Appendix A - Acceptable Quality Levels
Service Level Agreement (SLA)

AQL #	Metric	Task	Performance Requirement	Performance Standard	AQL (willneed revision based on agreed Standard)	Definitions
1	New Hardware deployment	Asset Management	After new hardware is received, inventoried, and ready for use, deploy the hardware for its designated purpose.	Within 60 days for hardware being received	Within 90 days for hardware being received	From time signed for complete order received to actual deployment. Measured based on monthly report reflecting items received and date of deployment. As reported in the MSR.
2	Change completeness and accuracy	Configuration Management	Review and grade production changes for completeness and accuracy	Maintain ≥ 92.5% successful change rate	Maintain ≥ 92.5% successful change rate	As reported in the MSR
3	Automated build and deployment system up-time	Configuration Management	Keep automated build and deployment system operational from 5:00 AM to 5:00 PM pacific	Uptime during these hours ≥ 95%	Uptime during these hours ≥ 95%	As reported in the MSR
4	STIG Settings	Cybersecurity	Apply STIG settings	Correct STIG settings: CAT-I = within 30 days ≥ 95% of the time. CAT-II = within 60 days ≥ 95% of the time	Correct STIG settings: CAT-I = within 30 days ≥ 92% of the time. CAT-II = within 60 days ≥92% of the time	As reported in the MSR
5	Patching	Cybersecurity	Patch vulnerabilities and apply STIG settings.	Patch Critical findings within 7 days, High and Medium within 21 days ≥ 95% of the time.	Patch Critical findings within 7 days, High and Medium within 21 days ≥ 92% of the time.	Patches covered by an approved POAM or Deviation Request are excluded from this AQL. As reported in the MSR.
6	Pre-Production	Cybersecurity	Assets complete pre-production scans and approval by Cybersecurity prior to production utilization.	98% compliant	95% compliant	As reported in the MSR
7	First Time Environment Setup	Web/Middleware/ Database	Create a middleware environment specific to a proposed new apps needs and render it ready to accept an application deployment from the DMDC CM infrstructure	Physical = Within 5 weeks ≥ 80% of the time Virtual = within 1 week; ≥ 90% of the time	Physical = Within 5 weeks ≥ 80% of the time Virtual = within 1 week; ≥ 90% of the time	Approval means, all equipment received and approved by the government and is made available to test. As reported in the MSR.
8	Web Application Configuration - Quality	Web/Middleware	New web systems configurations will be consistent with current production web systems	≥ 98% accuracy	≥ 95% accuracy	Vendor must QC each application server prior to going into production. As reported in the Grid Oracle Enterprise Management Suite.
9	Response to Phone call Inquiries	Helpdesk	Average Speed to Answer	Average answer speed of < 30 seconds ≥ 95%	Average answer speed of < 30 seconds ≥ 95%	As reported in the MSR

Appendix A - Acceptable Quality Levels
Service Level Agreement (SLA)

AQL #	Metric	Task	Performance Requirement	Performance Standard	AQL (willneed revision based on agreed Standard)	Definitions
10	Response to Voicemail and Email	Helpdesk	Time to Respond during duty hours and non-duty hours	Duty Hours: Average response time of < 30 minutes ≥ 85%	Duty Hours: Average response time of < 30 minutes ≥ 85%	Non-Duty Hours = Messages received after Service Hours are answered by 9:00 am local time of the next business day. As reported in the MSR
11	First Call/Contact Resolution	Helpdesk	First Call/Contact Resolution	≥ 60% of the eligible/in-scope incidents received during the month are resolved at Level I within 2 hour of diagnosis of the reported incident/request.	≥ 60% of the eligible/in-scope incidents received during the month are resolved at Level I within 2 hour of diagnosis of the reported incident/request.	Level I = No work-site technical support required. As reported in the MSR
12	Inventory of all hardware and software deployment	Asset Management	Inventory will be maintained using current technologies for tracking.	≥ 95% accuracy	≥ 90% accuracy	Accuracy measured by annual physical inventory or random spot checks. As reported in the MSR.
13	IT Asset Receipt - Document of Intake	Asset Management	IT equipment is properly bar-coded and entered into the inventory management system.	Within 5 days of receipt ≥ 90% of the time	Within 7 days of receipt ≥ 85% of the time	As reported in the MSR
14	Respond to Incidents Classified as a Production Outage/Incident	Incident/Problem Management	Time to respond for all Administrators	Within 10 minutes of Incident reported	Within 15 minutes of Incident reported	As documented in the Incident log. Time to respond is that time to join the MML from initial contact. As reported in the MSR.
15	Change/Release Management resolution	Change/Release Management	Frequency of completion of Change Orders to meet the "need by date"	≥ 95% meet need-by-date	≥ 90% meet need-by-date	As reported in the MSR and available in Servicedesk tool.
16	Project Managment Timelines	Project Management	Ensure project timelines, milestones and need by dates are met.	≥ 95% of the time	≥ 90% of the time	Deliver on-time Projects based upon reasonable dates. Exception may be but not limited to: government procurements, resources, deliveries, complexity, additional external contracts and government changes to the Project. It should be with the understanding that "need by dates" be met unless senior ITO management grants a delay in the phase or scope of the project. As reported in the MSR.

Appendix A - Acceptable Quality Levels
Service Level Agreement (SLA)

AQL #	Metric	Task	Performance Requirement	Performance Standard	AQL (willneed revision based on agreed Standard)	Definitions
17	Service Level - Quality of Service Metrics	Service Portfolio/ Service Level	Monitor performance and quality of service and report on efficiency and effectiveness of the Service Level Management process.	≥ 95% meet Service Levels	≥ 90% meet Service Levels	*Government will provide criteria for reporting as needed based on Service Level Agreements with DMDC and customers/partners. As reported in the MSR
18	NIPR and SIPR VTC availability	VTC Support	Availability of the VTC in NIPR and SIPR environments	≥ 95% availability	≥ 90% availability	As reported in the MSR
19	Production Environment Availability	Data Center	Production environment availability	≥ 99.5% up time in all production environments	≥ 99.5% up time in all production environments	Availability of applications supported by the Production Environments. Metric excludes outages outside the control of the vendor or government approved maintenance windows. As reported in the MSR.

CAPACITY MANAGEMENT - KPI DASHBOARD 01/07/2015

LEGEND:

KPI = Key Performance Indicator
CSF = Critical Success Factor
CMIS = Capacity Management Information Systems

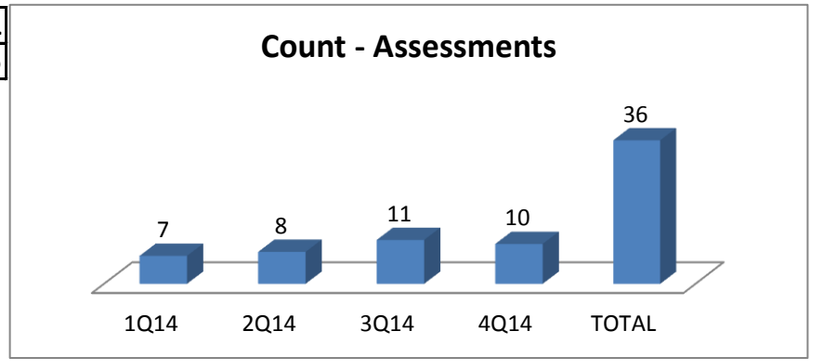
1Q14 = Jan-Mar 2014
2Q14 = Apr-Jun 2014
3Q14 = Jul-Sep 2014
4Q14 = Oct-Dec 2014

KPI: Capacity Assessments Completed

BENEFITS: Systems & Application Right Sizing.

CSF: Provides IT services with appropriate capacity to match business needs.

QTR	1Q14	2Q14	3Q14	4Q14	TOTAL
Count - Assessments	7	8	11	10	36
Rolling Count - Assessments	7	15	26	36	

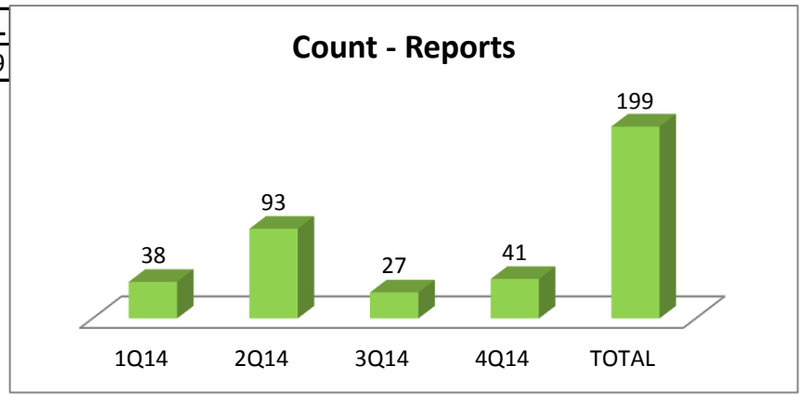


KPI: Capacity Intelligence - Reports/Dashboards

BENEFITS: Monitoring, Trending, Forecasting, Planning.

CSF: Provides adequate capacity forecasts & Protects IT services from capacity related incidents.

QTR	1Q14	2Q14	3Q14	4Q14	TOTAL
Count - Reports	38	93	27	41	199
Rolling Count - Reports	38	131	158	199	

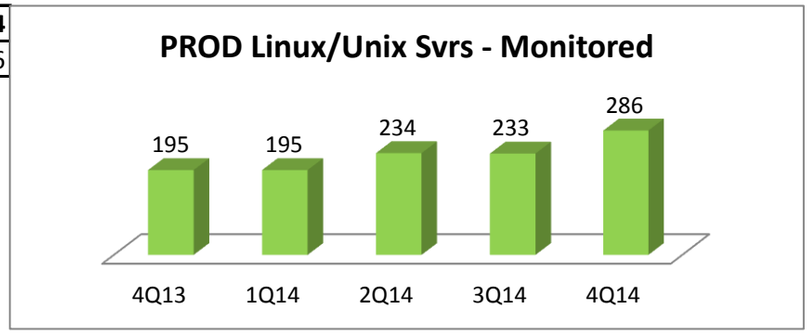


KPI: Capacity Tool Support - CMIS/TQ Operations

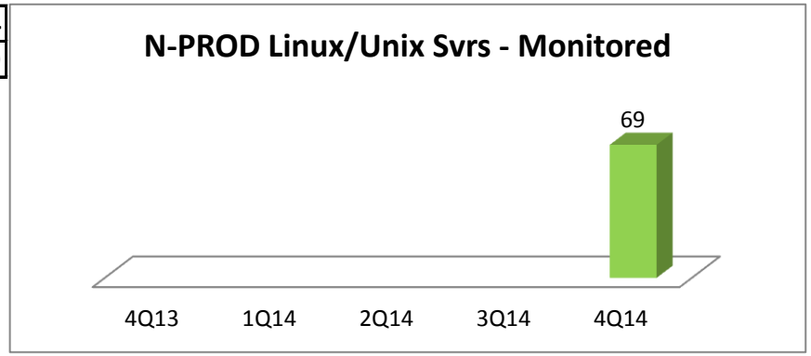
BENEFITS: Effective and Efficient Capacity & Performance Monitoring, Historical Data for Trending, Analysis & Reporting.

CSF: Protects IT services from capacity related incidents.

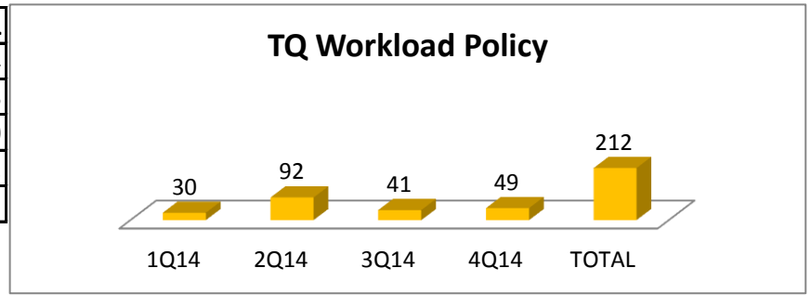
TQ -MONITORED (PROD)					
QTR	4Q13	1Q14	2Q14	3Q14	4Q14
PROD Linux/Unix Svrs	195	195	234	233	286



TQ - MONITORED (NON-PROD)					
QTR	4Q13	1Q14	2Q14	3Q14	4Q14
N-PROD Linux/Unix Svrs					69



TQ - WORKLOAD POLICY					
QTR	1Q14	2Q14	3Q14	4Q14	TOTAL
Unix	7	12	4	1	24
Linux	23	53	34	48	158
Windows	0	27	3	0	30
TOTAL	30	92	41	49	212
Rolling TOTAL WL Policy	30	122	163	212	

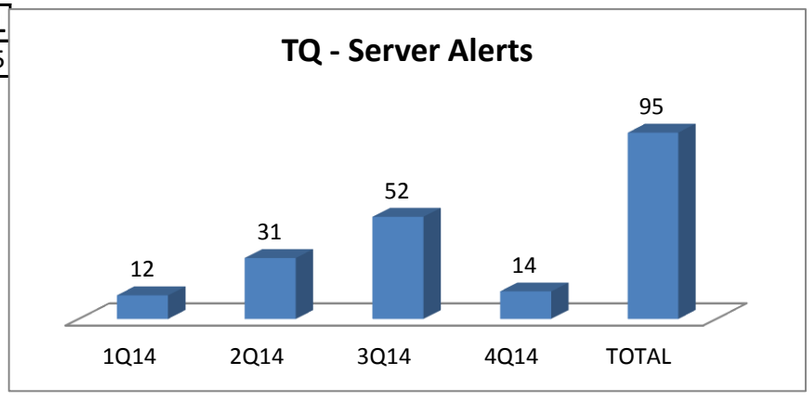


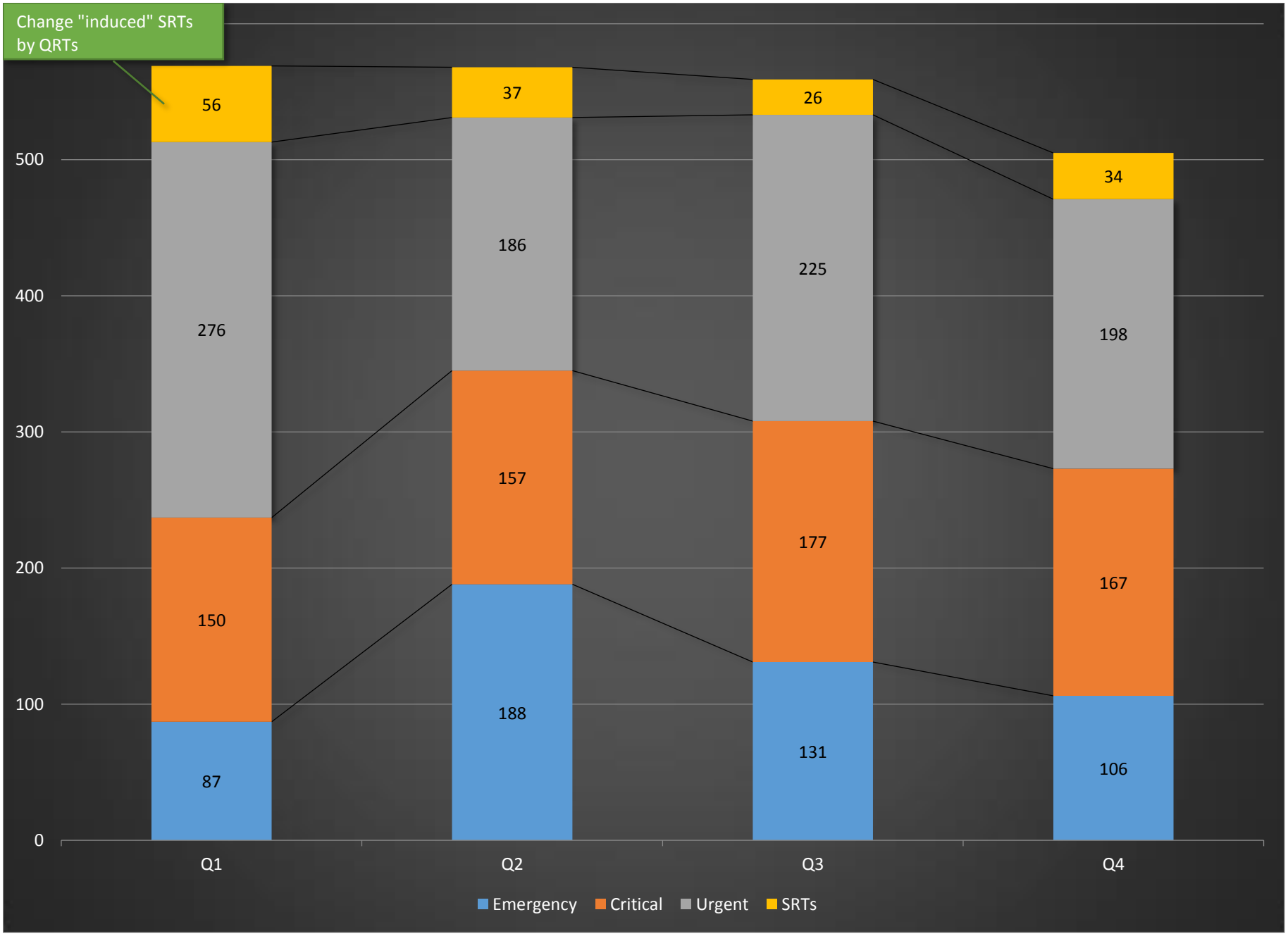
KPI: SRT Avoidance Due to TQ CMIS Monitoring

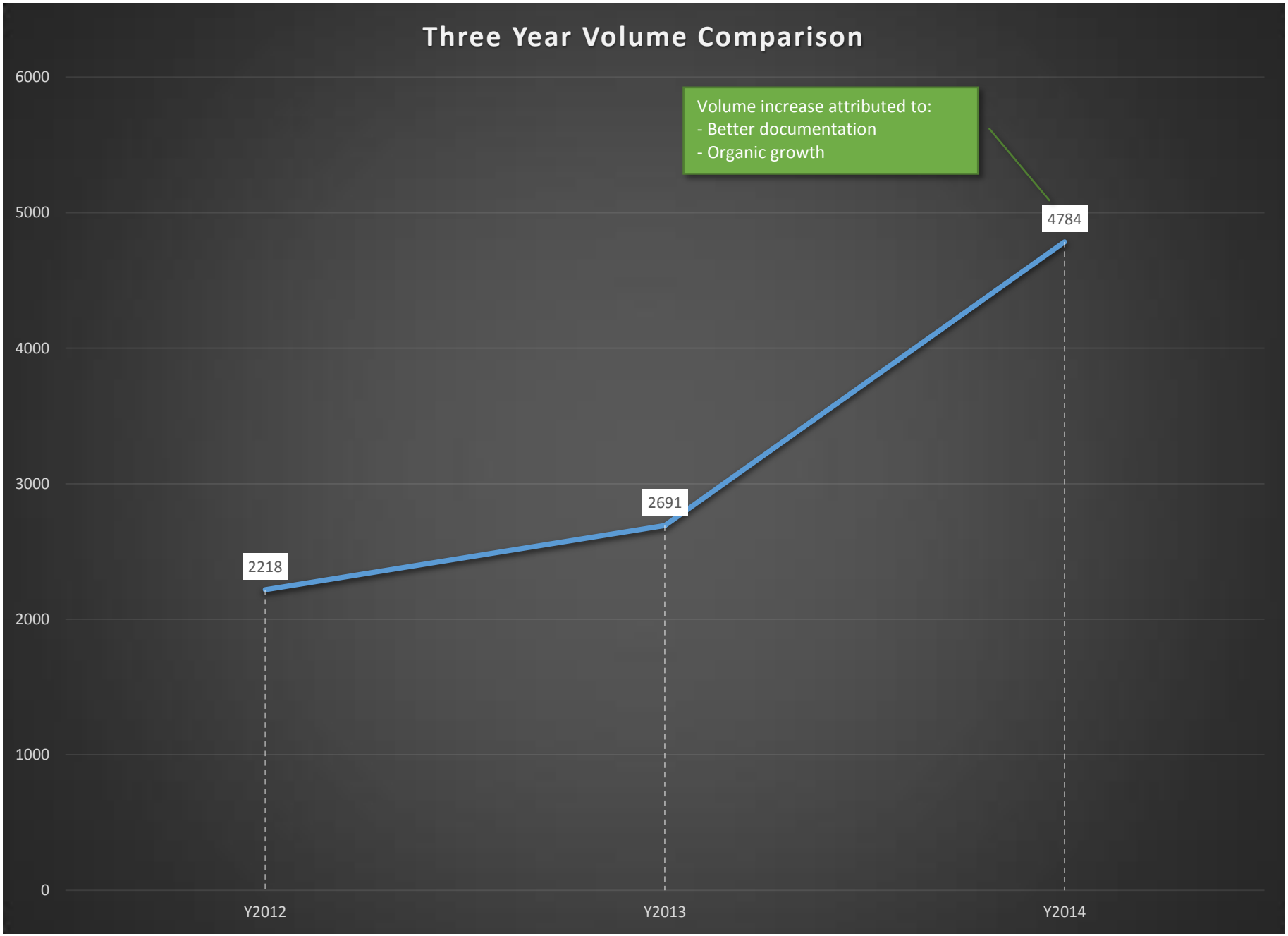
BENEFITS: Prevents Potential SRTs

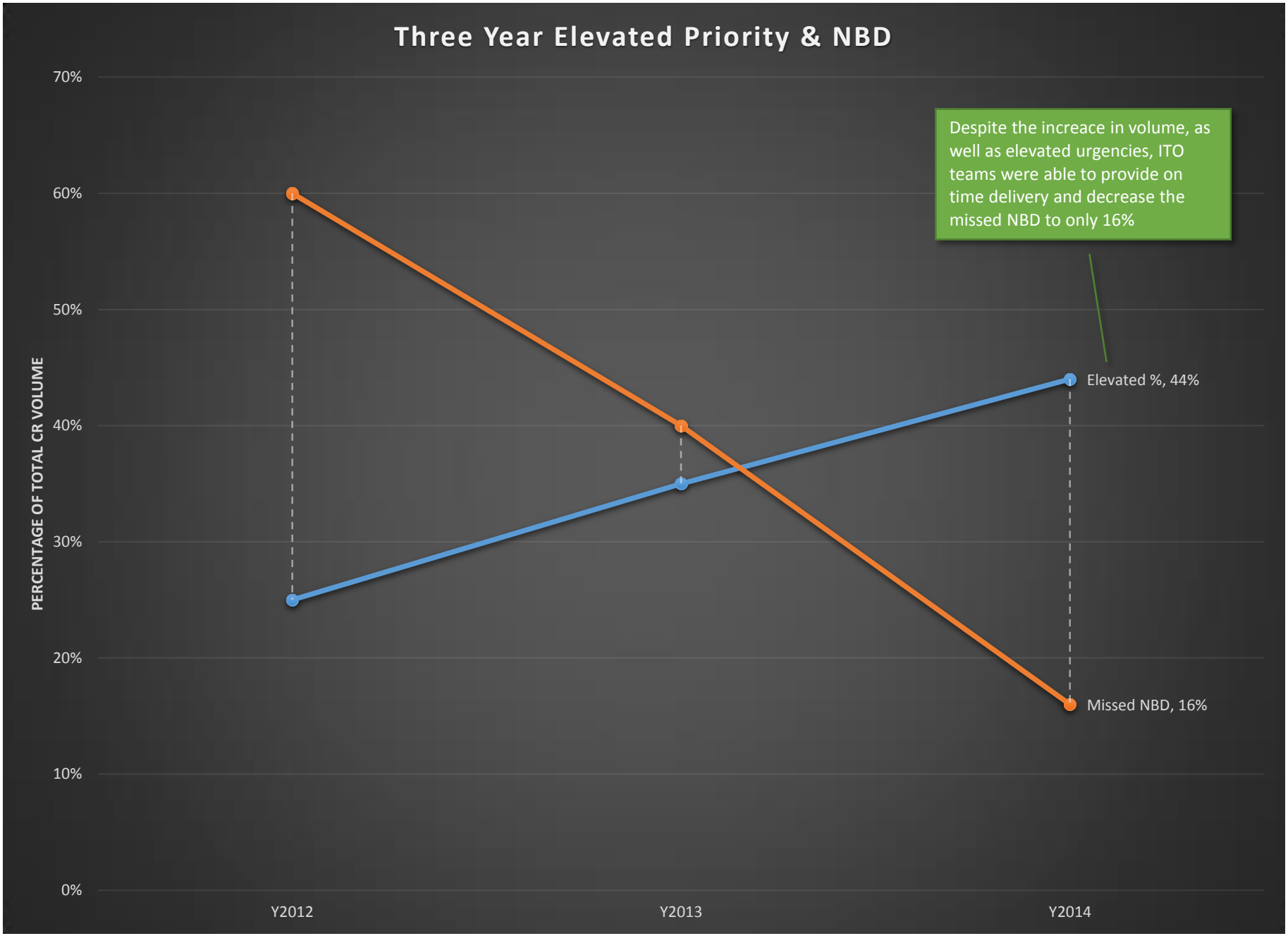
CSF: Increases IT Service Availability

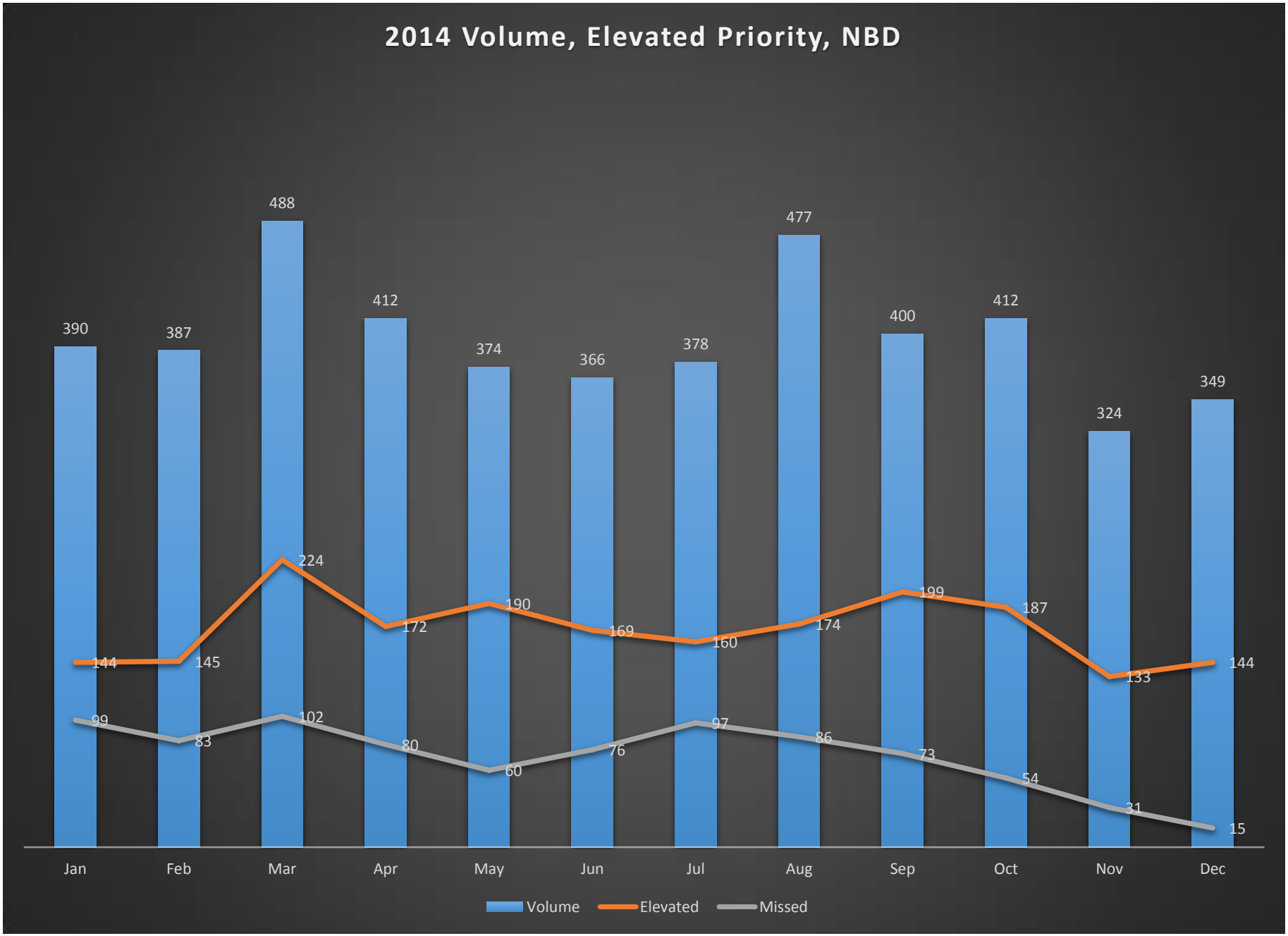
QTR	1Q14	2Q14	3Q14	4Q14	TOTAL
Server Alerts	12	31	52	14	95

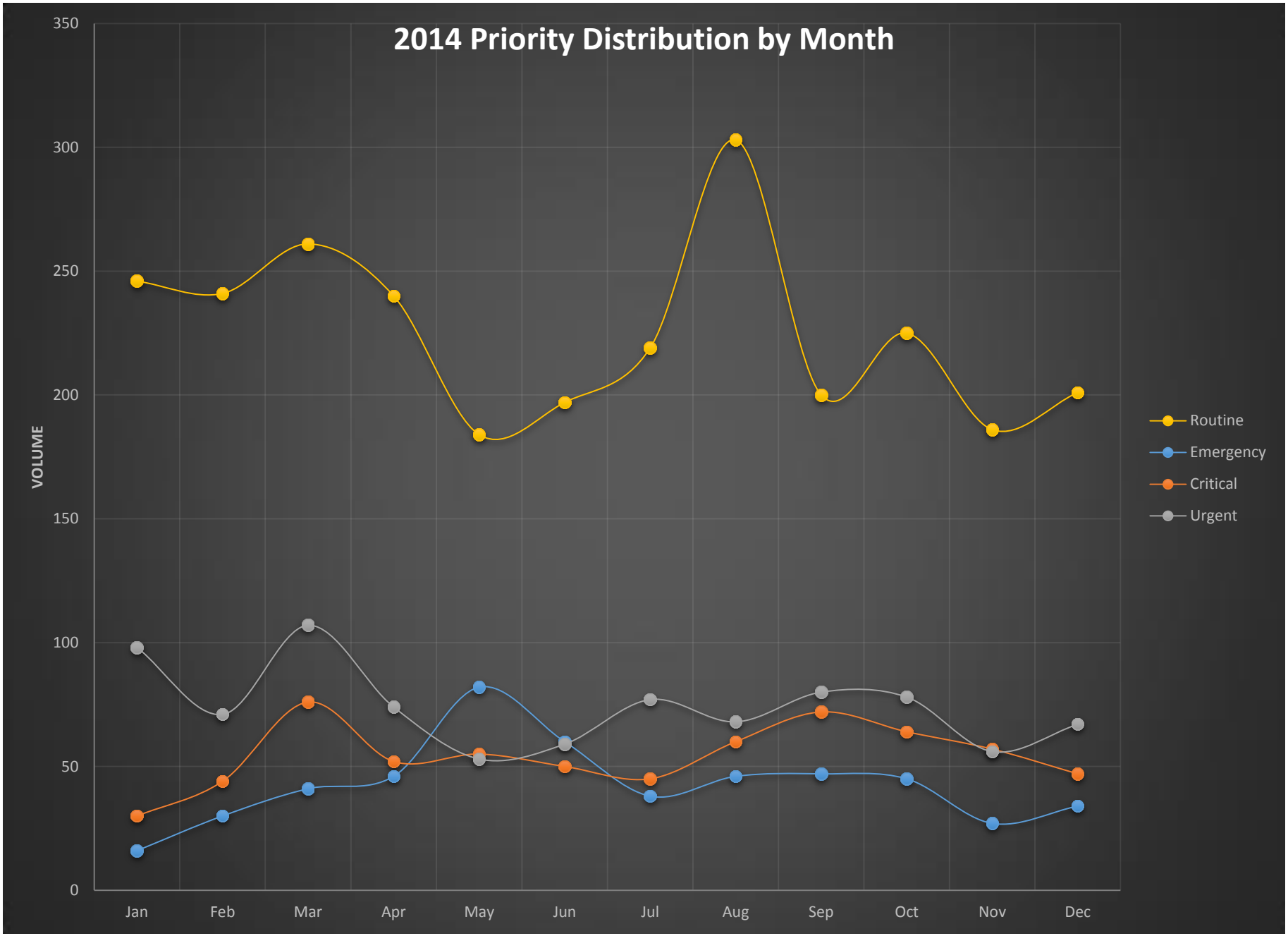


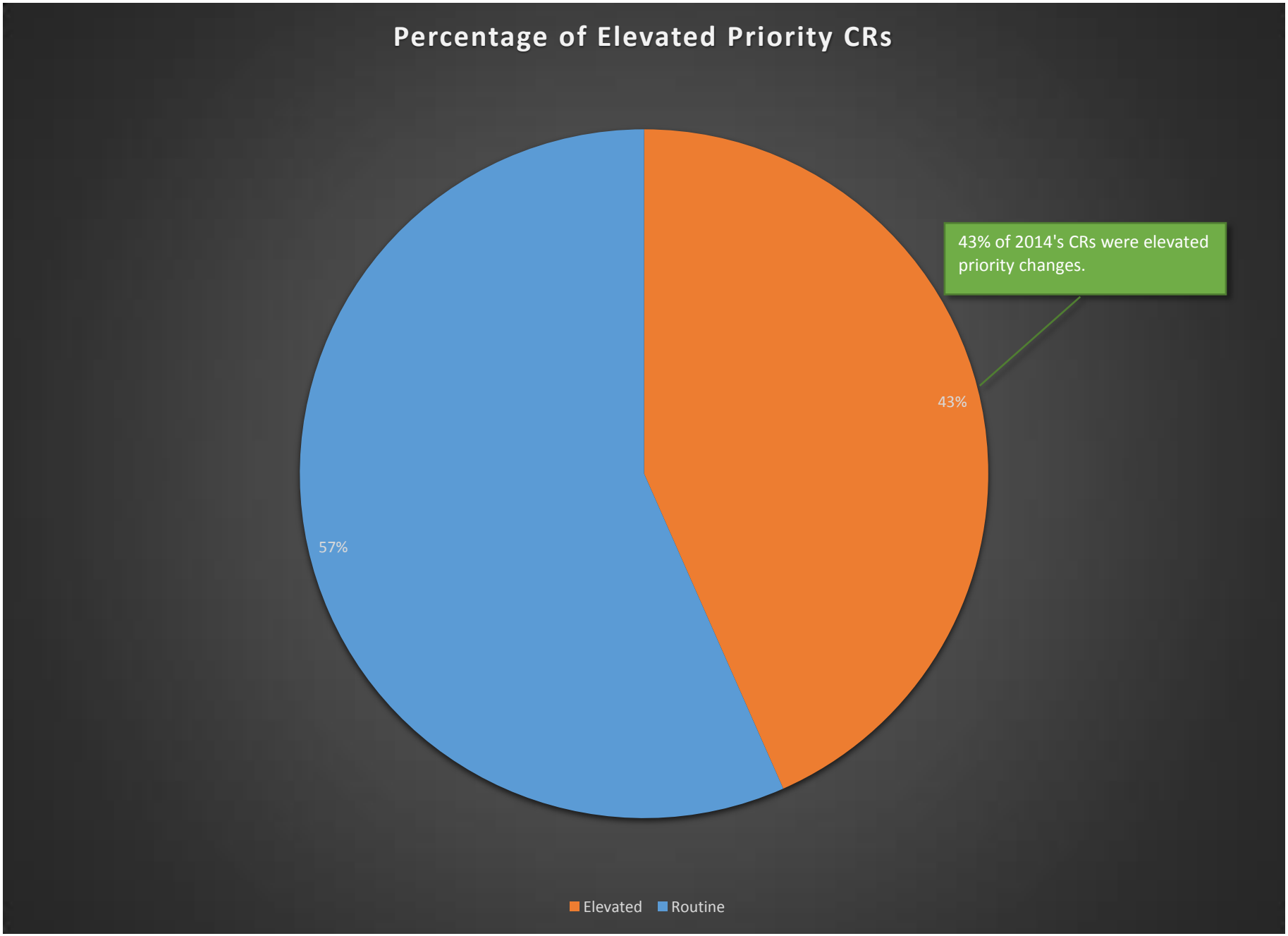

Change "induced" SRTs by QRTs
500
400
300
200
100
0
56
276
150
87
37
186
157
188
26
225
177
131
34
198
167
106
Q1
Q2
Q3
Q4
Emergency
Critical
Urgent
SRTs

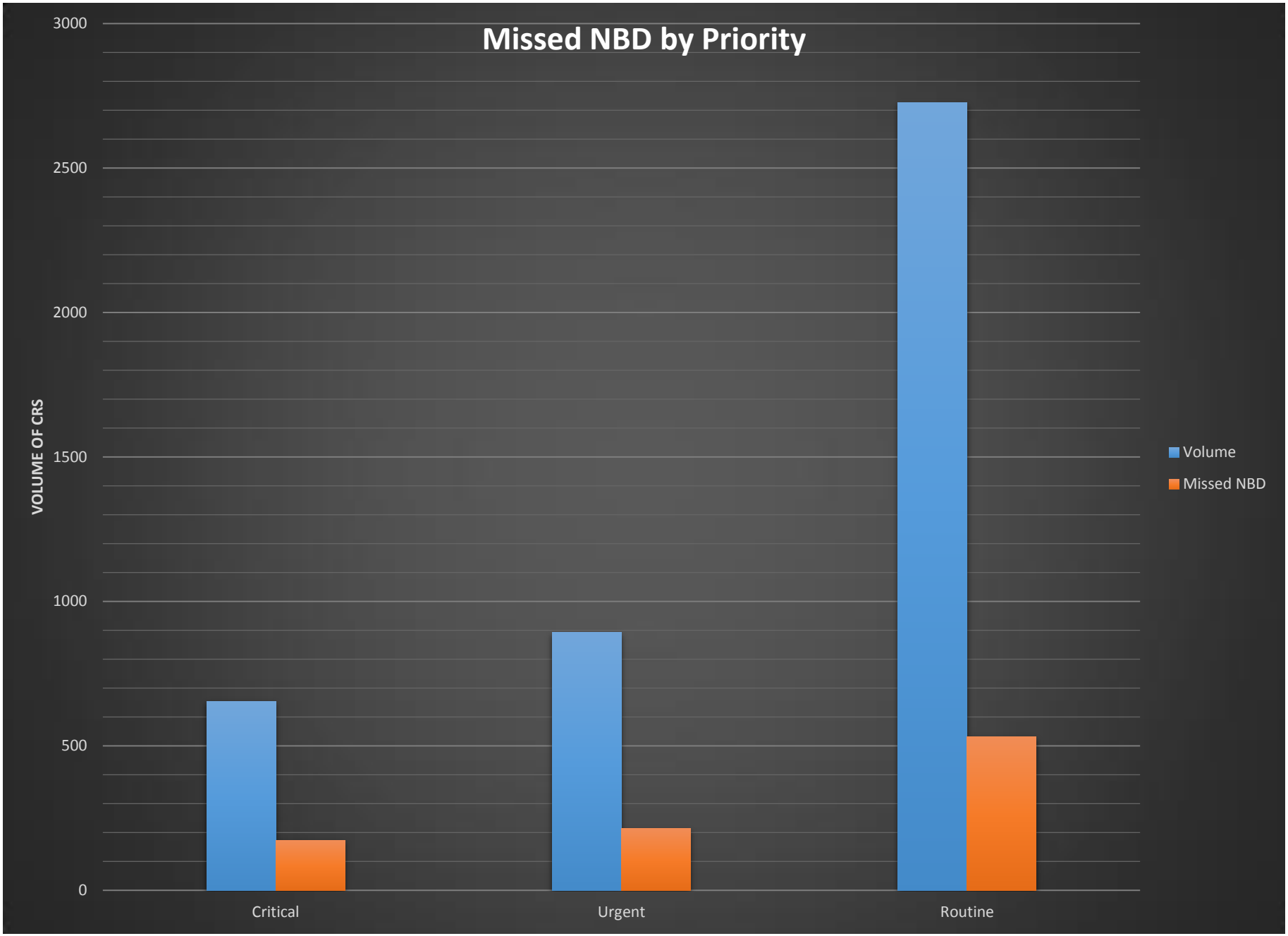

Three Year Volume Comparison
6000
5000
4000
3000
2000
1000
0
Volume increase attributed to:
- Better documentation
- Organic growth
2218
2691
4784
Y2012
Y2013
Y2014

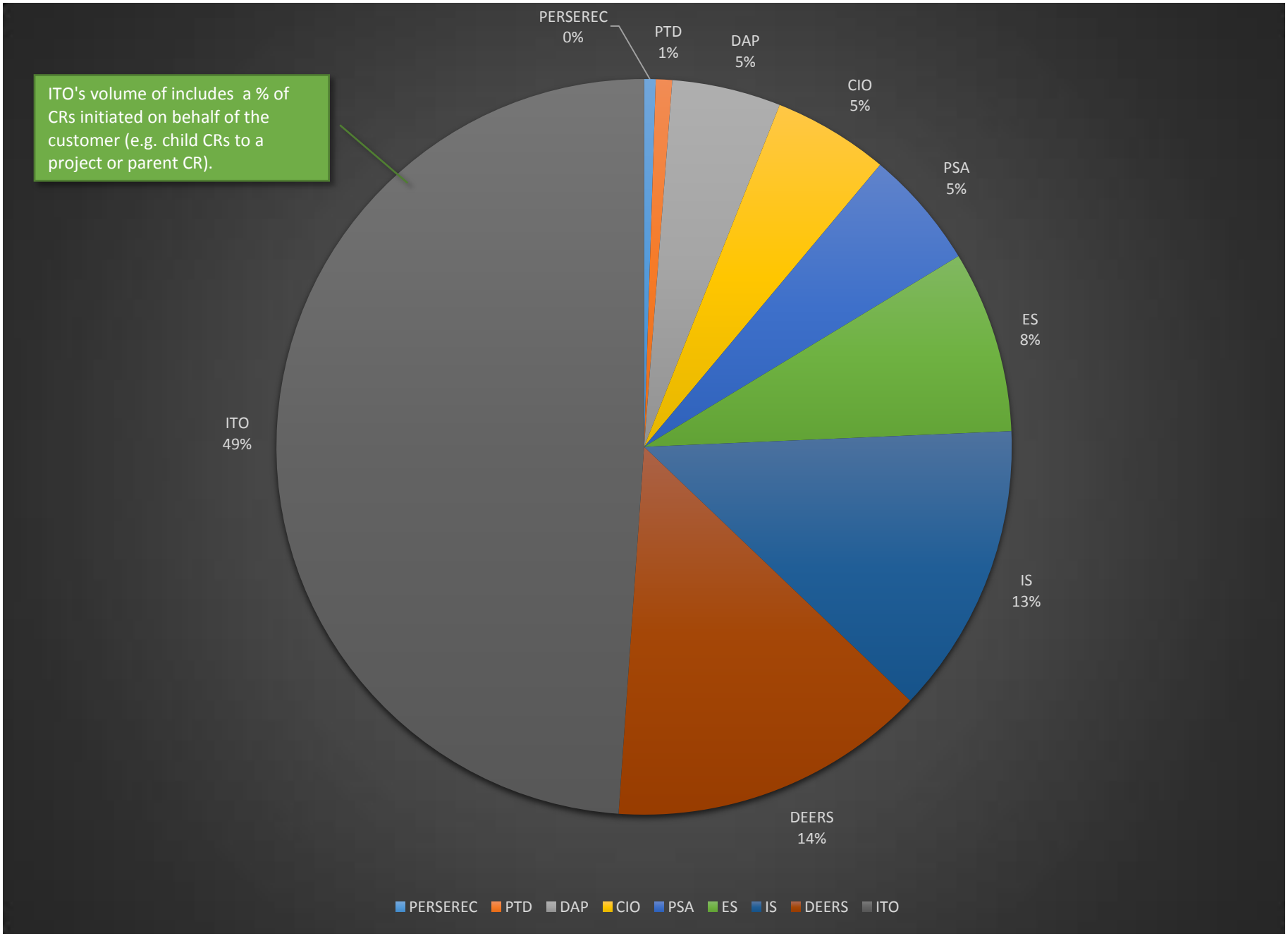

Three Year Elevated Priority & NBD
70%
60%
50%
40%
30%
20%
10%
0%
PERCENTAGE OF TOTAL CR VOLUME
Y2012
Y2013
Y2014
Despite the increace in volume, as well as elevated urgencies, ITO teams were able to provide on time delivery and decrease the missed NBD to only 16%
Elevated %, 44%
Missed NBD, 16%


2014 Volume, Elevated Priority, NBD
390
387
488
412
374
366
378
477
400
412
324
349
144
145
224
172
190
169
160
174
199
187
133
144
99
83
102
80
60
76
97
86
73
54
31
15
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Volume
Elevated
Missed


2014 Priority Distribution by Month
VOLUME
350
300
250
200
150
100
50
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Routine
Emergency
Critical
Urgent

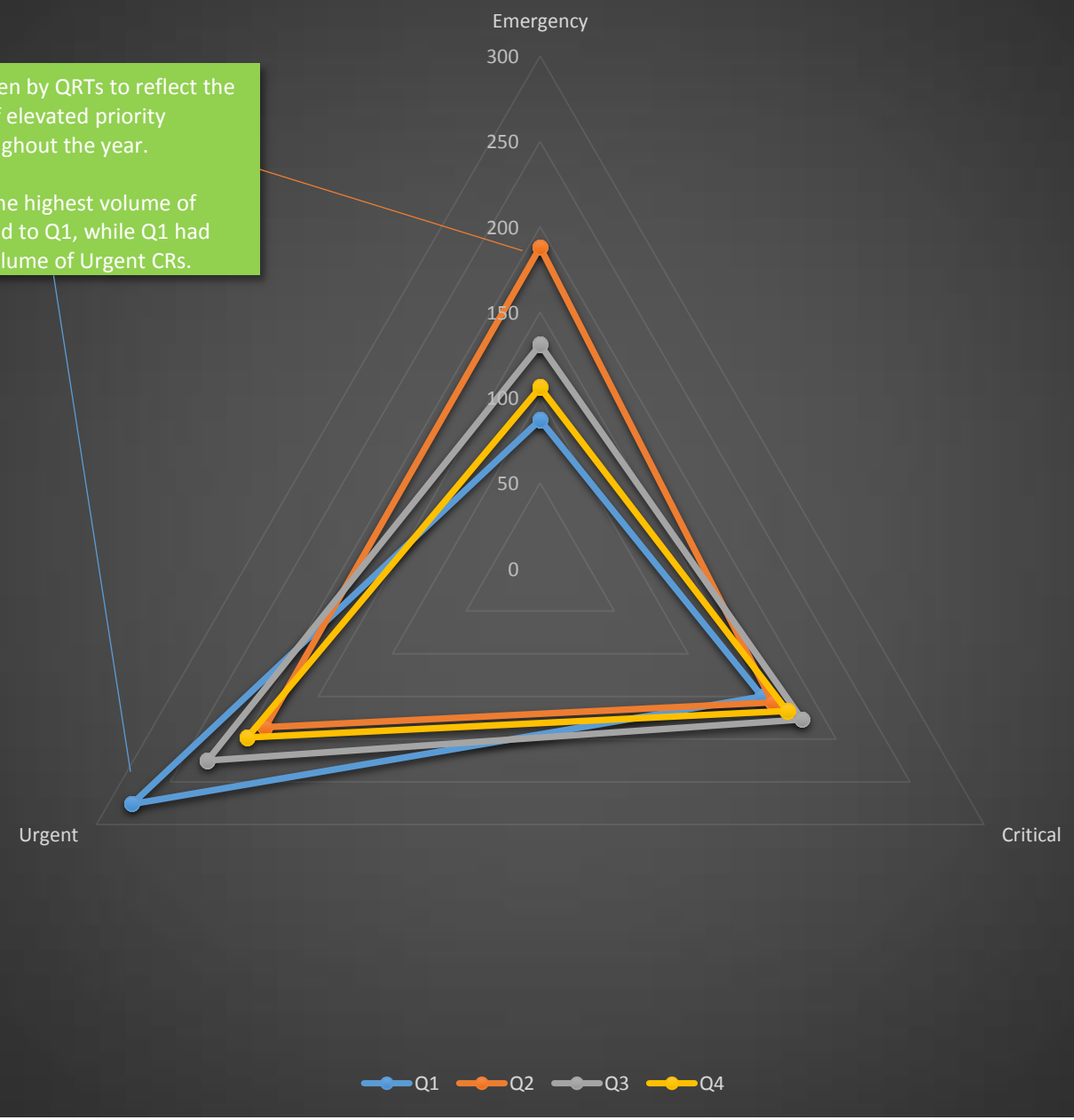

Percentage of Elevated Priority CRs
43% of 2014's CRs were elevated priority changes.
43%
57%
Elevated
Routine

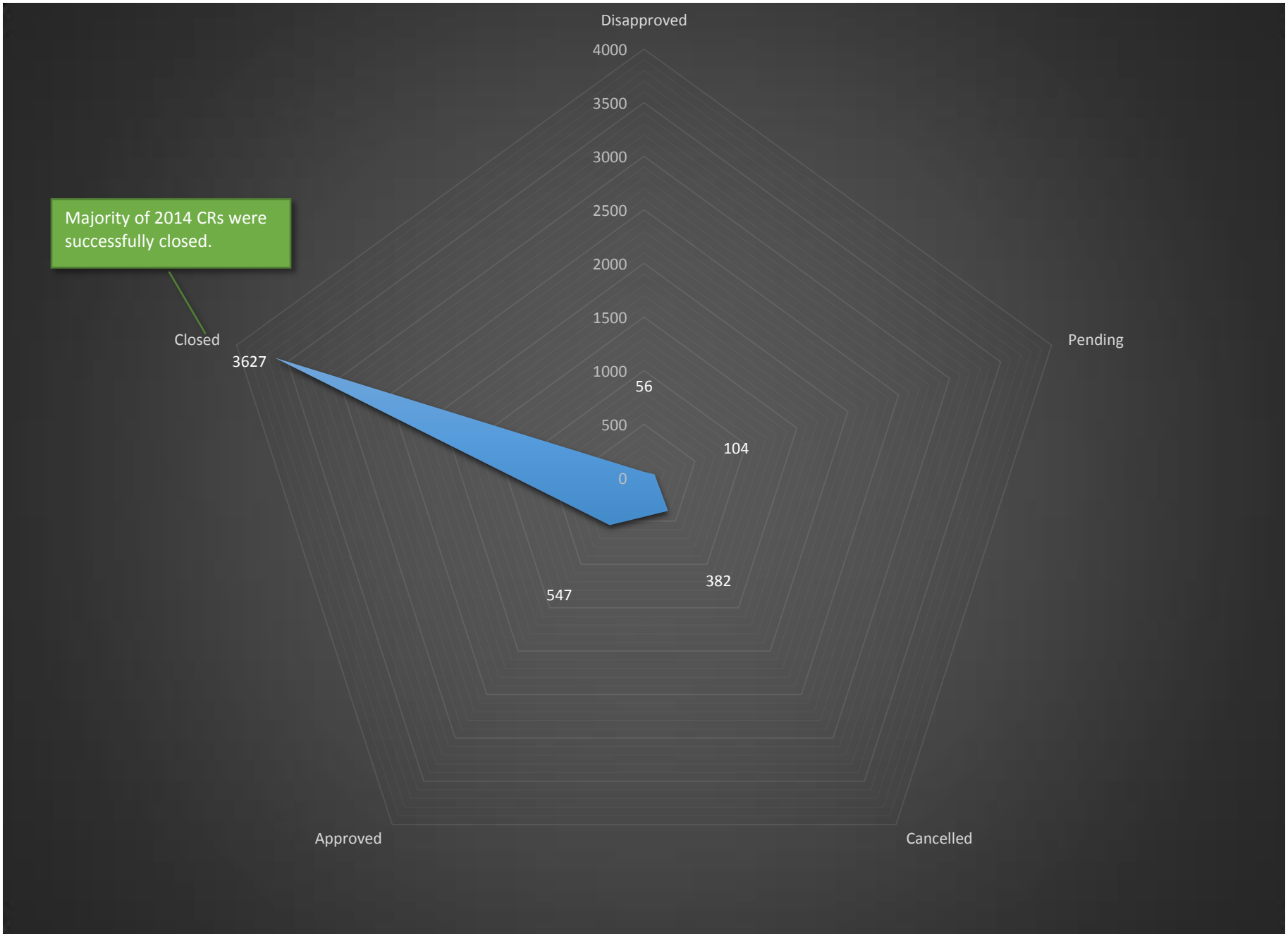

Missed NBD by Priority
VOLUME OF CRS
3000
2500
2000
1500
1000
500
0
Critical
Urgent
Routine
Volume
Missed NBD

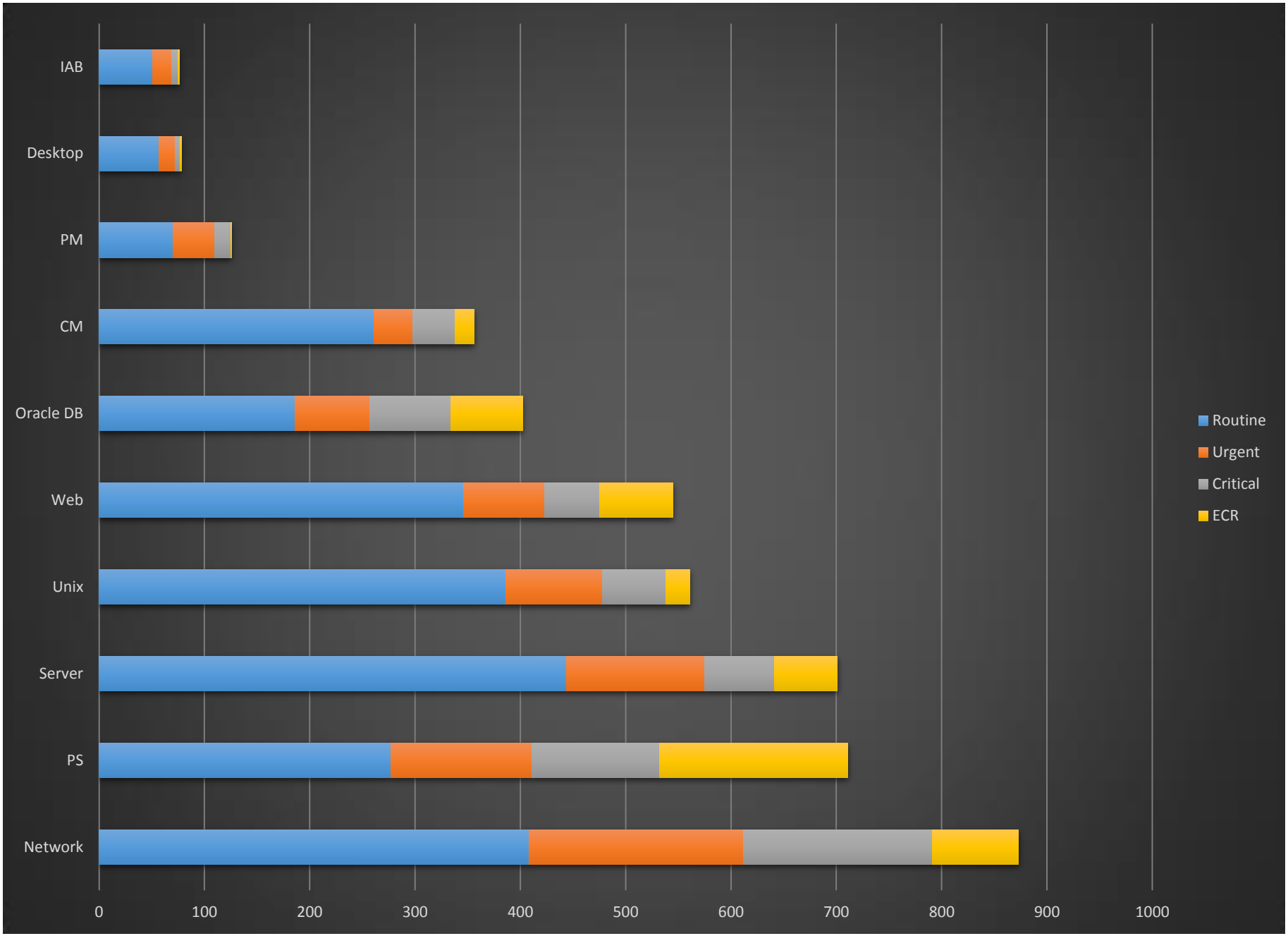

ITO's volume of includes a % of CRs initiated on behalf of the customer (e.g. child CRs to a project or parent CR).
PERSEREC 0%
PTD 1%
DAP 5%
CIO 5%
PSA 5%
ES 8%
IS 13%
DEERS 14%
ITO 49%
PERSEREC PTD DAP CIO PSA ES IS DEERS ITO

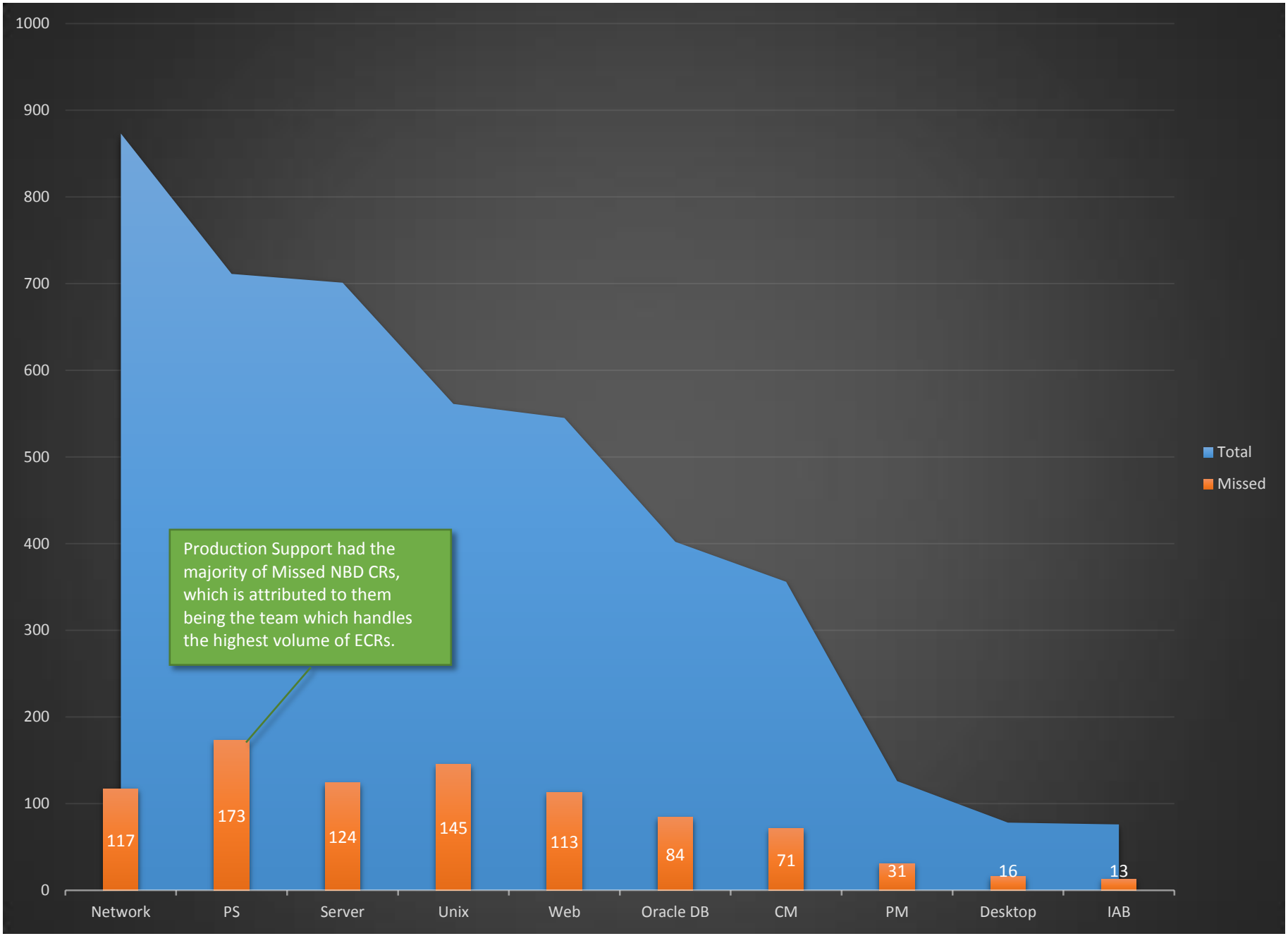
The year broken by QRTs to reflect the distribution of elevated priority changes throughout the year.

Q2 has seen the highest volume of ECRs compared to Q1, while Q1 had the highest volume of Urgent CRs.




Majority of 2014 CRs were successfully closed.
Disapproved
4000
3500
3000
2500
2000
1500
1000
500
0
Closed
3627
Pending
56
104
382
547
Approved
Cancelled


IAB
Desktop
PM
CM
Oracle DB
Web
Unix
Server
PS
Network
0
100
200
300
400
500
600
700
800
900
1000
Routine
Urgent
Critical
ECR


1000
900
800
700
600
500
400
300
200
100
0
Total
Missed
Production Support had the majority of Missed NBD CRs, which is attributed to them being the team which handles the highest volume of ECRs.
117
173
124
145
113
84
71
31
16
13
Network
PS
Server
Unix
Web
Oracle DB
CM
PM
Desktop
IAB

Change Management Process Owner Role

The ***Process Owner*** is defined as "a role that is accountable for ensuring that a process is fit for purpose". The process owner role is accountable for ensuring that their process is performed according to the agreed and documented standard and meets the aims of the process definition.

The Change Management Process Owner's responsibilities usually include:

- Designing change authority hierarchy and criteria for allocating RFCs to change authorities
- Designing change models and workflows
- Working with other process owners to ensure that there is an integrated approach to the design and implementation of change management, configuration management, release and deployment management, and service validation and testing.
- Carry out the generic process owner role for the change management process (see below)

The process owner's 'generic' accountabilities include:

- Sponsoring, designing and change managing the process and its metrics
- Defining the process strategy
- Assisting with process design
- Ensuring that appropriate process documentation is available and current.
- Defining appropriate policies and standards be employed throughout the process
- Periodically auditing the process to ensure compliance to policy and standards
- Periodically reviewing the process strategy to ensure that it is still appropriate and change is required.
- Communicating process information or changes as appropriate to ensure awareness
- Providing process resources to support activities required throughout the service lifecycle
- Ensuring the process technicians have the required knowledge and the required technical and business understanding to deliver the process, and understand their role in the process
- Reviewing opportunities for process enhancements and for improving the efficiency and effectiveness of the process
- Addressing issues with the running of the process
- Identifying improvement opportunities for inclusion in the CSI register
- Working with the CSI manager and process manager to review and prioritize improvements in the CSI register
- Making improvement to the process

Further detail on the role and responsibilities of the process owner can be found in the ITIL Service Strategy, Service Design and Service Transition books.

Change and Release Management

Change Management ensures that standardized methods and procedures are used for efficient and prompt handling of all changes to minimize the impact of change-related incidents and improve day-to-day operations.

Release Management takes holistic view of a change to an IT service and should ensure that all aspects of a Release, both technical and non-technical, are considered together.

The Contractor shall establish and maintain a fully functional Change and Release Management Program Team to include the following activities, which are pursuant to and in accordance with established Systems and Technical Support Division Standard Operating Procedures and Reference Documents but not limited to the following: Governance Framework, Change Control Process Phases, Raising and Recording, Assessing and Authorizing, Planning and Implementation, Post Implementation Review, Closure and Formalized Measurement, Auditing and Compliance.

Contractor will ensure that standardized methods and procedures are used for efficient and prompt handling of all Changes in order to minimize the impact of Change-related Incidents upon service quality, and consequently to improve the day to day operation of DMDC 99% of time.

Contractor is accountable for ensuring that changes are recorded and then evaluated, authorized, prioritized, planned, tested, implemented, documented in CMDB, and reviewed in a controlled manner 99% of the time. An exception would be government resource not available.

Contractor will partner with other members of the Service Management community in DMDC to provide standardized end to end support and act as primary focal point for all Changes within the DMDC infrastructure, while providing ongoing development and maturation of the Change Control processes 100% of time.

Contractor will ensure that the following Critical Success Factors (CSF) and Critical to Quality (CTQ) dependencies are addressed and provided within the DMDC Change Management System but not limited to the following 100% of the time:
Appropriate Classification (Routine, Standard, Emergency, etc.) and Categorization (USD category areas and organizational attributes) of all Changes.

Perform Risk & Impact Assessment and Prerequisite Risk Mitigations for high risk / high impact Production Changes (e.g. Architecture Review Board submission and approval required prior to implementation, enhanced back-out and test plans, separate Post Change Implementation review meetings, etc., 90% of the time.

Establish, identify, apply and implement but not limited to the following ITIT Best Practices within the Change Management Team:

- Mandatory Checklists for Commissioning / Decommissioning evolutions.
- Proper CI attachments on all Change Requests that involve changes to any existing CI.
- Proper parent/child attachments and proper Incident/Problem ticket reference correlation.
- Integration of Change Management Process and Short-Term Planning meeting in order to streamline scheduling conflicts and ensure adequate post change test & acceptance.

- Implementation and organizational Adoption of standard CR templates (already developed) for common, cyclical or minor CR's to streamline the formalized process and ensure due diligence is given primarily to the 20% of Changes which have 80% of the Production Impact potential.
- Mechanism to implement High Priority (Urgent/Critical/Emergency) Changes without compromising quality assurance. Mechanism to capture Root Cause of High Priority Changes (unplanned and otherwise) and drive down.
- Workflow and checkpoint improvements to ensure CAB Functions (TRB/CCB) do not become a "rubber stamp" (due to automation and current "hands off" approach) and actually add quality control value to the Change Control process.

Contractor will demonstrate measurable improvement of CSF and CTQ Milestones during quarterly review cycles, as measured by positive quarterly trends in the efficiency and CMMI-ITIL Process Maturity rates for Change Management.

Operational Change Management Metrics will be reported on in accordance with above metrics and KPI criteria. Reviews will require no more than two quarterly review cycles to meet acceptance levels.
Key Performance Indicators will show positive monthly and quarterly trends in the accuracy and quality of existing CR's.

AQLs:

- Change Management data quality at 95% of time.
- CR On-Time Delivery Rate based on reasonable Need By Dates - 90% of time.
- Identify Percentage of Changes exceeding the originally agreed Delivery Date (Need by Date).
- CMMI-ITIL Maturity to be Measured as an aggregate score and assigned an overall Process Rating (1.0 through 5.0) for the following areas: Process Foundation, Delivery, Interfaces, Organizational Elements, Tool and Methodology, Measurement & Control.
- Assessment Categories contain Major Accomplishments, Primary Gaps and Original Benchmark Score 90% of time.

Deliverables:

- Contractor shall measure and report on the following Operational Metrics and Key Performance Indictors (KPI's) related to the Change Management function. Contractor will demonstrate gradual improvements for the following metrics and KPI's:
    - Total Number of Changes in the Change Pipeline – By Status (Approved for Production, Approved for Test Lab, In Procurement, etc.) *Total Changes Implemented during reporting cycle.
    - Number of Failed Changes.
    - Number of High Priority (Urgent/Critical/Emergency) Changes by Category.
    - Average Processing Time Per Change (Days), by Type.
    - Number of Changes by Closure Code (Rejected/Backed Out/Canceled).
    - On Time Delivery Rate - Percentage of Changes exceeding the originally agreed Delivery Date (Need by Date).
    - Percentage of Changes resulting in an unplanned Production Incident (SRT), by Severity.
    - Number of Changes implemented to remediate a Production Incident or Problem.

- Change Management Process Maturity Level (pursuant to existing DMDC CMMI-ITIL Assessment Criteria and Assessment Baseline documentation). Monthly Report

Release Management Team

- 60 days after contract award, the Contractor will revise, establish and implement a robust Release Program using ITIL Best Practices to include but not limited to:
  - Establishing a Release Policy with roles and responsibilities for Systems Admins and External governance. This policy must include but not limited to:
    - Release Planning, release acceptance, roll-out, communication to all parties.
    - Full release, package release, emergency release and etc.
  - Create Definitive Software Library - authorized versions of all software/CI's are stored and protected.
  - Create Definitive Hardware Store
  - Create Version (configuration structure for the purpose of tracking and auditing change history).

- Provide Monthly and Quarterly Service Level Reporting, On Demand Audits, Key Performance Indicator Assessment, CMMI-ITIL Maturity Assessment.
- Identify weekly/monthly (as needed) those releases (all categories under release) that caused production outages (SRTs) or other major incidents within our Enterprise environment.

AQL: No more than 10 Major Incidents SRTs/Production Outages per month based upon Systems responsibilities.

AQL: No more than 20 Minor Incidents SRTs/Limited Production Outages per month based upon Systems responsibilities.

AQL: Provide PMIR, MPR or IPR for any major incident/outage or trend NLT 5 business days post SRT.

AQL: Weekly Release Plans (i.e. Short Term Planning) and/or Maintenance Window will be produced NLT 1 day after formal meeting for weekend testing via SharePoint.

Change Authority Board (CAB) Charter

Charter Approval

Approver	Title and/or Affiliation	Approval Date
Kris Hoffman	Chief Information Officer, DMDC and CAB Chairperson	
Rick Ongaro	Information Assurance Branch	

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Purpose

The purpose of this charter is to establish the Defense Manpower Data Center (DMDC) Change Management CAB (Change Authority Board) and define its scope of authority, identify the membership and define their responsibilities.

Scope

The DMDC CAB represents the interests of the Department of Defense (DoD) and the DMDC by ensuring that a structured process is used to consider the governance set forth by the DoD 8500.2, as well as to evaluate risk to the DMDC on select changes and releases brought to their attention. The CAB shall request that impact analysis of proposed changes be performed, review higher risk changes and releases, make decisions, and communicate decisions made to affected groups and individuals.

Activities of the CAB

Scheduled CAB Meetings

The CAB meets by default once per month. Any high risk and/or complex Release or Change must be presented to the meeting as determined by the associated Release or Change authority. Outside of scheduled monthly CAB meetings and by the direction of the CIO or the CAB chairperson, an emergency CAB meeting can be called with a minimum of one business days' notice.
Appendix A:
Appendix B: At the request of a stakeholder, a CAB meeting will be scheduled within one week of a requestor's notice.

Emergency CAB Meeting

Occasionally, CAB meetings will be called on an ad hoc/emergency basis. Meeting agenda and minutes will still be captured. Decisions on proposed modifications will be arrived at as soon as possible. Any steps that were bypassed during the emergency will be completed as soon as possible or officially waived by the CAB at their next meeting.

Meeting Activities

1. Agendas will be distributed as approved by the Chairperson. Items not contained in the agenda may be discussed, at the discretion of the CIO and/or the CAB Chairperson.
2. The review of previous CAB meeting action items
3. The review and disposition of proposed high risk modifications to DMDC configurations under direct control of the Mission Assurance policy DoD 8500.2
4. Ensure that reviewed IA issues, proposed releases or proposed changes will not have a negative impact on current DMDC operations.

5. Approve deviations from governing DoD 8500.2 policies or controls on a case-by-case basis.
6. Approve updated Change Management process modifications or modifications to Change Management process documentation.
7. Inform the DMDC Information Technology Steering Committee of any hardware/software configuration changes that affect the current Information Assurance or DMDC configuration standards and/or affect other organizations.
8. Meeting minutes and any action items will be distributed as approved by the Chairperson. Activities not contained in the minutes may be discussed, at the discretion of the CIO and/or the CAB Chairperson.

CAB Membership

Roles

CAB Chairperson

The CAB Chairperson's responsibilities include the following but are not limited to:

1. Approves the CAB Agenda, including the determination of agenda items
2. Provides oversight of the Information Assurance program with regards to those areas specifically called out by the DoD 8500.2 and the Mission Assurance Category assigned to environments within the scope of the CABs authority.
3. Facilitates the CAB decision process for disposition of approved releases and changes brought before the CAB within the scope of the CABs authority. Decisions may be to approve, disapprove, defer, or send proposed changes back to the originator for rework.
4. Ensures that originators of proposed releases and changes are informed of decisions concerning disposition.
5. Directs DMDC release and change governance.

Standing Members

CAB standing members will consist of representatives from the DMDC Information Assurance and other functional (business and technical) areas. These members will have voting privileges.

DMDC Role or Organization	Name
CIO and CAB Chairperson	Kris Hoffman
Information Assurance Branch	Rick Ongaro
DMDC Change Management Process Owner	Denise McFaddin

Quorum

For a high risk decision the CAB is deemed assembled if at least 2/3 of the senior members (CIO, IAB and/or Division Directors) are present to come to an agreement on the IA area, the release or the change that is to be considered. In the event of a senior CAB member being unavailable they are to provide a delegate.

For all other risk considerations, any member of the CAB may review the proposed release or change if they are qualified to do so.

Authority

The DMDC CAB derives its authority from the DoD 8500.1 and DoD 8500.2 policies and governance controls. The CCC will review each agenda item and/or proposed release or change against its real or perceived impact on the confidentiality, integrity and/or confidentiality of existing DMDC services and operations. The CAB has final recommendation over all issues brought before it for review. Any significant budget impacts will require Project Oversight Committee approval. CCC decisions are documented in the CCC minutes, and are implemented within the scope of its authority.

Version Control

This DMDC Change Authority Board (CAB) charter supersedes all existing DMDC CAB charter in any previously published DMDC Change Management, TRB-CCB or Configuration Management documentation.

Version	Date	Author	Change Description
1.0	9 Jan 2014	Corde Wagner	Initial Version

Glossary

Term/Acronyms	Definition
Business Day	Generally Monday through Friday, 8 am to 5pm, not including approved holidays.
Change	The addition, modification or removal of anything identified as critical within the IT Configuration Baseline that could have an effect on IT Services. Note: For purposes of DMDC policy and the Change Management process, all synonyms for change also apply. They include but are not limited to: modify, adjust, deploy, release, configure, modification, manipulate, transform, correct, add, remove, delete, alter, switch, tweak, update, patch, upgrade, etc.
Change Control Board (CCB)	A group of people that support the assessment, prioritization, authorization and scheduling of changes. A change control board is usually made up of representatives from: all areas within the IT service provider; the business; and

Term/Acronyms	Definition
	third parties such as suppliers. The role of the Change Control Board (CCB) is to provide a policy review of proposed changes to ensure that the proposed changes increase the operational efficiency of the DMDC IT Infrastructure in support of the mission of DMDC.
Change Type	**Normal:** A change that is not an emergency change or a standard change. Normal changes follow the defined steps of the change management process. **Standard:** A pre-approved Change that is low risk, relatively common and follows a procedure or work instruction. For example, password reset or provision of standard equipment to a new employee. RFCs are not required to implement a Standard Change, and they are logged and tracked using the ticketing system. **Emergency:** A change that must be introduced as soon as possible. For example: ▪ To resolve a major incident that is impacting production services ▪ To implement a critical security patch in response to an active incident in the specified environment.
Change Request	CR: Change Request. Change Order ticket type within CA USD. (See Request for Change (RFC))
Customer	Someone who receives goods or services from DMDC.
Change Windows	The defined period of time allowed for a change to be implemented. By best practices changes scheduled for a specific window of time must begin and end within that established change window. Examples of Change Windows for DMDC is the "Static Maintenance Window" which is an approved time for STS changes to be performed.
Emergency Change Approvers	The ECA is a designated approval authority and subgroup of the Change Advisory Board (CAB) that makes decisions about emergency changes.
ITSM	IT Service Management: The implementation and management of quality IT services that meet the needs of the business. IT service management is performed by IT service providers through an appropriate mix of people, process and information technology.
Outage	Outage: Where a service is not available, during it's agreed Service Availability, to many or all users. ▪ An unstable condition, as involving an impending abrupt or unexpected disruption to production and/or to business service(s). ▪ A stoppage in the functioning of a machine or mechanism due to a failure in the supply of power, electricity, data stream, etc.
Production	Production consists of all the assets and resources used to provide services to external and internal customers, including hardware, network, operating system

Term/Acronyms	Definition
	software, COTs software, customer facing business applications software (e.g. DEERS, RAPIDS, DAP, etc.), databases, and facilities (e.g. datacenter raised floors and other network/infrastructure rooms.)
Service	A means of delivering value to customers by facilitating outcomes customers want to achieve without ownership of specific costs and risks.

References

- DMDC Change Management TRB/CCB Procedure Document, v17, August 2013
- DMDC Change Request Guidebook, November 2013
- DMDC Emergency-Change_Guidebook, November 2013
- DMDC Change Management Method of Procedure Guidebook, December 2013
- Management of the Department of Defense Information Enterprise, DoD Directive 8000.1, February 2009
- Recommended Security Controls for Federal Information Systems and Organizations, NIST 800-53 rev-4, National Institute of Standards and Technology, US Department of Commerce, 4/30/2013
- ISO/IEC 20000-1:2011, Clause 5
- ISO/IEC 20000-2:2012, Clause 9
- COBIT v5 Enabling Processes, ISACA, 2012
- ITIL Service Strategy, v3, TSO, 2011
- ITIL Service Transition, v3, TSO, 2011
- ITIL Service Operation, v3, TSO, 2011
- The Visible Ops Handbook, IT Process Institute, 2010

IT Service Management (ITSM) Change Management Policy v1.0

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Objective

The objective of this policy and the change management process is to control the lifecycle of all changes in the DMDC infrastructure. These policy statements have been established to protect the integrity of the DMDC infrastructure and associated outputs with the goal of achieving a highly resilient environment. Individuals who bypass the policies and processes for DMDC Change Management may put the DMDC at risk of business outage and non-compliance with government regulations, among other effects.

Scope

In scope:

This DMDC Change Management policy applies to employees, contractors, consultants, and other workers at the DMDC, including all personnel affiliated with third parties who have a need to implement a change to the DMDC infrastructure. This includes but is not limited to the following environments:

- Production (including 24x7)
- Sensitive Information Processing (SIPR) systems
- The Classified Data Center (CDC)
- Contractor Test (CT)
    - Demo1 and Demo2
- Disaster Recovery (DR)
- Stress Test region
- Quality Assurance (QA) region
    - Model1 and Model2
- DEV
    - Test1 and Test2
- Those workstations, laptops, printers and other DMDC standard devices that fall under the governance and overall control of the DMDC domain and Organization Unit (OU) standards for software and hardware.
    - For example: Global deployment of IE-10 and 'Lockdown' policies to all DMDC workstations would be applicable, whereas local break-fix issues or individual Commercial Off-the-Shelf (COTS) installations and modifications for a single workstation would be covered via Incident and Service Request tickets; Incident and Service Request procedures are outside the scope of this Change Management policy.

Out of scope:

The following areas are out of scope for this policy unless explicitly identified and shall be governed by the applicable policies for each:

- Development and lab environments not specifically referenced as being "In Scope" of this policy.
- Mainframe Platforms at the NPS (Naval Post graduate School)
- Service Request and Incident related activities for individual workstations, laptops, printers and other DMDC standard devices at the unit level (outside the scope of DMDC domain or Organizational Unit (OU) policy, patching requirements, etc.)
    - For example: Individual workstations and laptops used for general business purposes; workstations used for code generation, code testing or other individual purposes.

Policy Statements

Policy No.	Change Management Policy	Rationale
ChgM-1	Every change or modification to a DMDC managed computing environment is subject to the Change Management Policy and must follow the approved DMDC Change Management process and related procedures. Managed computing environments are delineated within the 'In Scope' section of this document.	Ensures the necessary visibility is provided for all changes and fundamentally this ensures consistency in process execution. Facilitates exchanging critical information related to real-time production activities.
ChgM-2	With the exception of an approved Emergency Change, no change can be made into any DMDC managed computing environment unless the change is first logged and officially approved in the designated DMDC change management / ITSM ticketing system. This policy statement applies to all changes made in DMDC managed computing environments, regardless of the type or category of the change.	This is a widely accepted and highly effective industry best practice, which is also supported through the NIST 800-53 v4 under Configuration Control and Control Objectives for Information and Related Technology (COBIT) v5 BAI06.01 through BAI06.04 This is essential for the management and recording of configuration changes and is critical for Incident Management teams who are responding to Major Incidents (aka: SRTs).

Policy No.	Change Management Policy	Rationale
ChgM-3	Any change that must be made immediately will be considered an Emergency Change. Generally, emergency changes are to restore a critical service during an outage situation and based on government priorities and direction. An Emergency Change must have a documented SRT number noted in the Emergency Change Request (ECR). In some situations an emergency change can be approved for very specific business-critical changes that are not related to an SRT or service restoration (e.g. proactive change to prevent an SRT or other service disruption); these changes must receive exception /authorization from the Division Director for that service or as appropriate from an Emergency Change Approver (ECA) and will only apply for that one specific change on that one date/time authorized.	Controlling and documenting emergency changes is a widely accepted and highly effective industry best practice which is also specifically called out as a control object in COBIT v5 BAI06.02
ChgM-4	Each CR that is submitted must have a complete and detailed Method of Procedure (MOP) document attached prior to submission for scheduling and approval. Every MOP must use the standardized MOP template which will include the business justification, detailed work instructions for the change, the verification plan, back-out plan, contact information, etc.	A detailed Method of Procedure (MOP) that will allow reviewers and approvers to understand the scope, complexity and ultimately the risks associated with the requested change. Depth and breadth of mandatory MOP details are commensurate with the complexity and overall risk profile identified within each CR.
ChgM-5	All non-emergency changes into production must be scheduled within an authorized Change Window. All approved changes must be completed within the Change Window approved for that specific change. These Change Windows are to be documented for each	The DMDC has a complex architecture with high-availability demands that cannot be compromised by change or releases that could ‘collide’ with one another and result in severe impact to the DMDC customer base or systems.

Policy No.	Change Management Policy	Rationale
	Service Environment. The Service Hours for each Environment are currently governed and coordinated via the Short Term Planning (STP) function. Change Requests must identify the Scheduled Start Date and approximate duration prior to implementation.	By viewing scheduled and approved changes for a specific day and time, the change management team has a higher probability of identifying where conflicts and collisions may occur and the incident management team can most effectively work to identify a potential cause of SRTs.
ChgM-6	All Requests for Change must be processed in a timely manner each business day. For this, every Division Approval group, Technical Review Board (TRB) and all Change Control Board (CCB) members must complete the review, risk assessment, and approval or rejection of all CRs assigned to that approval group each business day. At a minimum, TRB and CCB groups must process CRs in their queue twice each business day (morning and afternoon).	To ensure the efficient and timely execution of all changes, the responsible reviewers and approvers must make certain that all assigned requests for change are appropriately processed each day.
ChgM-7	DMDC Change Management Process Owner will ensure the change management policy and process is defined and published. The Change Management Process Manager will: 1. Ensure that the process, procedures and tools supporting this policy are documented and available, and that training is provided for all Change Management process participants and practitioners. 2. Provide reports that address the efficiency and effectiveness of the Change Management process.	The Process Owner is accountable to provide guidelines for how the Change Management process is to be performed and managed. Without an appointed Process Manager (ITIL defined and supported with a current RACI matrix), it is certain that the change process will not be properly sponsored and maintained.
ChgM-8	All Changes must be verified through review or testing before promotion into	Studies show that untested and unmanaged changes are often the cause of incidents and

Policy No.	Change Management Policy	Rationale
	Production is approved. The CR must include the necessary information to confirm and substantiate the review, or to confirm successful deployment in a Test and Pre-Production environment.	other issues that adversely impact service availability and the overall reliability of the production infrastructure. Ensuring that changes and releases are properly formed and tested not only increases the chances that issues will be identified before affecting production, it reduces the amount of productivity time lost when engineering teams are required to debug incidents and problems in production.
ChgM-9	The DMDC Information Assurance Branch (IAB) at its discretion may elect to review any and all Change Requests. The DMDC Change Management process manager will ensure that the designated IAB reviewers receive Change Request notifications from the ITSM tool.	The IAB Group is responsible for reviewing proposed changes to determine if the change will adversely modify the operational behavior of the configuration item (CI) and/or potentially violate the overall network and security policy. The IAB Group ensures that the change request follows the Security Technical Implementation Guides, DMDC Security policies, and that there is no potential loss of sensitive PII data. This review of the proposed configuration change can happen before or after the proposed change is tested
ChgM-10	Change requests must be submitted with sufficient lead time for each type of CR. The Change Management Process Manager will: 1. Provide an outline of the lead times and requirements for justifying the priority and urgency of any submitted change. 2. Document target resolution times for each authorized priority level within the Change Management process.	This is to ensure that the appropriate level of review and assessment of risk is performed, and that teams have adequate time to prepare for the change before the date of implementation.

Roles and Responsibilities

This policy calls for specific roles to be filled to ensure the effectiveness and efficiency of the Change Management process. The names of the DMDC personnel who will fill these roles will be documented and updated in the Change Management Process documentation and associated RACI matrix.

Role	Responsibility
Process Champion	The Process Champion is the business and operations interface and the person responsible for the official policy promulgation, promotion and encouragement to use the Change Management process throughout the DMDC Enterprise.
Process Sponsor	The role of the Process Sponsor is to support the Change Management policy by actively the related Change Management processes, ensuring support for the overall program and advising the IT organization on how to increase understanding and effective use of the Change Management process.
Process Owner	The Process Owner is accountable for the effectiveness of the process and efficiency of the supporting documentation for the process. This includes accountability for setting policies and providing leadership and direction for the development, design and integration of the process as it applies to other applicable frameworks and related ITSM processes being used and / or adopted for the DMDC. The Process Owner will be accountable for the overall health and success of the Change Management Process.
Process Manager	A role officially assigned to a single individual who will be accountable for all activities associated with the DMDC Change Management process. The Change Management process manager manages execution of the Change Management process and coordinates all activities required to process and manages changes. The Change Management process manager has the ultimate responsibility for the use of the Change Management process and procedures.
DMDC Leadership	It is the responsibility of all managers and leaders within the DMDC to ensure that all personnel subject to this policy are aware of this policy and are adequately trained to adhere to it.
DMDC employees and contractors	It is the responsibility of those DMDC employees and contractors who participate in the Change Management process to read, understand and work within the guidelines set forth in this policy and the related processes and procedures.

Exceptions

- Requests for exception to this policy must be submitted in writing to the Process Owner.
- Request exception will be reviewed by the Process Owner and must be further reviewed and approved by the DMDC Change Advisory Board (CAB).

Enforcement

Any violations of this policy will be reported to the appropriate member of management.

In the event that the DMDC Management believes a violation of this policy has occurred it shall notify the employee and/or vendor/supplier and provide a reasonable opportunity to address such circumstances as it believes constitute a violation of this policy.

Approvals

X

Kris Hoffman
Chief Information Officer

X

Wade Shaffer
Director, STS Division

Version Control

This DMDC Change Management Policy supersedes all existing Change Management policies or references to management of changes made in previously published DMDC Change Management, TRB-CCB or Configuration Management documentation.

Version	Date	Author	Change Description
1.0	22 Jan 2014	Corde Wagner	Final

Glossary

Term/Acronyms	Definition
Business Day	Generally Monday through Friday, 8 am to 5pm, for the organization implementing the change or providing support, not including approved holidays.
CCB (Change Control Board)	The role of the Change Control Board (CCB) is to provide a policy review of proposed changes to ensure that the proposed changes increase the operational efficiency of the DMDC IT Infrastructure in support of the mission of DMDC.
Change	The addition, modification or removal of anything identified as critical within the IT Configuration Baseline that could have an effect on IT Services. Note: For purposes of DMDC policy and the Change Management process, all synonyms for change also apply. They include but are not limited to: modify, adjust, deploy, release, configure, modification, manipulate, transform, correct, add, remove, delete, alter, switch, tweak, update, patch, upgrade, etc.
Change Advisory Board (CAB)	A group of people that support the assessment, prioritization, authorization and scheduling of changes. A change advisory board (CAB) is usually made up of representatives from: all areas within the IT service provider; the business; and third parties such as suppliers.
Change Type	**Normal:** A change that is not an emergency change or a standard change. Normal changes follow the defined steps of the change management process. **Standard Change:** A standard change is a change that could be made to a service or other configuration item for which the approach is pre-authorized by change management, and the standard change will follow an accepted and established procedure to provide a specific change requirement. By being "pre-authorized", the implementer can be allowed to perform the pre-authorized change without being required to present the requested change to change management each time the change is to be implemented. Every standard change will have a change Method of Procedure (MOP) that defines the steps to follow, including how the change will be logged and managed as well as how it should be implemented. The MOP is part of what is reviewed by change management to arrive at the decision if the standard change will be pre-authorized for use. Example of a standard change: a password reset, provision of standard equipment, low risk database maintenance, etc. **Emergency:** A change that must be introduced as soon as possible. For example: ▪ To resolve a major incident that is impacting production services ▪ To implement a critical security patch in response to an active incident in the specified environment.
Change Request	CR: Change Request. Change Order ticket type within CA USD. (See Request for

Term/Acronyms	Definition
	Change (RFC))
Customer	Someone who receives goods or services from DMDC.
Change Windows	The defined period of time allowed for a change to be implemented. By best practices changes scheduled for a specific window of time must begin and end within that established change window. Examples of Change Windows for DMDC is the "Static Maintenance Window" which is an approved time for STS changes to be performed.
Emergency Change Approvers	The ECA is a designated approval authority and subgroup of the Change Advisory Board (CAB) that makes decisions about emergency changes.
ITSM	IT Service Management: The implementation and management of quality IT services that meet the needs of the business. IT service management is performed by IT service providers through an appropriate mix of people, process and information technology.
Outage	Outage: Where a service is not available, during it's agreed upon Service Availability, to many or all users. ▪ An unstable condition, as involving an impending abrupt or unexpected disruption to production and/or to business service(s). ▪ A stoppage in the functioning of a machine or mechanism due to a failure in the supply of power, electricity, data stream, etc.
Organizational Unit (OU)	A particularly useful type of directory object contained within domains is the organizational unit. Organizational units are Active Directory containers into which you can place users, groups, computers, and other organizational units. An organizational unit cannot contain objects from other domains.
Production	Production consists of all the assets and resources used to provide services to external and internal customers, including hardware, network, operating system software, COTS software, customer facing business applications software (e.g. owned by the DEERS, RAPIDS, DAP divisions, etc.), databases, and facilities (e.g. datacenter raised floors and other network/infrastructure rooms.)
Request for Change (RFC)	A formal proposal for a Change to be made. It includes details of the proposed change, and may be recorded on paper or electronically. The term is often misused to mean a change record, or the change itself.
Service	A means of delivering value to customers by facilitating outcomes customers want to achieve without ownership of specific costs and risks.
TRB (Technical Review Board)	In DMDC the role of the Technical Review Board (TRB) is to provide a technical review, assessment, classification, and approval of proposed changes into the DMDC production environments as made by the DMDC Enterprise. The TRB is responsible for evaluating proposed configuration changes based upon the

Term/Acronyms	Definition
	predetermined criteria associated with the CR requirements.
Vendor/ Supplier	A third party responsible for supplying goods or services that are required to deliver IT services. Examples of suppliers include contractors, commodity hardware and software vendors, network and telecom providers, and outsourced organizations (e.g. Managed Services Providers, etc.).

References

- DMDC Change Management TRB/CCB Procedure Document, v17, August 2013
- DMDC Change Request Guidebook, November 2013
- DMDC Emergency-Change_Guidebook, November 2013
- DMDC Change Management Method of Procedure Guidebook, December 2013
- Management of the Department of Defense Information Enterprise, DoD Directive 8000.1, February 2009
- Recommended Security Controls for Federal Information Systems and Organizations, NIST 800-53 rev-4, National Institute of Standards and Technology, US Department of Commerce, 4/30/2013
- ISO/IEC 20000-1:2011, Clause 5
- ISO/IEC 20000-2:2012, Clause 9
- COBIT v5 Enabling Processes, ISACA, 2012
- ITIL Service Strategy, v3, TSO, 2011
- ITIL Service Transition, v3, TSO, 2011
- ITIL Service Operation, v3, TSO, 2011
- The Visible Ops Handbook, IT Process Institute, 2010

IT Service Management (ITSM) Configuration Management Policy

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Purpose

The purpose of this Policy is to establish a DMDC wide Configuration Management Program and to provide responsibilities, compliance requirements, and overall principles for Configuration Management process that supports information systems and technology management across all of the DMDC.

Scope

In scope:

This DMDC Configuration Management policy applies to employees, contractors, consultants, and other workers at the DMDC, including all personnel affiliated with third parties who have a need to implement a change to any DMDC configuration item (CI). This includes but is not limited to modifications to any configuration item in the following environments:

- Production (including 24x7)
- Contractor Test (CT)
    - Demo1 and Demo2
- Disaster Recovery (DR)
- Stress Test
- QA
    - Model1 and Model2
- DEV
    - Test1 and Test2

Out of scope:

The following areas are out of scope for this policy unless explicitly identified and shall be governed by the applicable policies for each:

- Development and lab environments not specifically referenced as being "In Scope" of this policy.
- Mainframe Platforms at the NPS (Naval Post graduate School)
- Service Request and Incident related activities for individual workstations, laptops, printers and other DMDC standard devices at the unit level (outside the scope of DMDC domain or Organizational Unit (OU) policy, patching requirements, etc.)
    - For example: Individual workstations and laptops used for general business purposes; workstations used for code generation, code testing or other individual purposes.

Policy Statements

Policy No.	Change Management Policy
CfgM-x	DMDC shall establish, implement, and enforce configuration management controls on all services, systems, networks and applications deemed to be in-scope of this policy.
CfgM-x	The Information Assurance requirements will be identified and included in the design, acquisition, installation, operation, upgrade, or replacement of all DMDC information systems configurations.
CfgM-x	Every change or modification to a DMDC managed configuration is subject to the Change Management Policy and must follow the approved DMDC Change Management process and related procedures.
CfgM-x	Configuration Management shall be performed by documenting requirements; maintaining consistency between critical assets and their respective critical administrative information and approved configurations; and ensuring that approved changes to configurations are reflected in the configuration documentation.
CfgM-	There shall be a documented procedure for recording, controlling and tracking versions of CIs. The degree of control shall maintain the integrity of services and service components taking into consideration the service requirements and the risks associated with the CIs. • All changes to work products under configuration management control, i.e. Configuration Items (CI), will be tracked and controlled by means of a change request. • Configuration items will be identified in the change or release request form and

Policy No.	Change Management Policy
	before any change is implemented to the configuration item. • Records of configuration items will be established and maintained as defined in the CM plan.
CfgM-x	Configuration Management Database (CMDB): • The organization will use a single or federated repository for storing all information related to hardware and software configuration items and the associated configuration management relationships / dependencies. • Changes to CIs shall be traceable and auditable to ensure integrity of the CIs and the data in the CMDB. • Master copies of CIs recorded in the CMDB shall be stored in secure physical or electronic libraries referenced by the configuration records. This shall include at least documentation, license information, software and, where available, images of the hardware configuration.
CfgM-x	Configuration Management process will implement and ensure that a regimented set of standard operating procedures (SOPs) are followed, to include but not limited to: • Configuration Identification: Selecting and identifying the configuration structures for the entire infrastructure CIs, including the owner, interrelationships, and configuration documentation. • CI Naming Conventions, Classification and Relationships: CIs shall be uniquely identified and recorded in a CMDB. The CMDB shall be managed to ensure its reliability • and accuracy, including control of update access. • Configuration Control: Ensuring that only authorized and identifiable CIs are accepted and recorded from receipt to disposal. • Configuration Status Accounting: The reporting of all current and historical data concerned with each CI throughout its life cycle. • Configuration Verification and Audit: A series of reviews and audits that verify the physical existence of CIs and check that they are correctly recorded in the CMDB.
CfgM-x	Configuration Baseline: • A configuration baseline of the affected CIs shall be taken before deployment of a release into the live environment.

Policy No.	Change Management Policy
	• Configuration of critical DMDC assets shall be documented in configuration management tool at levels necessary to design, construct, operate, support and dispose of an asset. • The level of detail documented shall be tailored and proportionate to the product's scope, importance, complexity, production quantity, performance requirements, budget, and schedule. • At a minimum, the configuration baseline shall identify the product's performance, functional, and physical attributes, including internal and external interfaces. • The baseline shall also include traceability of the lowest level configuration items (CIs) to the highest level requirements (i.e., a traceability matrix). • Authorized deviations from an asset's configuration baseline shall be documented.
	Asset Management • There shall be a defined interface between the configuration management process and the asset management process. • All assets used to deliver services will be managed according to relevant statutory, regulatory and financial requirements and contractual obligations. Assets will be managed by effective procedures. • Asset management requires an accurate configuration management database (CMDB), or equivalent means of record keeping, to be established and used effectively. Information in the CMDB will be kept current by effective service management processes, e.g. changes to the CMDB to be approved via the change management process.
CfgM-x	Documentation • All designated documentation relating to the processes of configuration management and deployment will be placed under configuration and change management control. • Note: Designated work products include, but are not limited to, roles and responsibilities, standards, guidelines, process descriptions, procedures, templates, SOPs and work instructions.
CfgM-x	Stakeholders: • Stakeholders in the relevant configuration management and deployment processes

Policy No.	Change Management Policy
	will be identified and engaged as necessary. • A list of relevant stakeholders will be established and maintained.
CfgM-x	Configuration Audit: • The final step in any approved change will be an update and verification of the CMDB. The Configuration Manager will oversee the verification of CIs in the change record. • The service provider shall audit the records stored in the CMDB, at planned intervals. Where deficiencies are found, the service provider shall take necessary actions and report on the actions taken. • Configuration audits shall be performed to verify that configuration management requirements have been met and that the requirements have been accurately documented before a configuration is baselined or is migrated to the production environment. In addition, developmental and operational systems shall be periodically reconciled against their documentation to ensure consistency between production and its current baseline documentation. Verification of the incorporation of modifications is a critical function of this activity. Periodic audits of software and hardware configuration baselines in the production environment shall be performed to ascertain that no unauthorized changes have been made without proper approval.
CfgM-x	Management Oversight: • The status of the configuration management process and practices will be reviewed with senior management on a regular basis • Issues identified will be logged and resolved as part of the Continual Service Improvement program.

Roles and Responsibilities

This policy calls for specific roles to be filled to ensure the effectiveness and efficiency of the Configuration Management process. The names of the DMDC personnel who will fill these roles will be documented and updated in the Configuration Management Process documentation and associated RACI matrix.

Role	Responsibility
Process Owner	The Process Owner is accountable for the effectiveness of the process and efficiency of the supporting documentation for the process. This includes

Role	Responsibility
	accountability for setting policies and providing leadership and direction for the development, design and integration of the process as it applies to other applicable frameworks and related ITSM processes being used and / or adopted for the DMDC. The Process Owner will be accountable for the overall health and success of the Configuration Management Process.
Process Manager	A role officially assigned to a single individual who will be accountable for all activities associated with the DMDC Configuration Management process. The Configuration Management process manager manages execution of the Configuration Management process and coordinates all activities required to process and manages changes. The Configuration Management process manager has the ultimate responsibility for the use of the Configuration Management process and procedures.
DMDC Leadership	It is the responsibility of all managers and leaders within the DMDC to ensure that all personnel subject to this policy are aware of this policy and are adequately trained to adhere to it.
DMDC employees and contractors	It is the responsibility those DMDC employees and contractors who participate in the Configuration Management process to read, understand and work within the guidelines set forth in this policy and the related processes and procedures.

Exceptions

- Requests for exception to this policy must be submitted in writing to the Process Owner.
- Request exception will be reviewed by the Process Owner and must be further reviewed and approved by the DMDC Change Advisory Board (CAB).

Enforcement

Any violations of this policy shall be reported to the appropriate member of management.

In the event that the DMDC Management believes a violation of this policy has occurred and the conduct is capable of being addressed, it shall notify the employee and/or supplier and provide a reasonable opportunity to address such circumstances as it believes constitute a violation of this policy.

Policy Approval

Approvers	Title and/or Affiliation	Approval Date
Kris Hoffman	Chief Information Officer, DMDC and Process Champion	
Wade Shaffer	Director, Systems and Technical Support Division, DMDC	

Version Control

This DMDC Configuration Management Policy supersedes all existing Configuration Management policies or references to management of configurations made in previously published DMDC Change Management, TRB-CCB or Configuration Management documentation.

Version	Date	Author	Change Description
1.0	27 April 2014	Corde Wagner	Initial Rewrite – Draft

References

- DMDC Change Management TRB/CCB Procedure Document, v17, August 2013
- Management of the Department of Defense Information Enterprise, DoD Directive 8500.01 and 8500.02
- Recommended Security Controls for Federal Information Systems and Organizations, NIST 800-53 rev-4, National Institute of Standards and Technology, US Department of Commerce, 4/30/2013
- ISO/IEC 20000-1:2011, Clause 9.1
- COBIT v5 Enabling Processes, ISACA, 2012
- ITIL Service Strategy, v3, TSO, 2011
- ITIL Service Design, v3, TSO, 2011
- ITIL Service Transition, v3, TSO, 2011
- ITIL Service Operation, v3, TSO, 2011

Department of Defense
Defense Manpower Data Center
Systems Lifecycle Management
Information Technology Support Services

IT Asset Management
Standard Operating Procedures

Version 2.0

DOC ID: DMDC_ITAssetMgt_SOP_2013v2.0

OCTOBER 10, 2013

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Document Revision History

Revision History	Date	Summary of Changes	Author
0.1	09/10/2012	Initial Standard Operation Procedure	Vic Giordano
1.0	12/06/2012	Version 1.0	Diane Justice
2.0	10/10/13	Version 2.0	Cid Hart

Record of Acceptance/Approval

Program Manager		
Printed Name: Al Hudson		Date:
Signature:		
Customer		
Printed Name: Wade Shaffer		Date:
Signature:		
Printed Name:		Date:
Signature:		

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1 Introduction

Asset Management is a standard accountancy process concerned with maintaining details of assets above a certain value and their depreciation. Asset Management systems may include information on the values, current ownership and location of assets in the UAPM Asset Repository but, unlike Configuration Management, will not record configuration attributes or the relationships between assets or performance histories through associated service desk records.

The procedures found in this document define those steps that will be used to ensure compliance with Department of Defense asset management standards.

2 Objective

The overall goal of the DMDC Asset Management Process Standard is to bring about a standardized process methodology such that all IT assets may be acted on in an efficient and timely manner to effectively maintain the accuracy and completeness of the DMDC asset repository.

3 IT Asset Lifecycle Processes

DMDC assets are managed from the point they enter the DMDC environment until the time they are disposed of (excessed). Asset Management is engaged through the following processes:

- Procurement process – obtain new assets
- New Asset Registration subprocess – update CMDB for newly procured assets
- Transfer process – move assets within DMDC (site to site)
- Excess process – dispose of assets at end of life
- Excess Asset registration subprocess – update CMDB for disposed assets

3.1 Procurement Process

New assets enter the DMDC environment by way of the Procurement Process. The process is briefly summarized below. The procedural details of this process can be found **here.**

1. When new equipment is needed by STS, a Government Purchase Card (GPC) or Procurement Request and Funding (PR&F) Form is filled out and attached it to a USD Service Request (SR), along with one or more vendor quotes:
2. The SR is transferred to the Requestor's Branch Director and then to the Division Director for review and approval.
3. Once approved, the Division Director (or Deputy) creates an "I Need" request, and transfers the SR to the Asset Manager for processing.
4. After the "I Need" request has been approved, it is forwarded to the BOM for processing and fulfillment.

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5. The Asset Manager receives the SR, and determines whether the assets listed on the procurement form need to be registered in the CMDB, or whether only confirmation of receipt is required. A child ticket is created with instructions to the Asset Recipient for next steps required.
    a. Receipt Confirmation only - when consumable assets are received, the person receiving the assets will sign and date the packing slip, scan and attach it to the child ticket, and transfer the ticket to the Asset Manager for closure. At present, consumables are not tracked in the CMDB, but are tracked locally at each DMDC site by the Desktop team.
    b. Receipt Confirmation and New Asset Registration - fixed assets require Receipt Confirmation and New Asset Registration. When fixed assets are received, the asset recipient signs and dates the packing slip, scans and attaches it to the child ticket, and transfer the ticket to the Asset Manager. At that point, the Asset Manager works with the Asset Recipient to complete the New Asset Registration Subprocess (3.1.1).

3.1.1 New Asset Registration Subprocess

The New Asset Registration subprocess is engaged when fixed assets are received into the DMDC environment, and is the means by which fixed assets are tagged with barcode asset tags, and asset records are created in the CMDB.

When the child ticket is reassigned to the Asset Manager, the ticket contains a packing slip that contains the serial numbers of the items that were received at DMDC. The Asset Manager works with the Asset Recipient to attach a barcode inventory tag to each asset and complete the asset registration data spreadsheet. Figure 1 shows the asset registration spreadsheet template.

Required	Required	Required	Required	Required	Required	Required	Optional	Required	Required	Optional	Optional	Optional	Optional	Optional
USD Ticket# for Procurement	Date Received	Site	Manufacturer	Model Name	Serial Number	Inventory Tag	Asset Type	Asset Class	Primary Contact	PO Number	Requisition ID (help desk ticket number)	Purchase Date	Ship Date	Maintenance Vendor

Figure 1

The asset registration spreadsheet template may be found **here**

When complete, the spreadsheet file is attached to the child ticket for documentation purposes. The Asset Manager is responsible for ensuring that the asset records are created in the CMDB. Records may be created manually or, if the number of records is numerous, the spreadsheet file may be attached to a USD Service Request, which is assigned to the Tools team. The Tools team will then use the spreadsheet to import the data into new records en masse. When this ticket is closed by the Tools team, the Asset Manager verifies the records are correct, and closes the Asset Registration ticket.

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3.2 Asset Transfer Process

Assets may also move within DMDC from one DMDC site to another via the Transfer process. This process involves the preparation and shipment of assets from one site, receipt of assets at another, and updating asset records in the CMDB. These activities are documented from beginning to end in a USD Service Request.

The Transfer process involves the following procedures:

- Creating a USD Service Request
- Filling out a Chain of Custody Record – this document can be found here
- Shipping the assets to the receiving site
- Updating the CMDB
- Verifying assets received and updating the Request ticket

3.2.1 Creating a USD Service Request

The Service Request ticket is initiated by the individual sending assets to a remote DMDC site. When the shipment is shipped, the sender and advises the recipient of the tracking number and reassigns the ticket to the recipient.

The Request ticket needs to be filled out documenting who the assets are being shipped to and what is being shipped.

Table 1 below shows the field values needed to create an Asset Transfer ticket in USD.

Affected End User	Asset Manager
Assignee	The person receiving the assets
Request Area	Tracking.AssetMgmt
Summary	Enter “Asset Transfer: (shipping site) to (receiving site)
Description	Enter quantity and type of assets (ex. 10 monitors)

Table 1

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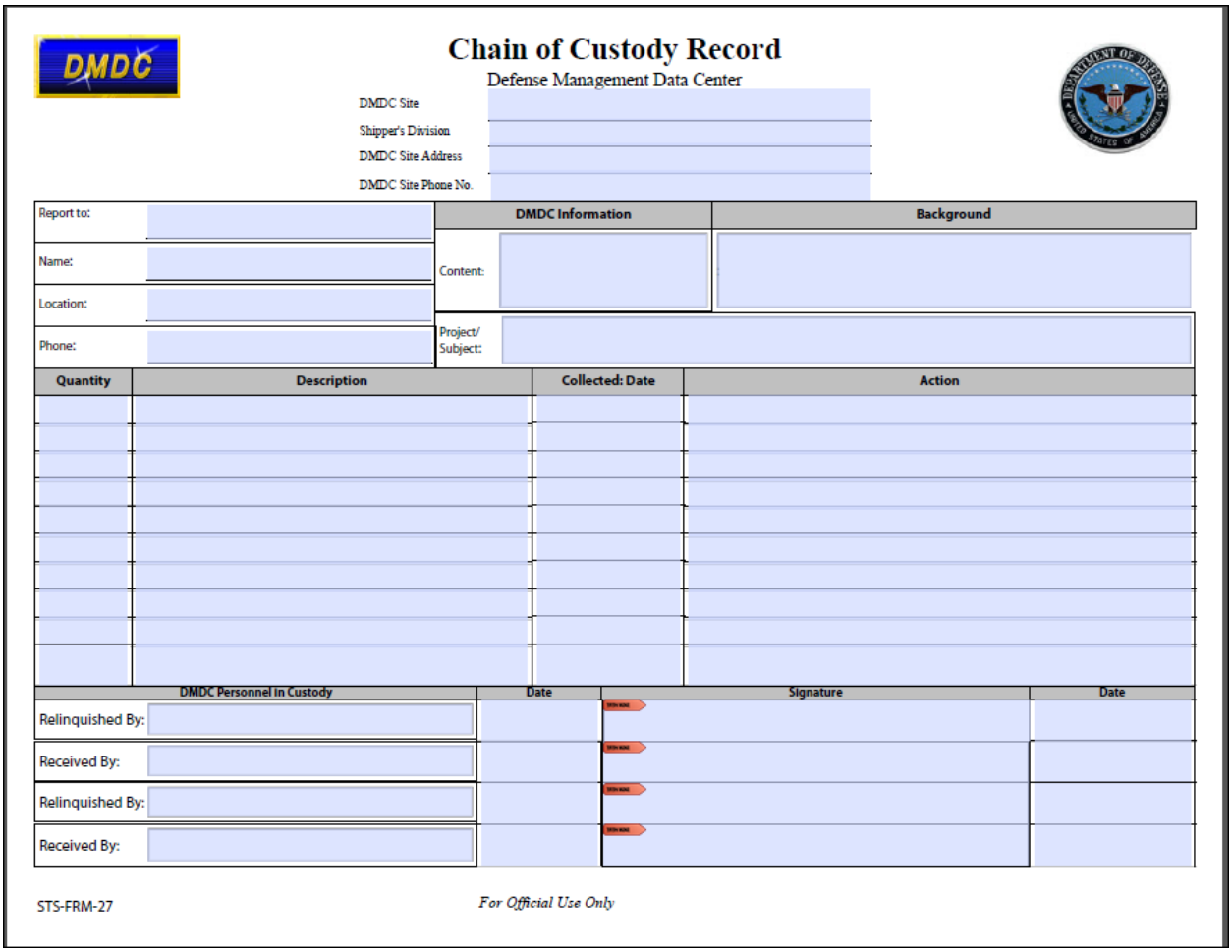
3.2.2 Filling Out the Chain of Custody Record

The asset data for each item shipped is recorded electronically into a Chain of Custody Record. Use one line per serial number – more than one page may be needed. Figure 2 shows a sample of the form.



Chain of Custody Record

Defense Management Data Center

DMDC Site
Shipper's Division
DMDC Site Address
DMDC Site Phone No.

		DMDC Information	Background
Report to:		Content:	
Name:			
Location:			
Phone:		Project/ Subject:	

Quantity	Description	Collected: Date	Action

DMDC Personnel In Custody		Date	Signature	Date
Relinquished By:				
Received By:				
Relinquished By:				
Received By:				

STS-FRM-27

For Official Use Only

Figure 2

Once the form has been filled out, it must be:

1. Printed, signed, and dated at the first "Relinquished By:" box
2. Placed in one of the boxes that the assets are contained in, or securely attached to one of the assets in the shipment.

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Table 2 below describes the data that needs to be entered in the Chain of Custody Record fields:

DMDC Site	The site the assets are being shipped FROM
Shipper's Division	The division of the person responsible for shipping the assets
DMDC Site Address	The address the assets are being shipped FROM
DMDC Site Phone No.	The phone number of the person shipping the assets
Report To	The gov't employee at the SHIP FROM site who authorized the shipment
Name	The name of the person responsible for shipping the assets
Location	The City and State the assets are being shipped FROM
Phone	The phone number of the person responsible for shipping the assets
Content	Summary of items shipped (ex. 3 servers)
Background	Any other pertinent asset information
Project/Subject	Reason the items are being shipped
Quantity	Enter "1" (one line for each serial number)
Description	Model, serial number and asset tag number
Collected Date	Date of shipment
Action	'Transfer asset from (shipping City, State) to (receiving City, State)"
Relinquished By	Shipper's name
Received By	Receiver's name

Table 2

3.2.3 Shipping the Assets to the Receiving Site

When the assets have been shipped, the shipper obtains a tracking number from the Mailroom, and notifies the recipient and the Asset Manager of the tracking number so they will know when to expect delivery. The shipper then assigns the Transfer ticket to the asset recipient.

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3.2.4 Updating the CMDB

Once the asset data has been collected for the items being shipped, the CMDB is updated accordingly by the Asset Manager. Table 3 below shows which CMDB fields must be updated when assets are moved from site to site within DMDC.

Asset Name	Incorporate the new site in the naming convention
Location	The new site location
Floor Number	The floor number where inventory is kept prior to deployment
Room Number	The room number where inventory is kept prior to deployment
Contact	Name of responsible person or group receiving the assets
Service Status	(located on tab 4) Available
Notes	(Date): Shipped to (recipient) in (new location) on (date shipped) via Fedex (tracking number) per ticket (ticket number).

Table 3

3.2.5 Verifying Assets Received

When the recipient of the assets receives the shipment, they retrieve the Chain of Custody Record and verify the assets in each box with the items listed on the Chain of Custody Record. If the contents of the shipment match up with each item listed on the Chain of Custody Record, then the recipient signs the Chain of Custody in the “Received by” field under the ‘Relinquished by” field and files the form for retention. If the assets contained in the shipment do not match what is documented on the Chain of Custody Record, then the recipient contacts the Asset Manager to report the discrepancy, and the Asset Manager will engage the asset recipient and asset sender (and the shipping company if necessary) and work with all parties until the matter is resolved.

After confirming the contents of the shipment, the asset recipient then verifies changes have been made correctly for each asset in the CMDB. If adjustments are required, then the asset recipient contacts the Asset Manager to resolve such anomalies and the Asset Manager then updates the affected records.

The recipient then updates the Activities section of the transfer Request ticket indicating reception of shipped asset and closes the ticket.

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3.3 Excess Asset Registration subprocess

The Excess Asset Registration subprocess is engaged by Systems personnel when the Asset Manager is advised that an asset (or collection of assets) is to be decommissioned from production use, removed from active inventory status, and delivered to Operations Support for DRMO processing. This subprocess is comprised of the following procedures:

- Creating a USD Service Request
- Completing the Excessed Assets tracking spreadsheet
- Verifying the asset data and updating the CMDB

3.3.1 Creating a USD Service Request

The Service Request ticket is initiated by the Asset Manager when advised by the asset owner that one or more assets will be excessed.

1. Asset Manager is notified by the asset owner that one or more assets will be excessed.
2. Asset Manager creates a New Request from Template 149588 in USD.
3. Asset Manager attaches the Excesssed_Assets.xls tracking spreadsheet to newly generated Request ticket.
4. Asset Manager assigns Request to Systems staff responsible for tracking assets through Excess process.

3.3.2 Completing the Excessed Assets tracking spreadsheet

1. All required fields, such as serial number, must be filled out completely by Systems staff for each asset being excessed.
2. If the asset being excessed contains a hard drive, a DTID (Disposal Turn-In Document) number must be obtained from Operation Support.
   (Note: *Any tasks that Operations Support delivers to Systems staff that are excessing this asset must be carried out completely and accurately, or the DRMO process will not able to execute efficiently*. *Such tasks could be degaussing the hard drive, labeling asset components with documents provided by OS, etc. – these tasks are described in detail in section 3.4 - Excess process)*
3. Systems staff then attaches the completed tracking spreadsheet to the Request ticket.
4. Request ticket is then reassigned to the Asset Manager for review and processing.

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3.3.3 Verifying the asset data and updating the CMDB

1. The Asset Manager verifies that all required fields are filled in with appropriate data.
2. If all entries are complete and acceptable, the Asset Manager updates each asset's corresponding record in the CMDB. Table 4 below shows which CMDB fields must be updated.
3. When each asset being excessed is completed, the Asset Manager closes the Request ticket. The assets are inactive and no longer part of Systems inventory.

Record Status	Inactive
Service Status	(tab 4) Disposed of
CI?	NO
Location	Delete all reference to location (site, floor, room, etc)
Contact	Delete all references to contact (may need to use “Update Contacts” button to remove any “Other Contacts” listed)

Table 4

Systems is responsible for collecting each asset decommissioned by the Excess Asset Registration process and delivering them to Operations Support for DRMO processing.

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3.4 Excessed Asset Process

Once hardware assets have been registered as Excess in the CMDB, the Excess Process is the means by which hardware assets are prepared to be physically removed from the DMDC site and either shipped to a DRMO site or disposed in an on-site E-Waste bin. Systems is responsible for collecting assets that are to be disposed of and either delivering them to Operations Support for DRMO processing, or depositing them into an E-waste bin.

Two forms are required in order to send excessed hardware to DRMO. These forms are:

- DLA form 2500 (replaces old DLIS form #1867), Certification of Hard Drive Disposition.
- Issue Release/Secure Receipt. An AMPS account is required in order to file this form. Contact the POC's below according to the location of the asset(s) being excessed.
    - Seaside POC: Barbara Price
    - Mark Center/ East Coast POC: Greg Asma

The Excess process involves the following procedures:

- Filling out the shipping manifest
- Submitting the electronic request form to receive DTID number
- Preparing the equipment for shipping
- Turning in hard drives and magnetic media
- Disposing E-waste and other equipment such as the keyboard, mouse, cables, etc.
- Updating the CMDB

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3.4.1 Filling out the shipping manifest

Seaside site: Contact Barbara Price (x4080) and notify her about any items being prepared for DRMO shipping, to obtain a DTID. Note that Ms. Price submits the electronic requests for all DRMO out of Seaside and prepares documentation for approval from DRMO to receive the excess equipment.

Mark Center and other East Coast sites: Contact Greg Asma (571-372-1028) to obtain a DTID. Mr. Asma submits electronic requests for all DRMO out of the Mark Center and prepares documentation for approval from DRMO to receive the excess equipment.

The Shipping manifest template and LSN table may be found here.

1. Take a general inventory of all excess and determine what goes to DRMO and what can go to E-waste (see section 3.4.5 for E-waste items).

2. For DRMO items, populate the Shipping Manifest template with item information—make, model, LSN, serial number, blue asset tag (former) or barcode asset tag (new). Figure 3 shows a populated shipping manifest.

3. Contact the local the AMPS account POC to receive a Disposal Turn-In Document (DTID) number.

a. DTID is composed of:

i. **DODAC** (which represents the shipping site, e.g. **H98259** for DMDCW)

ii. **Request number** (generated after drop-off submission, e.g. **3023**) and

iii. **Pallet number** (in this example, Pallet 3 is **0003**)

iv. **Item delineation** by Letter

Figure 3 shows an example where there are only two LSNs, first being a blank suffix and the second the letter **A**. If you have five different LSNs on a pallet, they would be identified up to letter **D**. Each letter corresponds to the correct LSN for that specific pallet.

4. The asset information will be used to update the appropriate records in the CMDB once the items have been shipped to DRMO.

5. Each pallet will contain a shipping manifest printout that identifies the pallet items.

	A	B	C	D	E	F	G	H
1	DTID	Item	Make	Model	LSN	Blue tag	Serial	Barcode
5	H98259-3023-0003	Workstation	Gateway	2000	7010DSWORKST0	9708	9557156	
6	H98259-3023-0003	Workstation	Gateway	2000	7010DSWORKST0	9687	9557194	
7	H98259-3023-0003A	Printer	HP	4600 hdn	7025DSLASERPR	22522	JPAKD10712	
8	H98259-3023-0003A	Printer	HP	4600 hdn	7025DSLASERPR	12521	JPCKF24248	
9	H98259-3023-0003A	Printer	HP	9500dn	7025DSLASERPR	26020	JPCBB10399	
10								

Figure 3

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3.4.2 Scheduling a DRMO drop-off appointment

This procedure is performed by Barbara Price (Seaside site) and Greg Asma (Mark Center and East Coast sites)

1. Complete and submit an Issue Release/Receipt Document (DD 1348-1A) to DRMO.
2. Once the DD Form 1348-1A is approved, an appointment to deliver property to DRMO can be scheduled.
3. Advise the Requestor and the Asset Manager when the shipment has been sent to DRMO.

3.4.3 Preparing the equipment for shipping

Important: If the hard drive has been removed from any workstation, server, laptop or printer, **DLA form #2500 (See Figure 5) must be filled out and attached to the chassis**.

DLA Form 2500 can be found here.

Hard drive destruction must be documented separately (see 3.3.4 Turning in Hard Drives for breakdown of magnetic media destruction)

1. Secure data cards, CD-ROM media, back-up tapes, memory sticks, floppy disks, etc.
2. Remove hard drives:
    a. Hard drives must be degaussed and crimped, and boxed separately before sending to DRMO (see 3.3.4 Turning in Hard Drives for additional instructions).
3. Group all similar items by pallet in accordance with the shipping manifest.
4. Secure equipment to pallet(s) using shrink wrap.
5. Attach a printout of the pallet's shipping manifest to each pallet.

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CERTIFICATION OF HARD DRIVE DISPOSITION

Check if hard drive or similar data storage components have been removed.

This certifies this hard drive:

Serial No. Barcode No.

Make/Model

was Overwritten / Degaussed / Destroyed in accordance with DoD Memo dated June 4, 2001, "Disposition of Unclassified DoD Computer Hard Drives", on (Date)

Software / Degausser

(Manufacturer, Product Version, Date)

Method of Destruction

(e.g., approved metal destruction facility)

DTID No. / Hand Receipt No.

Generator Name

Phone Email

Printed Name Rank/Grade

Signature Date

DLA FORM 2500, APR 2013 (Replaces all similar forms) hide this label

CERTIFICATION OF HARD DRIVE DISPOSITION

Figure 5: DLA Form 2500: Certification of Hard Drive Disposition

3.4.4 Turning in Hard Drives and other Magnetic Media

1. New hard drives inside unbroken packaging do not need any labels or certification.
2. **Hard drives that are going to be destroyed do not require DLA form 2500 to be filled out.**
    a. All hard drives that are being turned in to DRMO as scrap **must** be destroyed (degaussed and crimped) prior to being shipped.
3. All other magnetic media (including tapes) **must** be degaussed.
    a. Tapes and other magnetic media **must** be identified by unique LSN's and boxed separately.

<u>Keep like items together – MIXING MAY RESULT IN SHIPMENT BEING REJECTED</u>

3.4.5 Disposing E-Waste and Other Equipment

1. The following items can be classified as E-Waste and mixed together in the e-Waste bin:
    a. Keyboards, mice, cables, analog phones, miscellaneous computer components
2. The following items are E-Waste but must be grouped by item type, and may be palletized for ease of transport.
    a. Monitors, printers that do not contain hard drives
        i. CMDB must be updated for these items

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3. Return empty toner cartridges to the mail room (Mark Center) or appropriate receptacle in the warehouse (Seaside). Non-HP toner must be placed in the appropriate recycling bin. HP toner boxes contain a return label that must be used to return the empty cartridge.
4. Blackberries and other mobile devices can be turned in to DRMO once their batteries have been removed.
5. Batteries should be placed in the appropriate “battery-only” disposal receptacle.

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Systems Content Management Official Resources

Summary:
This article outlines the official Content Management Resources of the Systems & Technical Support Division. The Systems Document Library on SharePoint and the USD Knowledge Base are the two official resources of Systems Content Management.

Purpose:
User requires more information about Systems documentation resources.

All content published by these resources has been processed through the Systems Content Management review process. Systems has two official resources for Systems Documentation. They are:

1. The Systems Document Library on SharePoint
2. The Knowledge Base in Unicenter Service Desk.

Systems Document Library on SharePoint

The Systems Document Library is a collection of documents that have been processed through the Systems Document Control procedure. During the Systems Document Control procedure, documents are assigned unique Document Control Numbers (DCN's) and formatted in the official Systems Document Template.

The Systems Document Library includes, but is not limited to, the following document types:

- Policy
- Procedures
- Standard Operating Procedures
- Process Documents
- Reference Documents
- Service Level Agreements
- Forms
- Checklists
- Templates

DCN documents established through this process are considered official Systems documentation. DCN documents differ from knowledge documents because they tend to be more lengthy, thorough, and go through a more stringent approval process before they are published. These documents are considered upper-tiered documents, i.e., documents that have mandatory procedures, be considered official procedures, and be approved by senior management. For more information on how to request a DCN document go to: **How to Request a Document through the Systems Document Control Process**.

SharePoint is used as a repository for all Systems published documentation. The Systems Document Library structure is based upon Systems functional areas. The documents in the Systems Document Library are arranged by category. These categories are:

- Account Management
- Asset Management
- Blackberry
- CAC
- Certificate Management
- Change Management
- Configuration Management
- Content Management
- Data Center

- Defense Connect Online
- Desktop
- Disaster Recovery
- Email Management
- Employee Action Form (EAF)
- Forms Management (Systems)
- Hardware
- Incident Management
- Laptop
- Network
- Oracle
- Password Management
- Patching
- Problem Management
- Procurement
- Production
- Remote Access
- Security
- Server
- Software
- Technical Review Board
- Unicenter Service Desk
- Unix
- Video Teleconferencing
- Virus

Note that the Systems Document Library also has a search function that allows the user to search for the type of document.

For each published document, additional information is provided within the document's properties, such as the individual document's:

- Title
- Document Control Number (DCN)
- Document Owner
- Description

The **Systems Document Library** is located from the Systems SharePoint web page. Also, note that at the bottom of the **Systems SharePoint page** is a link to the Content Management web page where the user can request a document via the Document Request Form.

Knowledge Base in Unicenter Service Desk

The Knowledge Base in the Unicenter Service Desk is the Systems knowledge repository for: "how to" documentation, abbreviated Systems procedures and policies, quick reference documentation, and known-error documentation. The Knowledge Base solution provides dynamic self-service information to Systems analysts and DMDC Enterprise users. The Knowledge Base, also known as Knowledge Tools, provides rapid access to content through a web interface.

The Knowledge Base includes, but is not limited to, the following document types:

- How To and Troubleshooting documentation
- First Call Resolution documentation for the Systems Enterprise Helpdesk

- Policy Overviews
- Procedures
- Standard Operating Procedures
- Reference Documents
- Service Level Agreements

Knowledge Base documents established through this process are considered official Systems documentation. Knowledge documents are reviewed through the Knowledge Document workflow process before they are published. For more information about how to create a knowledge document, go to: **How to Create a Knowledge Document**. Knowledge documents are reviewed annually (unless content requires a greater review frequency). They differ from DCN documents because they tend to be more brief and capture only essential information. These documents tend to be lower-tiered documents, i.e., documents that are not necessarily mandatory and do not need senior management approval. These documents should always refer to the upper-tiered documents (DCN documents) as the official Systems policies, procedures, processes, etc.

Access to knowledge documents are based upon the knowledge document subject. There are documents within the Knowledge Base that are only available to Systems personnel. Several Systems documentation available to DMDC Enterprise users are posted on SharePoint as a link that directs users to the Knowledge Base documents. When documents are accessed, the Knowledge Base captures document "hits" which allows the Systems Content Management team to capture the frequency of use for each document.

The Knowledge Base is only as good as the information submitted by Systems personnel. Participation is highly encouraged.

Knowledge Management (KM)

Knowledge Management purpose is to align IT services with the business, improve the quality and cost-effectiveness of IT services by installing ITIL Best Practices within each Knowledge Document . KM controls the provision and support of IT services that are tailored to meet the needs of the organization. Effective KM published processes should minimize or eliminate basic IT operating errors.

Currently, Systems maintains over 300 Knowledge Articles, including How To's, in the Knowledge document repository and 300 documents, including policies, forms and procedures, on SharePoint.

Provide documentation and technical writing services that include developing and maintaining documentation related (but not limited to) hardware, software, PKI, Systems processes/policy and Systems resources/tools. Develop and maintain training materials (i.e. VTC), forms, templates, checklists for the division. Record and maintain notes for key meetings (i.e. Maintenance Contract Meeting). Develop and post announcements as requested (i.e. SharePoint, Service Desk).

Knowledge Management will partner with Systems teams and Knowledge stakeholders to ensure correct content is published and new knowledge documents are identified.

Provide Knowledge Management support services to that streamline and improve KM processes, facilitate, train and sustain the ability of KM users to interface with systems, customers and facilitate the creation and advancement of KM process improvement initiatives.

Improve the KM integration with the current Service Desk Tool (or whatever is selected) with SharePoint ensuring maximum users are able to access a self-service knowledge management environment based upon authentication and authorized use. Restrict access to knowledge for different user communities.

AQLs:

AQL: All Documentation in the Knowledge Repositories will be reviewed, at minimum, a quarterly basis. Once update is provided/identified, document will be updated and published within 5 business days.

AQL: New documents requested, depending on the complexity, will be provided with 5 business days.

AQL: Published content will be 95% accurate.

Deliverables:

- 90 days after contract award, the Contractor will provide a Health Report of the Knowledge Management Program, along with any recommendations. Health Report will be provided quarterly to the Government.

- 90 days after contract award, the Contractor will provide a Knowledge Management Program SOP document.

- Provide monthly Knowledge Usage report (i.e. hits) .
- Provide Annual Report of Knowledge Management Program status.

National Security Systems Public Key Infrastructure

Department of Defense
Registration Practice Statement

Version 5

13 June 2012

In Compliance With

CNSS Instruction No. 1300
National Security Systems Public Key Infrastructure
X.509 Certificate Policy

Version 1.1

June 2011

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1 INTRODUCTION

See *CNSS Instruction No. 1300, Instruction for National Security Systems Public Key Infrastructure X.509 Certificate Policy* [CNSSI 1300].

1.1 OVERVIEW

See [CNSSI 1300].

1.1.1 Certificate Policy

This Registration Practice Statement (RPS) conforms to [CNSSI 1300].

1.1.2 Relationship between the Certificate Policy and the Certification Practice Statement

This RPS conforms to [CNSSI 1300].

1.1.3 Scope

This RPS applies to Registration Authority (RA) Officers from the CC/S/A that participate in the issuance process for all certificates issued to named individuals that assert a [CNSS 1300] Policy Object Identifier (OID) (see Section 1.2). This RPS also applies to the individuals responsible for these certificates, persons operating an RA System, and Trusted Agents (TAs) appointed by an RA Officer operating under this RPS.

It does not address requirements that are addressed by the CA specific information. That is addressed in the *National Security Systems (NSS) Public Key Infrastructure (PKI): Department of Defense (DoD) Subordinate Certification Authority System (CAS) Certification Practice Statement (CPS)* [CAS CPS]. It also does not address process for issuance of certificates as described in the *NSS PKI DoD Non Person Entity (NPE) CAS CPS* [NPE CAS CPS]. It does include nomination, credentialing and security controls for the NPE Verifying Officials (NVOs).

1.1.4 Interoperation with CAs Issuing Under Different Policies

See [CNSSI 1300].

1.2 DOCUMENT NAME AND IDENTIFICATION

The official title of the RPS is the "*Department of Defense Registration Practice Statement.*"

This RPS is involved in the issuance of certificates that assert the following Policy OIDs, defined in [CNSSI 1300]:

id-cnss-policies:: = {joint-iso-itu-t(2) country(16) us(840) organization(1) gov(101) csor(3) pki(2) cert-policy(1) cnss(21)}

id-CNSS-software	ID::={id-CNSS-policies (1)}
id-CNSS-hardware	ID::={id-CNSS-policies (2)}
id-CNSS-device	ID::={id-CNSS-policies (3)}

1.3 PKI PARTICIPANTS

1.3.1 CNSS Policy Management

See [CNSSI 1300].

1.3.1.1 NSS PKI Policy Management Authority

See [CNSSI 1300].

1.3.1.2 NSS PKI Member Governing Body

See [CNSSI 1300].

1.3.1.3 Agency NSS PKI Management Authority

The Department of Defense (DoD) Agency NSS PKI Management Authority (ANMA) is the Director, DoD Public Key Infrastructure (PKI) Program Management Office (PMO). ANMA responsibilities are specified in [CNSSI 1300]. DoD signing CAs subordinate to the NSS PKI Root CA conform to the practices specified in [CAS CPS].

DoD implements RPSs. The ANMA performs a compliance analysis of RPSs and determines whether they meet the requirements of [CNSSI 1300] and [CAS CPS].

1.3.1.4 Agency NSS PKI Point of Contact

Not applicable.

1.3.2 Certification Authority System

Not applicable.

1.3.3 Registration Authority

An RA is an entity authorized by the CAS to collect, verify, and submit information provided by potential Subscribers which is to be entered into public key certificates. The term RA refers to hardware, software, and individuals that collectively perform this function. Unless expressly stated otherwise, RA requirements are imposed on all RA components of the NSS PKI. RA operations are performed in accordance with [CAS CPS] and this RPS. The RA is responsible for the following:

- Control over the registration process;
- The identification and authentication process;
- The revocation, suspension and restoration process; and,
- The Key Recovery process.

1.3.3.1 RA System

The RA System includes hardware and software that is used by the RA Officer in support of the CAS in collecting and formatting information that is to be used in certificate issuance, certificate

revocation, and key recovery. External databases that are used to support the verification of Subscriber or Requestor information are not considered part of the RA System.

1.3.3.2 RA Operations Staff

RA components are operated and managed by individuals holding trusted roles. Specific responsibilities for these roles, as well as requirements for the separation of duties, are described in Section 5.2. RA Operations Staff are designated as holding a trusted role.

1.3.3.3 RA Officer

An individual who is responsible for any of the duties of certificate issuance, certificate revocation, or key recovery is designated as an RA Officer. Duties may be performed by the same individual, or may be separated across different roles. RA Officers are designated as holding a trusted role.

Not all RA Officers have the same authority within the PKI. Some RA Officers may be specifically designated only to perform duties as an NVO. NVOs approve issuance of System and Device certificates via the NPE Registry. Some, designated as Local Registration Authorities (LRAs), only have authority to perform the Name certificate registration function of an RA. Individuals designated as LRAs do not have the authority to approve Code Signing, System or Device certificates not issued via the NPE Registry; revoke, suspend, or restore certificates; or perform key recovery operations. Any LRA may also be designated to perform NVO functions. Except as noted above, all references to RA Officers include LRAs and NVOs. Some RA Officers have privileges on the CA to do registration/revocation functions. Other RA Officers have privileges to do Key Recovery functions. An RA Officer may have privileges to perform both functions. All RA Officers that have revocation privileges also are designated to perform NVO functions. The RA Officer Nomination memorandum states which functions the RA Officer will perform.

1.3.4 Trusted Agent

A TA is an individual explicitly aligned with one or more RA Officers who has been delegated the authority to perform a portion of the RA function (e.g., a TA may perform identity proofing of certificate applicants for a requestor who cannot appear in person before an RA Officer). A TA does not have privileged access to CAS components to authorize certificate issuance, certificate revocation, suspension, restoration, or key recovery. Instead, the TA provides information to the RA Officer in a secure fashion. No request submitted by a TA is implemented until approved by an RA Officer. TAs are designated as holding a trusted role and all have an *id-CNSS-hardware* Name certificate that they use for all interaction with the RA Officer.

1.3.5 Subscriber

A Subscriber is the entity whose name appears as the subject in a certificate. The NSS PKI supports issuing certificates to three types of Subscriber: Name, Role, and System or Device. Unless otherwise specified, statements for Subscriber apply to all three types. Each Certificate has a person who is responsible for the private key associated with a certificate, known as the PKI Sponsor, who asserts that the certificate and associated private key are being used in accordance with [CNSSI 1300]. All PKI Sponsors have an *id-CNSS-hardware* Name Signature

certificate. Each of the types of Subscriber has an associated PKI Sponsor. Table 1-1 shows the PKI Sponsor for each type of Subscriber.

Table 1-1: Subscriber Types

Subscriber Type	PKI Sponsor
Name	Individual named in the certificate
Role	Individual authorized to use certificate or designated individual responsible for management of Role certificates
System or Device	Designated individual responsible for system or device keys

CASs are sometimes technically considered Subscribers in an NSS PKI. However, the term Subscriber as used in this document refers only to those entities that request certificates for uses other than signing and issuing certificates or certificate status information.

1.3.5.1 Name Subscriber

Name certificates contain an individual name as the subject. Name certificates are tightly coupled with the individual named in the certificate. Name certificates are issued to Federal Government employees, contractors, and affiliates. The PKI Sponsor for a Name certificate is the individual named in the certificate.

1.3.5.2 Role Subscriber

Role certificates contain a role, group, or organization name as the subject; they do not contain the name of an individual in the *Distinguished Name* (DN) field. The PKI Sponsor for a Role certificate is an individual who is explicitly responsible for managing access to the private key associated with the certificate. In addition, the PKI Sponsor is responsible for establishing technical or procedural controls and managing access to the private key associated with the certificate. Code signing certificates are special Role certificates that are used to sign code.

1.3.5.3 System or Device Subscriber

System or Device certificates contain a system or device name as the subject. Systems and devices may be virtual or actual physical entities. Systems and Devices are also referred to as NPEs. Examples of Systems or Devices are workstations, guards, firewalls, routers, web server, database server, and other infrastructure components. The PKI Sponsor for a System or Device certificate is an individual who shall be explicitly responsible for managing access to the private key associated with the certificate. System and Device certificates may be issued as specified in the RPS or as specified in the DoD NPE CA CPS [NPE CA CPS].

1.3.6 Relying Party

A Relying Party uses a Subscriber's certificate to verify or establish one or more of the following:

- The identity and status of an individual, role, or system or device
- The integrity of a digitally signed message
- The identity of the creator of a message
- Confidential communications with the Subscriber

A Relying Party is the entity that relies on the validity of the binding of the Subscriber's name to a public key. A Relying Party is responsible for deciding whether or how to check the validity of the certificate by checking the appropriate certificate status information. A Relying Party may use information in the certificate (such as Certificate Policy OID identifiers) to determine the suitability of the certificate for a particular use.

Relying Parties may base the reliance they choose to place on a certificate on the factors such as the amount and type of inherent risk of an activity, the consequence of failure, and the use of risk mitigation controls.

1.3.7 Other Participants

An RA Officer operating under this RPS requires the services of at least one Systems Administrator (SA), Information Assurance Officer (IAO) and Compliance Auditor. RA Officers, SAs, IAOs, TAs and Compliance Auditors are the entities described in this document designated as holding a trusted role. As such, they are required to meet the personnel controls identified in Section 5.3.

An RA Officer operating under this RPS who issues Role certificates relies on a Role Based Attribute Authority (RBAA). An RA Officer operating under this RPS who issues Code Signing certificates also relies on a Code Signing Attribute Authority (CSAA).

1.3.7.1 Systems Administrator (SA)

An SA is a person authorized to perform operations on the RA system that require privileged access.

1.3.7.2 Information Assurance Officer (IAO)

An IAO is the person responsible for providing security services that support the RA operation.

1.3.7.3 Compliance Auditor

A compliance auditor performs compliance audits as specified in Section 8.

1.3.7.4 Code Signing Attribute Authority (CSAA)

The CSAA is the entity within the CC/S/A authorized to appoint individuals to receive and use DoD issued code signing certificates. Within the CC/S/A, the commander/director of the organization that is responsible for execution of the RPS designates, using a means that can be authenticated, the CSAA to the CC/S/A RA Officer.

1.3.7.5 Role Based Attribute Authority (RBAA)

The RBAA is the entity within the CC/S/A authorized to appoint individuals to receive and use DoD issued Role certificates other than code signing certificates. Within the CC/S/A, the commander/director of the organization that is responsible for the role designates, using a means that can be authenticated, the RBAA to the CC/S/A RA Officer.

1.4 CERTIFICATE USAGE

See [CAS CPS].

1.4.1 Appropriate Certificate Uses

RA Officers and TAs ensure that PKI sponsors know that certificates issued by the NSS PKI are to be used to protect classified information SECRET or below within U.S. SECRET networks or information systems.

1.4.2 Prohibited Certificate Uses

RA Officers and TAs ensure that PKI sponsors know that certificates issued by the NSS PKI are not to be used to support transactions unrelated to United States (U.S.) Government business.

1.5 POLICY ADMINISTRATION

1.5.1 Organization Administering the Document

The DoD PKI PMO is responsible for administering this RPS. The CC/S/A organization that is responsible for the execution of this RPS is identified separately.

1.5.2 Contact Person

The DoD PKI PMO is responsible for maintaining this RPS. The CC/S/A contact information and address for the organization that will use this RPS is identified separately.

1.5.3 Person Determining CPS Suitability for the Policy

The DoD ANMA determines the compliance of this RPS with requirements of [CNSSI 1300] and [CAS CPS].

1.5.4 CPS Approval Procedures

This RPS is submitted to the DoD Certificate Policy Management Working Group (CPMWG) for compliance analysis against the requirements of [CNSSI 1300] and [CAS CPS]. If deemed compliant, the CPMWG forwards the RPS to the DoD ANMA for approval.

1.5.5 Waivers

Waivers are not granted under any level of assurance. Variation in CAS and RA practices are either deemed acceptable under a current Certificate Policy OID, or the ANMA submits a change request to [CNSSI 1300]. If neither is possible, DoD may establish a new Certificate Policy OID for the non-compliant practice under the NSS PKI.

1.6 DEFINITIONS AND ACRONYMS

See Appendices B and C.

2 PUBLICATION AND REPOSITORY RESPONSIBILITIES

2.1 REPOSITORIES

Not applicable.

2.2 PUBLICATION OF CERTIFICATION INFORMATION

Not applicable.

2.3 TIME OR FREQUENCY OF PUBLICATION

Not applicable.

2.4 ACCESS CONTROLS ON REPOSITORIES

Not applicable.

3 IDENTIFICATION AND AUTHENTICATION

3.1 NAMING

3.1.1 Types of Names

For Name and Role certificates, the RA Officer provides elements of the DN and other fields to the CA for inclusion in the certificate based on the certificate type. For System or Device certificates, the RA Officer verifies or edits the DN and other fields in the certificate request posted to the CA by the PKI Sponsor.

3.1.2 Need for Names to be Meaningful

RA Officers ensure that the subject name identifies the entity to which the certificate is assigned in a meaningful way. The RA Officer validates that an affiliation exists between the Subscriber and any organization identified by any component of any name in its certificate. The RA Officer uses local knowledge (direct or via a TA) to verify organizational affiliation.

The common name (CN) represents the Subscriber. The remainder of the DN represents the subscriber's organization affiliation. For Name certificates, the RA Officer ensures that the common name is understandable for humans. For Name certificates, this will typically be a legal name. For Role certificates, this will typically be the formally recognized name of the role, group, or organization. For System or Device certificates, this typically will be a fully qualified domain name or an application name.

For Name certificates, the RA Officer interface to the CA restricts the name choices available to the RA Officer to those within DoD's approved name space.

For Role, System and Device certificates, the RA Officer verifies that the requested DN is within DoD's approved name space prior to approving the certificate for issuance.

Note that the LRA Server only allows spaces or hyphens to be used as separators in CN fields.

3.1.2.1 RA Officer Certificate Name

RA Officers who have revocation or recovery privileges will have certificates that contain names with the following form:

cn=RA.<last_name>.<first_name>[.<middleName|middleInitial>][.<generation_qualifier>].<EDIPI>, ou=<CC/S/A>, ou=DoD, ou=NSS, o=U.S. Government, c=US.

An RA Officer that will function only as an NPE Verifying Official (NVO) will have certificates with the following form:

cn=NVO.<last_name>.<first_name>[.<middleName|middleInitial>][.<generation_qualifier>].<EDIPI>, ou=<CC/S/A>, ou=DoD, ou=NSS, o=U.S. Government, c=US.

The EDIPI is a ten-digit number assigned to individuals by the Defense Enrollment Eligibility Reporting System (DEERS).

3.1.2.2 LRA Certificate Name

RA Officers approve the issuance of certificates to LRAs with the following form:

cn=LRA.<last_name>.<first_name>[.<middleName|middleInitial>][.<generation_qualifier>].< EDIPI>, ou=<CC/S/A>, ou=DoD, ou=NSS, o=U.S. Government, c=US

3.1.2.3 Individual's Names

Most individual Name Subscribers will have certificates that contain names with the following form:

cn=<last_name>.<first_name>[.<middleName|middleInitial>][.<generation_qualifier>].< a ten-digit unique identifier number >, ou=<CC/S/A>, ou=DoD, ou=NSS, o=U.S. Government, c=US

Individuals performing as network system administrator Name Subscribers may have a specific Name certificate that has "ADM" pre-pended to the CN. These are referred to as "SA Name certificates."

The ten-digit unique identifier will either be the EDIPI which has been obtained from the Subscriber's S-ADR record or a Unique Identifier (UID) assigned by the registration system (e.g., LRA Server) during the registration process.

3.1.2.4 Device Certificate Names

The DN convention used for Devices issued via the manual process is:

cn=<XXXX>, ou=<CC/S/A>, ou=DoD, ou=NSS, o=U.S. Government, c=US

The cn= will be a Fully Qualified Domain Name. For Web Servers, the cn= must be the exact URI name by which the server is accessed by clients. Some NPEs are not sensitive to the cn= in the certificate and it serves only as a label.

For Devices that are accessed using multiple names, the primary Fully Qualified Domain Name will be used in the DN. If there is a Subject Alternative Name field, it contains the primary name and may contain alternate names.

3.1.2.5 System/Application Names

The DN convention used for System/Application certificates is:

cn=<application name>, ou=<CC/S/A>**,** ou=DoD, ou=NSS, o=U.S. Government, c=US

LRAs will assist RA Officer with privileges to issue manual system or device certificates in facilitating the issuance of certificates to applications using the System/Application certificate process. For applications, the PKI Sponsor provides the application name for the CN. This will be the name of the application as registered in the SIPRNET Defense Information Technology Portfolio Repository (DITPR).

3.1.2.6 Role-Based Certificate Names

Role-Based certificates fall into one of the three types discussed below. The cn= portion of the Distinguished Name (DN) is limited to 64 characters.

3.1.2.6.1 Role Certificates

A Role certificate is one which is issued to an individual filling a specific organizational role or function. The certificate will be issued in the name of the organization and role. The DN for Role certificates will contain a CC/S/A organizational unit (ou) component (e.g., ou=USMC). The complete DN for a Role certificate is:

cn=<Organization_Name.Organizational_Component.Role_Name.UID>, ou=<CC/S/A>, ou=NSS, ou=DoD, ou=NSS, o=U.S. Government, c=US

The RA Officer will register Role Certificates. The common name (cn=) of the Role certificate will be entered into the certificate request in the fields provided by the TPS or LRA Server Interface (Organizational Name, Organizational Component, Role Name.)

The RBAA provides the Organizational Name, Organizational Component, and Role Name. The UID Block Identifier will be assigned in accordance with Section **Error! Reference source not found.**.

3.1.2.6.2 Group Certificates

A Group certificate is one which is issued to group of individuals for simultaneous use while filling a specific organizational function. The certificate will be issued in the name of the organization and group. The DN for Group certificates will contain a CC/S/A organizational unit (ou) component (e.g., ou=USMC). The complete DN for a Group certificate is:

cn=<Organization_Name.Organizational_Component. Group_Name.UID>, ou=<CC/S/A>, ou=DoD, ou=NSS, o=U.S. Government, c=US

The RA Officer will register Group Certificates. The common name (cn) of the Group certificate will be entered into the certificate request in the fields provided by the LRA Server Interface: Organizational Name, Organizational Component, and Group Name.

The RBAA provides the Organizational Name, Organizational Component, and Role Name. The UID Block Identifier will be assigned in accordance with Section **Error! Reference source not found.**.

3.1.2.6.3 Code Signing Certificate Name

The DN convention for Code Signing Certificates is:

cn=CS.<ORG Name>.<CSID>, ou=<CC/S/A>, ou=DoD, ou=NSS, o=U.S. Government, c=US

The CSAA provides the ORG Name. The Code Signer Identifier (CSID) is assigned to a Code Signing request by the CC/S/A's CSAA and may be composed of alphanumeric characters.

3.1.3 Anonymity or Pseudonymity of Subscribers

The RA Officer provides meaningful name information to the CA as specified in Section 3.1.2 for each type of certificate. See [CAS CPS] for CA responsibilities.

3.1.4 Rules for Interpreting Various Name Forms

The DoD implementation of the NSS PKI will only use the following name forms: DN, URI [Request For Comment (RFC) 3986], DNS [RFC 1034], Electronic Mail Address [RFC 5322[1]], Microsoft User Principle Name (UPN), X.500 Directory Name, or Globally Unique Identifier (GUID) (Microsoft implementation of [RFC 4122].) These name forms are interpreted in accordance with the applicable ISO and Internet standards.

3.1.5 Uniqueness of Names

Within DoD, the RA Officer ensures that Name and Role Subscriber names are unique, Name certificates use the EDIPI or UID within the CN.

For System or Device certificates, the use of the FQDN ensures it is unique to the system or device.

For application certificates, DITPR requires that the application name be unique within the CC/S/A. Combining this CN with the CC/S/A field, guarantees that the DN is unique.

For Role Certificates, the RBAA or CSAA ensures that the DN is unique within the CC/S/A prior to providing it to the RA Officer.

The LRA Server infrastructure automatically generates 10-digit UIDs beginning with the number 9 for Subscribers that do not have an EDIPI. The LRA Server implementation guarantees that no two Subscribers have the same UID.

If the RA Officer identifies any naming collisions, the RA Officer will investigate. If it is an EDIPI collision, the RA Officer forwards the issue to the DoD PKI Program Management Office (PMO) to engage with DEERS. Otherwise, the RA Officer works with the appropriate authority (e.g., RBAA) to resolve. Once the collision is resolved, the RA Officer revokes and re-issues the certificates of the persons or Roles impacted by changed CN.

3.1.6 Recognition, Authentication and Role of Trademarks

The RA Officer will not knowingly assign names that contain trademarks. The RA Officer need not seek evidence of trademark registrations nor in any other way enforce trademark rights.

[1] Many applications still incorrectly refer to this as an RFC 822 name. RFC 822 has been replaced.

3.2 INITIAL IDENTITY VALIDATION

3.2.1 Method to Prove Possession of Private Key

Proof of possession of private keys is a Subscriber responsibility to the CA as is described in [CAS CPS]; RA Officers have no responsibilities in this area except when acting as or for the Subscriber.

For Name and Role certificates issued under this RPS via TPS, either the PKI Sponsor is in possession of the token when the key is generated or the RA Officer executes key generation for the Subscriber and forwards the keyed token (i.e., token containing keys and certificates) to the PKI Sponsor as described in Section 6.1.2.

For Name or Role Certificates issued in software, either the PKI Sponsor is present when the key is generated or the RA Officer generates the key and forwards the P12 file to the PKI Sponsor as described in Section 6.1.2.

For System and Device certificates, the PKI Sponsor is present at the generation of the keys and posts PKCS 10 file to the CA through the CA interface. The PKCS 10 file containing the public key is signed by the corresponding private key.

3.2.2 Authentication of Organization Identity

The RA Officer validates that an affiliation exists between the Subscriber and any organization identified by any component of any name in its certificate.

RA Officer will support the issuance of Role certificates. The RA Officer will authenticate the PKI Sponsor, using the procedures in Section **Error! Reference source not found.** and this section. In addition, the RA Officer will verify that the PKI Sponsor applying for a role-based certificate is authorized to act in this role. The RBAA or CSAA provides the RA Officer with the necessary information for creation of the Role certificate.

3.2.3 Authentication of Individual Identity

For certificates issued via an RA Officer, the RA Officer verifies the PKI Sponsor applicant's identity information as specified below.

3.2.3.1 Authentication for Name Subscribers

The RA Officer authenticates the identity and the specified attributes for Name Subscribers through all of the following mechanisms prior to initial certificate issuance:

- **Identity:** The applicant appears in-person before an RA Officer or TA and presents either a valid Personal Identity Verification (PIV) card issued in compliance with *Federal Information Processing Standard (FIPS) 201, Personal Identity Verification (PIV) of Federal Employees and Contractors* [FIPS 201] or two forms of identity source documents in original form. Valid identity source documents are listed in *OMB No. 1615-004, Form I-9, Employment Eligibility Verification* [FORM I-9]. At least one document must be a valid State or Federal government-issued picture identification (ID). For DoD, the PIV Card is the Common Access Card (CAC).

- The RA Officer or TA visually inspects the identification documents and authenticates them as being genuine and unaltered. In addition, the RA Officer or TA electronically verifies the authenticity of the source document, when such services are offered by the issuer of the source document. When electronic verification is not offered, the RA Officer or TA uses other available tools to authenticate the source and integrity of the identity source documents.
- **Citizenship:** For Name certificates where the Subscriber has an EDIPI, citizenship is provided by Secret-Authentication Data Repository (S-ADR). Otherwise, citizenship is verified by checking the clearance records at the local security office.
- **Clearance:** The RA Officer or TA ensures that the applicant possesses a minimum of a current SECRET clearance. The clearance is determined through an authoritative source (e.g., security database). If local policy/process guarantees that having a network login account on a U.S. SECRET network guarantees a current SECRET clearance and that if the person leaves the organization or has their clearance rescinded, the account is immediately deactivated, the RA Officer or TA may rely on the account verification for this check.
- **Account:** The RA Officer or TA ensures the applicant possesses a network login account on an accredited U.S. SECRET level information system or network or the application for PKI certificates is part of the enrollment process for obtaining a network login account on an accredited U.S. SECRET level information system or network. This is done by checking with a local System Administrator known to the RA Officer or TA.
- **Email:** For email address information asserted in a certificate, the RA Officer or TA ensures the validity of the email address provided by checking with a local System Administrator known to the RA Officer or TA.
- **System Administrator Position Designation:** For Name certificates that assert the Personnel Category Code (PCC) of "ADM" in the User Principal Name, the RA Officer or TA uses local knowledge to verify that the PKI Sponsor does perform that duty in the local environment.

If the RA Officer/TA obtains information from an individual, it will be in-person, in hard copy with wet signature, or in a digitally signed email using an *id-CNSS-hardware* Name Signature certificate.

The RA Officer or TA signs a DD Form 2842 [DD Form 2842] declaration acknowledging that they have verified the identity and any attributes.

For electronic authentication, see [CAS CPS].

RA Officers and TAs do not participate in electronic requests for issuance, renewal, re-key, or modification of certificates from the Name Subscribers.

3.2.3.2 Authentication for Role Subscribers

The PKI Sponsor accepting the Role certificate will digitally sign [DD FORM 2842]. The individual's identity will be verified using their *id-CNSS-hardware* Name Signature certificate.

The PKI Sponsor sends the request for a Role certificate to the RBAA or CSAA as appropriate. The request contains documentation describing the role, the users of the role, the contact information for transfer of the token and activation data, and, if others will use the Role

certificate, the process the PKI Sponsor uses to control access and verify the user's possession of a valid *id-CNSS-hardware* Name certificate. The request is digitally signed using the PKI Sponsor's *id-CNSS-hardware* Name Signature certificate. The RBAA/CSAA verifies the validity of the role and forwards the original email (with signature intact) to the RA Officer in an email digitally signed using the RBAA/CSAA's *id-CNSS-hardware* Name Signature certificate. The CSAA email will state that the request for a certificate is valid, there is a valid need, the PKI Sponsor is the appropriate person to obtain the certificate, the attributes requested are appropriate to the request, and other information required (e.g., CSID) to execute the Subscriber registration. The RA Officer validates the signature on the RBAA/CSAA email. The RA Officer verifies the authority to speak for the organization to as specified in Section 1.3.7.4.

The RA Officer authenticates the identity of the PKI Sponsor and the specified attributes for Role Certificate through the following mechanisms:

- **Role:** The RBAA or CSAA verifies the need for the Role certificate
- **Authority:** The RBAA or CSAA verifies that the PKI Sponsor is authorized to request a Role Certificate
- **Identity:** The RA Officer verifies that the PKI Sponsor possesses a valid NSS PKI issued Name certificate, and that the PKI Sponsor has a process to ensure that each Role Certificate user possesses a valid Name Certificate by reviewing the details in the request.
- **Attributes:** The RA Officer verifies any other attributes asserted by the Role Certificate via organizational processes

The PKI Sponsor is accountable for the private key associated with the Role Certificate, and acknowledges and accepts overall responsibility for the use of the Role Certificate and protection of its associated private key as part of the delivery process (see Section 6.1.2) or during the issuance process (See Section 4.2.1).

The PKI Sponsor follows the process described in the request to ensure that each individual who has access to the private key associated with the Role Certificate at any time possesses a valid NSS PKI Name Certificate. The PKI Sponsor ensures that no individual continues to have access to the private key associated with the Role Certificate after leaving the Role by maintaining direct control of the token except when signed out to an authorized user.

The RA Officer signs the DD Form 2842 returned by the PKI Sponsor verifying the identity and any attributes in accordance with this CPS and [CNSS 1300].

3.2.3.3 Authentication for System or Device Subscribers

The PKI Sponsor provides documentation identifying the System or Device, and any attributes not part of the standard profile (e.g., Globally Unique Identifier (GUID) in a Domain Controller certificate) and the CA Certificate Request Number to the RA Officer in a digitally signed email using the PKI Sponsor's *id-CNSS-hardware* Name Signature certificate. If the PKI Sponsor is a system administrator, the SA Name certificate is used. If the PKI Sponsor sends the digitally signed email to a local TA, the signed email will be included in the TA email to the RA Officer as an attachment. The RA Officer authenticates the identity of the PKI Sponsor and the specified attributes for System or Device Certificate through the following mechanisms:

- **System or Device:** The RA Officer verifies the approved existence of the System or Device by using local knowledge. If the RA Officer is not local, the RA Officer uses a local TA to verify the existence of the system or device.
- **Authority:** The RA Officer verifies the authority of the PKI Sponsor to request a System or Device Certificate by using the fact that the requestor is an SA (based on the digital signature) or by using local knowledge if the PKI Sponsor is not an SA. If the RA Officer cannot verify the authority because of distance, the RA Officer uses a local TA to verify the PKI Sponsor's authority.
- **Identity:** The RA Officer verifies that the PKI Sponsor possesses a valid NSS PKI issued Name Certificate through the digital signature on the request.
- **Attributes:** System administrators are considered the authoritative source for System and Device information within their domain. If the request is digitally signed with an SA Name certificate, the attributes are deemed verified. If the request is not signed using an SA Name certificate, the RA Officer verifies any attributes asserted by the System or Device Certificate based on local knowledge (e.g., the RA Officer verifies that the FQDN is from the appropriate domain). If the RA Officer cannot verify the attribute because of distance, the RA Officer uses a local TA to verify the PKI Sponsor's attributes using local knowledge.

The PKI Sponsor is accountable for the System or Device Certificate, and acknowledges and accepts overall responsibility for the use of the System or Device Certificate and protection of the associated private key. The PKI Sponsor may formally acknowledge the responsibilities in the digitally signed email request, in a signed DD Form 2842 or locally developed form.

The RA Officer or TA sign a declaration acknowledging that they have verified the identity and any attributes in accordance with this policy.

3.2.4 Non-Verified Subscriber Information

The RA Officer verifies all information included in a certificate as specified above.

3.2.5 Validation of Authority

There are no other explicit or implicit authorities beyond those that the RA Officer validates as described in Section 3.2.3. The CAS relies on the RA Officer to perform that validation prior to RA Officer approving the issuance of the certificate.

3.2.6 Criteria for Interoperation

Not applicable.

3.3 IDENTIFICATION AND AUTHENTICATION FOR RE-KEY REQUESTS

3.3.1 Identification and Authentication for Routine Re-Key

For manual Re-Key, see Section 4.7.

3.3.2 Identification and Authentication for Re-Key After Revocation

The initial issuance process is the only method for obtaining new certificates if the current certificate is not valid.

3.4 IDENTIFICATION AND AUTHENTICATION FOR REVOCATION REQUEST

Subscribers or others listed in Section 4.9.2 may submit revocation requests to an RA Officer /TA, who then authenticates the request. The request may be authenticated in one of the following ways:

- Via a digitally signed message (Note that a Subscriber may sign a certificate revocation request using the key suspected of being compromised, and such a request will be considered valid);
- In person via a signed document (another RA Officer or TA may serve as an intermediary who authenticates the request in a face-to-face transaction and uses local knowledge to determine whether the individual is authorized to make a revocation request);
- Using telephone (follow-up with the original signed document or a digitally signed message prior to taking any action), or;
- Using a signed document conveyed via a secure/non-secure fax.

3.5 IDENTIFICATION AND AUTHENTICATION FOR KEY RECOVERY REQUEST

3.5.1 Subscriber Request

For manual recovery, the PKI Sponsor requests recovery of sponsored certificate private keys by sending a digitally signed email to the RA Officer or TA using the PKI Sponsors *id-CNSS-hardware* Name Signature certificate.

3.5.2 Third Party Request

Entities other than PKI Sponsors may request recovery of escrowed key material. Recovery requests from other than the PKI Sponsor are made directly to an RA Officer or to a TA. The RA Officer or TA uses local knowledge to determine the authority of the requestor. The RA Officer or TA may consult with local organization management and/or legal counsel if appropriate.

If the requestor appears in person to make the request, the RA Officer or TA verifies their identity using the process described in Section 3.2.3.1. The requestor may also send the request via email, digitally signed using the requestor's an *id-CNSS-hardware* Name certificate.

If a TA performs the requestor validation, the TA provides the request along with verification of identity and authority to the RA Officer in an email digitally signed with the TA's *id-CNSS-hardware* Name Signature certificate.

4 CERTIFICATE LIFE-CYCLE OPERATIONAL REQUIREMENTS

4.1 CERTIFICATE APPLICATION

RA Officers use the appropriate RA Officer Name Identity, Signature or Encryption certificate for all communication related to PKI. All TA communications with an RA Officer is digitally signed using the TA's *id-CNSS-hardware* Name Signature certificate. If necessary for privacy or to protect "need to know" (e.g., transfer of activation data), information will be encrypted using the *id-CNSS-software* Name Encryption certificate. RA Officer communication to the CA is authenticated and encrypted using Client-authenticated Transport Layer Security (TLS) using the RA Officer's *id-CNSS-hardware* Name Identity certificate and the CA Device certificate. Subscribers authenticate to the Token Processing System (TPS) component of the DoD NSS Subordinate CAS using the UID and one time password provided by the RA Officer. The Subscriber authentication occurs within a server authenticated TLS session.

4.1.1 Who Can Submit a Certificate Application

Either PKI Sponsor is present when the keys are generated and the certificate request is submitted to the CA or the keys are generated and the request sent to the CA by the RA Officer on behalf of the Subscriber. If the PKI Sponsor is present when the keys are generated, the PKI Sponsor is considered to be in possession of the private key.

The System or Device PKI Sponsor generates a public/private key pair and formats that into a PKCS#10 certificate request using their System or Device application software and submits the request via a secure (TLS protected) Web session.

For RA Officer or Subscriber interaction with the CA during the certificate issuance process, see [CAS CPS].

4.1.2 Enrollment Process and Responsibilities

The generation of RA Officer certificates occurs in the same manner as for Subscriber certificates except that the DN is of the RA/LRA/NVO form.

For certificates with the RA name form: RA Officers with Revocation and/or recovery privileges are nominated by a CC/S/A official (identified separately) to DISA in a signed memorandum - electronic transmission with digital signature using a *id-CNSS-hardware* Name, *id-US-dod-mediumHardware* or *id-US-dod-mediumHardware-2048* certificate is permitted. An example nomination memorandum is included at Appendix D. At initial RA Officer training, the RA Officer conducting the training or another RA Officer authenticates the candidate RA Officer face-to-face in accordance with the requirements of Section 3.2.3.1.

For certificates with the LRA or NVO name form: LRA/NVOs are nominated by the local command to an RA Officer in a signed memorandum - electronic transmission with digital signature using a *id-CNSS-hardware* Name, *id-US-dod-mediumHardware* or *id-US-dod-mediumHardware-2048* certificate is permitted. An example nomination memorandum is included at Appendix E. At initial LRA/NVO training, the RA Officer conducting the training or another RA Officer authenticates the candidate LRA/NVO face-to-face in accordance with the

requirements of Section 3.2.3.1. If the LRA functioned as an LRA under the SIPRNET Pilot, that fact is stated in the nomination memorandum and these LRAs may be authenticated by an RA Officer, or TA as is done for any Subscriber. Subsequent face to face authentication of an existing LRA/NVO for issuance of new certificates with the same DN may be done by any RA Officer, LRA, NVO or TA as for any Subscriber. While a TA may authenticate an LRA/NVO, this should only be done if no RA Officer is available due to operational constraints (e.g., remote location). The RA Officer performing the LRA/NVO registration documents the need to use a TA in the RA Officer log.

Once candidate RA Officer /LRA/NVO has their RA Officer /LRA/NVO certificates, the candidate forwards a copy to the registering RA Officer. The registering RA Officer verifies the certificate against the registration information and emails the new RA Officer /LRA/NVO certificate to the CA Administrator (CAA) to add them to the appropriate privilege groups on the CAS.

For Hardware Subscriber Name certificates:

Once the RA Officer has received and verified all the required information, the RA Officer registers the subscriber with TPS by entering all required data into the interface provided. TPS generates Certificate Registration Instructions (CRI) containing a User Identification and one-time 16-character password.

If the PKI Sponsor is present at the certificate generation:

After the Subscriber signs the acknowledgement of responsibilities form ([DD FORM 2841] for RA Officers or [DD Form 2842] for other Subscribers), the RA Officer or TA provides the CRI and a token to the PKI Sponsor. Signatures on the acknowledgment of responsibilities form may use digital signatures using a valid *id-CNSS-hardware* Name Signature certificate.

The PKI Sponsor uses the token and CRI to authenticate to TPS and generate the certificate request as specified in [CAS CPS].

If a TA does the identity proofing, the TA forwards the acknowledgement of responsibilities form to the RA Officer. If in hard copy, the TA faxes or sends a scanned copy to the RA Officer immediately and forwards the paper copy via US Mail.

If a hard copy [DD FORM 2842] is transmitted, when the RA Officer receives the original hard copy of the Certificate of Acceptance and Acknowledgement of Responsibilities, the faxed/emailed copy may be destroyed.

If the RA Officer generates the certificates on behalf of the Subscriber:

The RA Officer performs the PKI Sponsor functions associated with generating the certificate request as specified in [CAS CPS]. The RA Officer immediately secures the keyed token and PIN in separate containers. PIN is classified SECRET and will be controlled accordingly. The token and PIN are provided to the PKI Sponsor as specified in Section 6.1.2.

For software Subscriber Name Certificates:

The RA Officer registers the Subscriber with the LRA Server, where a UID and one-time 16-character password are generated. After the Subscriber signs the acknowledgement of responsibilities form [DD Form 2842], the RA Officer or TA provides the CRI to the PKI

Sponsor. Signatures on the acknowledgment of responsibilities form may use digital signatures using a valid *id-CNSS-hardware* Name Signature certificate.

The PKI Sponsor uses the CRI to authenticate to the CA and generate the certificate request as specified in [CAS CPS].

If a TA does the identity proofing, the TA forwards the acknowledgement of responsibilities form to the RA Officer. If in hard copy, the TA faxes or sends a scanned copy to the RA Officer immediately and forwards the paper copy via US Mail.

If a hard copy [DD FORM 2842] is transmitted, when the RA Officer receives the original hard copy of the Certificate of Acceptance and Acknowledgement of Responsibilities, the faxed/emailed copy may be destroyed.

For Role Certificates[2]: The PKI Sponsor will submit a request to the RBAA or CSAA, as appropriate, who will verify and forward the request to the RA Officer as specified in Section 3.2.3.2. The RA Officer will verify that it has received a signed designation for the RBAA/CSAA. This verification will include the verification of digital signature if the RA Officer received an electronic copy of the RBAA/CSAA designation. The RA Officer will request the certificate from the CA on behalf of the applicant and notify the applicant that the request has been made and provide the PKI Sponsor with the CRI in accordance with Section **Error! Reference source not found.**, once all verification and checks have been completed.

For System and Device Certificates: The PKI Sponsor (normally an SA) forwards the request (including the identifying information and other attributes) along with the CA request number to the RA Officer as specified in Section 3.2.3.3. When an RA Officer receives notification that a System or Device certificate request is in-process, the RA Officer uses the request number to confirm that the request information matches the request posted on the CA server.

4.2 CERTIFICATE APPLICATION PROCESS

4.2.1 Performing Identification and Authentication Functions

If the RA Officer or TA uses local knowledge to verify information prior to certificate approval, the local knowledge is obtained by establishing a relationship with offices that have authority to assign information or attributes.

For Name Subscribers:

The RA Officer or TA performs authentication as described in Section 3.2.3.1. The RA Officer ensures that all information related to the Subscriber to be included in the certificate is accurate prior to providing the PKI Sponsor with the token and CRI. If the PKI Sponsor has an EDIPI, the person verifying the identity verifies the PKI Sponsor's EDIPI by inspection of a CAC, a document digitally signed using the private key from the CAC or other information provided by

[2] When a shared encryption capability is the primary reason for the group certificate, an identity certificate must be created to generate the encryption certificate, but serves no further purpose and may be destroyed, but not revoked. A signing certificate need not be generated at all. Microsoft based systems can use the "SupressNameChecks" policy that will allow users to select their existing Name ID or Signing Certificate on their personal CNSS Token for signature from the group mail-box and thus maintain individual non-repudiation without the need to generate unique signing certificates for each member of the group.

the PKI Sponsor. The RA Officer verifies that the identity information provided by the PKI Sponsor matches that displayed by S-ADR for the EDIPI.

If the RA Officer uses a TA to perform any data verification, the TA verifies the data prior to submitting it to the RA Officer. The data is transmitted to the RA Officer in an email digitally signed with the TA's Signature *id-CNSS-hardware* Name certificate. The RA Officer validates the emails digital signature and verifies it is from the TA.

The RA Officer will print, on a printer on the same subnet, the CRI generated by TPS or the LRA Server for each Subscriber that includes:

- A unique user identification
- A one-time password

If the RA Officer is going to generate the keys and certificates for the Subscriber, the RA Officer retains the CRI until it has been used and then destroys it.

If the PKI Sponsor will be present at certificate generation, the RA Officer delivers the CRI form in person directly to the PKI Sponsor, authenticating their identity in accordance with the requirements of Section 3.2.3.1. or the RA Officer delivers the CRI to a TA using one of the methods detailed below.

- The RA Officer may deliver the CRI form(s) in person directly to the TA; or,
- The RA Officer may send the CRI form, in its entirety, to the TA in a signed and encrypted S/MIME message on SIPRNET.

The RA Officer or TA, prior to providing the CRI, keyed token and PIN, or P12 file and password to the PKI Sponsor, will perform the identity proofing required by Section 3.2.3.1 and have the Subscriber sign the Certificate of Acceptance and Acknowledgement of Responsibilities that includes:

- A listing of their responsibilities as a Subscriber;
- Instructions regarding contacting the RA Officer in the event of a suspected compromise.

If the PKI Sponsor is using the CRI to directly interact with the CA, the person performing authentication instructs the PKI Sponsor to contact the RA Officer or TA if the one time password does not work. The TA informs the RA Officer. Upon being so informed, the RA Officer investigates whether or not the one time password has been used and a certificate created in the subscriber's name. If the CRI has been used to issue certificates in the subscriber's name, the RA Officer revokes all issued certificate (LRA/TA requests the RA Officer to revoke the certificates) and request that the PKI Sponsor's Security Officer investigate. If the Subscriber still requires a certificate, the RA Officer generates a new CRI. The new CRI is delivered to the PKI Sponsor using the same procedures (including identity checking and acknowledgement of responsibilities) as specified above.

For Role certificates:

A Role Based certificate is tied specifically to the PKI Sponsor who is identified in the Subject Alternative Name field of the certificate. The PKI Sponsor is responsible for control and use of the certificate and associated private key. The PKI Sponsor may authorize another to use the Role certificate. The PKI Sponsor maintains signature records of who used the certificate and

when. Ultimately, should an issue arise, the PKI Sponsor issued the certificate will be the one contacted for resolution.

The PKI Sponsor performs the following:

- Send an email digitally signed using the PKI Sponsor's *id-CNSS-hardware* Name Signature to the RBAA/CSAA, copy to the RA Officer, requesting authorization to obtain a Role certificate. If it is for a Code Signing certificate, the PKI Sponsor acknowledges that the Code Signing certificate private key requested may only be used for three years.

The RBAA/CSAA will perform the following:

- Validate the PKI Sponsor's request, to include verification of the PKI Sponsor's identity and need for the requested certificate;
- Submit a signed e-mail to the RA Officer validating that the certificate and contact information in the PKI Sponsor's request for issuance of a Role Certificate is correct, that the RBAA/CSAA approves the issuance of the Role Certificate and, if necessary, provides any information not in the PKI Sponsor's request required by the RA Officer to complete the request as specified in Section 3.2.3.2. This e-mail is digitally signed with the RBAA/CSAA's *id-CNSS-hardware* Name Signature certificate. The information the RA Officer needs to complete the request:
    - Information on attributes necessary to complete the certificate request
    - PKI Sponsor's Organizational Information and, for a Code Signing Certificate, the assigned CSID for the CN
    - Authorized PKI Sponsor's Contact Information

The RA Officer will conduct the following steps:

- Verify that they have received a digitally signed e-mail from the RBAA/CSAA for the code signer; verify that the e-mail is signed by an approved RBAA/CSAA; and, that the e-mail was signed using acceptable PKI credentials and perform identity verification and authentication as specified in Section 3.2.3.2
- Verify that the following DNs are identical: DN for the PKI Sponsor in their e-mail to the RBAA/CSAA and the DN of the person mentioned in the e-mail from the RBAA/CSAA

For Hardware Role Certificates (Note: Code Signing Certificates are only issued in hardware format):

- The RA Officer enters all required data into the TPS Role Certificate interface
- The RA Officer will print, to a file (e.g., PDF) or hardcopy on a printer on the same subnet, the CRI generated by TPS for the Role that includes:
    - A unique user identification
    - A one-time password
- The RA Officer formats a new token using the appropriate Phone Home URL.
- If the RA Officer is going to generate the keys and certificates for the Subscriber, the RA Officer retains the CRI until it has been used and then destroys it, performs enrollment and sends the token and pin as specified in Section 6.1.2.

- If the PKI Sponsor will be present at certificate generation, the RA Officer notifies the PKI Sponsor that the request has been processed and approved and request that the PKI Sponsor execute a DD Form 2842. The PKI Sponsor digitally signs the DD Form 2842 using the PKI Sponsor's *id-CNSS-hardware* Name Signature certificate and returns it to the RA Officer in a digitally signed email. The RA Officer send the CRI form to the PKI Sponsor in a digitally signed email, encrypted using the PKI Sponsor's *id-CNSS-software* Encryption certificate. The RA Officer sends the token to the PKI Sponsor as specified in Section 6.2.1.

For Software Role Certificates:

- The RA Officer enters all required data into the LRA Server Certificate interface
- The RA Officer will print, to a file (e.g., PDF) or hardcopy on a printer on the same subnet, the CRI generated by LRA Server for the Role that includes:
    - A unique user identification
    - A one-time password
- If the RA Officer is going to generate the keys and certificates for the Subscriber, the RA Officer retains the CRI until it has been used and then destroys it, performs enrollment and sends the P12 file and the password as specified in Section 6.1.2.
- If the PKI Sponsor will be present at certificate generation, the RA Officer notifies the PKI Sponsor that the request has been processed and approved and request that the PKI Sponsor execute a DD Form 2842. The PKI Sponsor digitally signs the DD Form 2842 using the PKI Sponsor's *id-CNSS-hardware* Name Signature certificate and returns it to the RA Officer in a digitally signed email. The RA Officer send the CRI form to the PKI Sponsor in a digitally signed email, encrypted using the PKI Sponsor's *id-CNSS-software* Encryption certificate.

For System or Device Certificates: See Section 3.2.3.3.

4.2.2 Approval or Rejection of Certificate Applications

A certificate application is not considered accepted until the CA has acted on the application and issued a certificate. If, for any reason, the certificate request is rejected prior to completion of the process, the RA Officer will inform the PKI Sponsor of the reason for the rejection. If the certificate is still required, the PKI Sponsor will make the appropriate corrections to the data submitted and resubmit. The RA Officer or TA will, when requested, provide guidance to the PKI Sponsor.

4.2.2.1 Name Certificate Application

The RA Officer approves the issuance of the certificate when enrolling the Name Subscriber as described in Section 4.2.1.

4.2.2.2 Role Certificate Application

The RA Officer approves issuance of the certificate when enrolling the Role Subscriber as described in Section 4.2.1..

4.2.2.3 System or Device Certificate Application

When an RA Officer receives notification, either directly or via another RA Officer or TA, that a System or Device certificate request is in process, the RA Officer uses the request number to confirm that the request information matches the request posted on the CA server. The RA Officer ensures the DN structure and other information in the certificate conforms to the requirements of Sections 3.1.2.4 or 3.1.2.5, and, if not, makes corrections as permitted by the CA interface to insure proper format and features are included in the certificate to match the customers requirement. If the RA Officer is satisfied, the RA Officer will approve the certificate for up to three years, and send an e-mail notification to the PKI sponsor that the certificate can be obtained from the CA server.

4.2.3 Time to Process Certificate Applications

For certificates issued by the CA based on input of a CRI, the CA rejects the CRI if it was generated more than 30 days prior to entry.

If the 30 day limit passes for any reason, the RA Officer/TA will redo the authentication of the PKI Sponsor prior to providing an updated CRI.

4.3 CERTIFICATE ISSUANCE

4.3.1 CA Actions during Certificate Issuance

Not applicable.

4.3.2 Notification to Subscriber by the CA of Issuance of Certificate

After the CA issues the certificate, the RA Officer notifies the Subscriber or the sponsor if the RA Officer manually approves certificate issuance. Otherwise, the Subscriber is considered to have been notified when the certificate is provided directly to the Subscriber.

4.4 CERTIFICATE ACCEPTANCE

4.4.1 Conduct Constituting Certificate Acceptance

The PKI Sponsor’s signature (hand written or digital) on the [DD FORM 2841] or [DD FORM 2842] or other appropriate acknowledgement of responsibilities obtained during the certificate request process is deemed as the acceptance of the certificate**.**

4.4.2 Publication of the Certificate by the CA

Not applicable.

4.4.3 Notification of Certificate Issuance by the CA to Other Entities

Not applicable.

4.5 KEY PAIR AND CERTIFICATE USAGE

4.5.1 Subscriber Private Key and Certificate Usage

The Subscriber should not use the signature private key after the associated certificate has been revoked or has expired. The Subscriber may continue to use the decryption private key solely to decrypt previously encrypted information after the associated certificate has been revoked or has expired. The use of the private key is further limited in accordance with the key usage extension in the certificate. If the extended key usage extension is present and implies any limitation on the use of the private key, those constraints are also observed.

4.5.2 Relying Party Public Key and Certificate Usage

A Relying Party should only use a public key for the purposes indicated in the certificate *Key Usage* extension. Relying Parties should not use expired or revoked encryption certificates. If the *Extended Key Usage* extension is present and implies any limitation on the use of the certificate, those constraints should also be followed.

4.6 CERTIFICATE RENEWAL

Not applicable.

4.7 CERTIFICATE RE-KEY

The RA Officer has no part in automated Re-key.

The RA Officer may assist in manual re-key of Name and Role Certificates for Subscribers as specified below.

System or Device Certificates issued via the manual process described in this RPS are rekeyed using the initial issuance process.

4.7.1 Circumstances for Certificate Re-Key

A certificate may be re-keyed if all of the following are true:

- The certificate has not reached the end of its validity period;
- The certificate has not been revoked;
- The name and other information in the certificate is still correct;
- The identity proofing of the PKI Sponsor is current; and,
- The RA Officer re-validates proof of possession of the old Signature private key by the PKI Sponsor by validating the email signature.

4.7.2 Who May Request Re-Key

The PKI Sponsor requests re-key of a Subscriber certificate.

4.7.3 Processing Certificate Re-Key Requests

The PKI Sponsor sends an email, digitally signed with the Subscriber's *id-CNSS-hardware Signature* certificate to the TA/RA Officer that processed their initial certificate request. If the PKI Sponsor does not know the identity of the RA Officer/TA, the PKI Sponsor is directed to the initial registration process. If a TA receives the request from the PKI Sponsor, the TA forwards that request to the RA Officer that performed the initial subscriber registration in a way that does not invalidate the PKI Sponsor's signature.

The RA Officer performs the following steps:

- Validate the certificate used by the PKI Sponsor to sign the request and that the certificate has not been used for a previous rekey request:
- Obtain the [DD Form 2842] of the PKI Sponsor and verify that it has been less than 3 years since the PKI Sponsor did a face to face authentication;
- For Hardware Name Certificates, authenticate to TPS and uses the PKI Sponsor's EDIPI to view the record from S-ADR;
- For Software Name Certificates, authenticate to the LRA Server and re-enroll the PKI Sponsor using the information in the current certificate;
- For Hardware Role Certificates, authenticate to TPS and view the Role Certificate record;
- For Software Role Certificates, authenticate to the LRA Server and re-enroll the PKI Sponsor using the information in the current certificate;
- Obtain a new CRI for the PKI Sponsor; and,
- Send the CRI to the PKI Sponsor encrypted using the *id-CNSS-software* certificate associated with the Signature certificate used to sign the request.
- For software certificates or if the Subscriber hardware token does not destroy the original private keys in the process of generating the rekeyed certificate, the RA Officer records the certificate used to authenticate for the rekey.

If the certificate is not valid, was previously used to authenticate for rekey of a Name Certificate, the face-to-face exceeds 3 years for the Subscriber Certificate, or the information in TPS and the original certificate do not match, the RA Officer stops the process and directs the PKI Sponsor to use the initial registration process to obtain a new set of certificates.

Upon receipt of the new CRI, the PKI Sponsor uses the token and CRI to authenticate to TPS or the CRI and a web browser to authenticate to the CA and generate the certificate request as specified in [CAS CPS].

4.7.4 Notification of New Certificate Issuance to Subscriber

The PKI Sponsor receives the new certificates as a result of the certificate issuance process.

4.7.5 Conduct Constituting Acceptance of a Re-Keyed Certificate

The PKI Sponsor's use of the CRI to authenticate to the TPS to obtain new certificates and subsequent failure to object to the issued certificate or its contents constitute acceptance of the certificate.

4.7.6 Publication of the Re-Keyed Certificate by the CA

The CA posts the encryption certificate in the same manner as for any other certificate set.

4.7.7 Notification of Certificate Issuance by the CA to Other Entities

Not applicable.

4.8 CERTIFICATE MODIFICATION

Not applicable.

4.9 CERTIFICATE REVOCATION AND SUSPENSION

The RA Officer only accepts revocation requests that are either digitally signed with an NSS certificate issued at the same or stronger assurance level, a request that is submitted in person with identity proofing as specified in Section 3.2.3.1 or a document with a handwritten signature. The CAS only accepts authentication requests from the RA Officer which authenticates using client authenticated TLS using the RA Officer *id-CNSS-hardware* Name Identity certificate.

4.9.1 Circumstances for Revocation

The RA Officer evaluates each request for revocation to determine if it is reasonable to state that the binding between the subject and the subject's public key defined within a certificate is no longer considered valid. Circumstances that invalidate the binding include the following:

- Identifying information or affiliation components of any names in the certificate become invalid;
- Information not included in the certificate but required for the issuance of the certificate becomes permanently invalid (e.g., a PKI Sponsor's U.S. SECRET network account is deactivated and the PKI Sponsor is not known to be transferring to another organization where the PKI Sponsor will have a U.S. SECRET network account (see Section 4.9.13));
- Privilege attributes asserted in the certificate are no longer accurate;
- The PKI Sponsor can be shown to have violated the stipulations of the PKI Sponsor agreement;
- The private key is suspected of compromise;
- For Name Certificates, the individual named in the certificate is no longer authorized to hold the certificate; and,
- Unlocking the token in an unclassified machine.

If the RA Officer determines that the binding is likely to be invalid, the RA Officer accesses the appropriate CA and marks the certificate for revocation.

If the PKI Sponsor or other authorized party provides appropriate justification in an authenticated manner, the RA Officer accesses the appropriate CA and marks the certificate for revocation.

If a Subscriber cryptographic module is suspected to have been lost, the PKI sponsor reports that immediately to an RA Officer /LRA or TA. The LRA/TA forwards the report to an RA Officer. The RA Officer immediately accesses the appropriate CA(s) and marks all certificates associated with the module as suspended pending investigation. If loss of control is confirmed, the RA Officer accesses the appropriate CA(s) and changes all certificates associated with the module to revoked for reason of compromise. PKI Sponsors are informed to not use a token which has potentially been compromised. If the cryptographic module is reacquired, it is destroyed as specified in Section 6.2.10.

4.9.2 Who Can Request a Revocation

The RA Officer can request the revocation of a Subscriber's certificate on behalf of any of the following:

- The PKI Sponsor;
- The Subscriber’s IAO or personnel security officer; or,
- CC/S/A Information Assurance or network defense personnel.

Requests may be sent directly to the RA Officer or via an RA Officer/TA.

The RA Officer uses local knowledge to determine whether the individual is authorized to make a revocation request. If the requestor is not local to the RA Officer, the RA Officer requests the assistance of another RA Officer or TA who is local to the requestor to verify the authority of the requestor.

4.9.3 Procedure for Revocation Request

The requestor provides the RA Officer with sufficient information to allow the RA Officer to determine if there is appropriate justification to revoke the certificate. The RA Officer will review all revocation requests to ensure that the revocation requests are legitimate; the request identifies the specific certificate(s) or the/token containing the certificates to be revoked and the reason for revocation. If received electronically, it is digitally signed using a certificate of at least the same assurance level as the certificate to be revoked. The RA Officer validates the signature prior to taking any action on the request. If received manually, the request is signed by the requestor.

If the revocation is being requested for reason of key compromise or suspected fraudulent use, then the originator’s and RA Officer’s revocation request so indicates.

The RA Officer will review all revocation requests to ensure that the revocation requests are legitimate and will then approve the revocation of the certificate, as follows:

- Authenticate revocation request, as defined in Section 3.4 of this RPS;

- Establish a TLS connection to the CA or TPS;
- Authenticate to the appropriate CA (for certificates not issued through TPS) or TPS (for token based certificates) using the RA Officer's PKI credential; Use the web based revocation form to provide the information necessary to identify the token containing the certificates to be revoked as described in [CAS CPS]; and,
- For bulk revocation, use the search function to identify the set of tokens to be revoked, verify the search results only includes the tokens and certificates to be revoked as described in [CAS CPS].

If the RA Officer receives a request for revocation from other than a party listed in Section 4.9.2, the RA Officer directs the person submitting the request to the PKI Sponsor's IAO or personnel security officer to verify the authenticity of the request. If the PKI Sponsor's IAO or personnel security officer agrees there is reason for revocation, the IAO or personnel security officer sends an authenticated request to the RA Officer for processing.

For hardware certificates, the RA Officer revokes all certificates when the token is turned in or the RA Officer is notified that the Subscriber no longer has a requirement regardless of whether the token is turned in or not. If the token is not turned in, or the token is not protected from malicious activity prior to zeroization, the reason code for the revocation is "compromise." If it is determined that a private key used to sign requests for one or more additional certificates may have been compromised at the time the requests for additional certificates were made, the RA Officer will review certificate request records and work with the CAA to attempt to determine all certificates directly or indirectly chaining back to that compromised key and revoke those.

As part of the out processing, all persons who have NSS hardware tokens are required to turn them in to their local security office unless they are approved to take the token with them to a follow on assignment (see Section 4.9.13.3). The local security office notifies the RA Officer of all out processing individuals who had SIPRNet accounts and whether the token was turned in.

4.9.4 Revocation Request Grace Period

The RA Officer completes processing of all revocation requests immediately upon receipt.

4.9.5 Time within Which CA Must Process the Revocation Request

The RA Officer completes processing of all revocation requests immediately upon receipt.

4.9.6 Revocation Checking Requirements for Relying Parties

Use of revoked certificates could have damaging or catastrophic consequences in certain applications. The matter of how often new revocation data should be obtained is a determination to be made by the Relying Party. Revocation data should be obtained from an authoritative source, such as a CRL or an authoritative CSS as defined in [CNSSI 1300].

If it is temporarily infeasible to obtain revocation information from an authoritative source, then the Relying Party should either reject use of the certificate or make an informed decision to accept the risk, responsibility, and consequences for using a certificate whose authenticity cannot be guaranteed to the standards of this policy.

The RA Officer validates all certificates either using CRLs or an authoritative CSS. The RA Officer will ensure that the CRL used to check the certificate has not reached its Next Update.

4.9.7 CRL Issuance Frequency

Not applicable.

4.9.8 Maximum Latency for CRLs

Not applicable.

4.9.9 On-line Revocation/Status Checking Availability

Not applicable.

4.9.10 On-line Revocation Checking Requirements

The RA Officer validates all certificates either using CRLs or an authoritative CSS.

4.9.11 Other Forms of Revocation Advertisements Available

Not applicable.

4.9.12 Special Requirements Related to Key Compromise

See 5.7.1 for incident and compromise handling and Section 5.7.3 for entity private key compromise procedures. See Section 4.9.3 for revocation procedures.

4.9.13 Certificate Suspension and Restoration

4.9.13.1 Circumstances for Suspension

When there is reason to believe that the binding between the subject and the subject's public key defined within a certificate is not currently valid (e.g., the PKI Sponsor is reassigned to another organization and does not have an account on a U.S. SECRET network during the transition), or there may be reason to question the security of the private key, but additional research is necessary to determine the status fully, the person informing the RA Officer of the need for revocation may request suspension instead. See [CNSS 1300] for examples.

4.9.13.2 Who Can Request Suspension

All persons authorized to request revocation may request suspension.

4.9.13.3 Procedure for Suspension Request

Except for suspension due to reassignment, the requestor uses the same procedures as specified for revocation. In addition to the information required for revocation, the requestor provides a time when it is expected that a final determination may be made.

When a PKI Sponsor is being reassigned within the organization (attributes do not change) and temporarily will not have an account on a U.S. SECRET network:

When notified of pending reassignment, the PKI Sponsor or other authorized person contacts the unit Information Assurance Manager (IAM) or other person authorized to request suspension of certificates for the unit (referred to as the requestor);

The requestor provides the RA Officer/TA with the gaining organization information (e.g., a copy of the reassignment orders), the expected date that the U.S. SECRET Network account will be closed, a copy of the PKI Sponsor's Name Identity certificate and the expected date of restoration. Documentation may be provided in person or via digitally signed email using the requestor's Name Hardware certificate;

The RA Officer/TA validates the requestor's identity;

If it is a TA, the TA forwards all information to the RA Officer;

On the requested date, the RA Officer accesses TPS and suspends all of the certificates associated with the subscriber token.

Note: The PKI Sponsor may hand carry the suspended token to the new organization or request that the RA Officer/TA send it to the gaining organization RA Officer/TA using the procedures specified in Section 6.1.2.

4.9.13.4 Limits on Suspension Period

The RA Officer maintains a log of all suspended certificates indicating the expected time to resolve or restore. If the RA Officer has any active suspended certificates, the RA Officer reviews that log every business day. The RA Officer revokes any certificate that is beyond its expected time to resolve or restore. The requestor may, prior to that time, submit an authenticated request to extend the time to resolve or restore.

4.9.13.5 Circumstances for Restoration

For a suspended certificate, once the issue that resulted in the suspension request has been resolved and it is determined that the binding between the subject and the subject's public key defined within a certificate is still valid and there was no compromise of the private key, the certificate may be restored once the RA Officer has performed the steps below. See [CNSS 1300] for examples.

4.9.13.6 Who Can Request Restoration

Except for suspension due to reassignment, the RA Officer may accept restoration requests from the individual who made the initial suspension request except a PKI Sponsor for the PKI Sponsor's own Name Certificate, or, with sufficient justification, from other individuals. The request is signed with a wet signature if the request is submitted in writing or using *id-CNSS-hardware* Name certificate if submitted electronically.

For restoration of certificates suspended due to reassignment, the RA Officer may accept a restoration request from the PKI Sponsor.

4.9.13.7 Procedure for Restoration Request

Except for suspension due to reassignment, the request for a restoration identifies the certificate to be restored, and provides the reason for restoration. Prior to approving a certificate restoration, the RA Officer validates the restoration request to include:

- Ensuring the request has appropriate justification;

- Authenticating the identity of the requestor; and,
- Verifying the requestor's authority to request restoration

The RA Officer does not accept restoration requests from the PKI Sponsor for the PKI Sponsor's own Name Certificate. If the PKI Sponsor requests restoration, the RA Officer informs the PKI Sponsor that the request needs to be sent from someone in the PKI Sponsor's chain of command. For other requests, the RA Officer only accepts digitally signed restoration requests signed using the requestor's *id-CNSS-hardware* Name Signature certificate.

For Name certificates, the RA Officer only accepts restoration requests from the PKI Sponsor's manager, supervisor, or superior officer. The manager, supervisor, or superior officer is responsible for determining if restoration or revocation is warranted and informs the RA Officer of that determination. The RA Officer uses local knowledge (directly, or through a TA) to determine that the requestor holds an appropriate position to make the determination.

For suspension due to reassignment:

Upon arrival, the PKI Sponsor notifies the gaining organization IAM or other person authorized to request restoration that the PKI Sponsor has suspended certificates. The requestor notifies the RA Officer/TA, providing the expected date when the U.S. SECRET network account will be activated;

The PKI Sponsor appears in person before the RA Officer/TA. The RA Officer/TA verifies the PKI Sponsor's identity as specified in Section 3.2.3.1 and verifies that the identity matches the identity in the certificates to be restored;

Prior to restoring the certificates, the RA Officer/TA verifies the security clearance, account activation and email address as specified in Section 3.2.3.1;

If it is a local TA, the TA notifies the RA Officer of the need to restore the Name certificates and the RA Officer verifies that the TA has checked the identity, clearance, account activation and email address;

The RA Officer accesses TPS and restores the certificates.

Once the certificate is revoked, the RA Officer rejects all requests to restore it.

4.10 CERTIFICATE STATUS SERVICES

Not applicable.

4.10.1 Operational Characteristics

Not applicable.

4.10.2 Service Availability

No stipulation.

4.10.3 Optional Features

No stipulation.

4.11 END OF SUBSCRIPTION

Subscription is synonymous with the certificate validity period. The subscription ends when the certificate expires or is revoked.

4.12 KEY ESCROW AND RECOVERY

The NSS PKI supports key escrow and recovery for private keys associated with encryption certificates. The NSS PKI does not support key recovery using key encapsulation techniques.

4.12.1 Key Escrow

4.12.1.1 Circumstances for Key Escrow

Encryption certificate private keys are escrowed as part of the key generation/certificate request process. Those are the only private keys that are escrowed.

4.12.1.2 Escrowing Keys

Not applicable.

4.12.1.3 Notification of Key Escrow to Subscriber

The Subscriber [DD FORM 2842] advises the PKI sponsor that private keys associated with their encryption certificates are escrowed by the PKI.

4.12.2 Key Recovery

The DoD implementation does not issue *id-CNSS-hardware* OID encryption certificates.

For *id-CNSS-software* OID encryption certificates, the RA Officer interacts with the DRM through the TPS interface. The RA Officer may specify recovery to Token if the associated certificate has been lost or destroyed. All other private keys are recovered in software. The DRM provides the key to the TPS as described in [CAS CPS]. For token recovery, TPS produces a CRI which is used to extract the private key from the DRM and insert it into the Token. For software recovery, the private key and certificate are provided in a PKCS 12 file. Keyed Tokens, P12 files and password are distributed to the requestor as specified in Section 6.1.2 for distribution private keys.

4.12.2.1 Circumstances for Key Recovery

Escrowed keys may be recovered to support the recovery of encrypted data for business, law enforcement or other requirements. In general, escrowed keys are recovered for the following purposes:

- The original copy of the escrowed key has been lost or damaged and the Subscriber cannot access data encrypted with the corresponding public key;
- The certificate is to be re-keyed and the earlier issued private keys are recovered to be included on the token containing the re-keyed certificate; and,
- An authorized third party (other than the PKI Sponsor) requires access to data encrypted with the corresponding public key.

4.12.2.2 Who May Request Key Recovery

PKI Sponsors may request recovery of their own escrowed keys. RA Officers may request initiation of the recovery of escrowed keys as part of the re-key process. Key recovery may also be requested by the following third parties:

- PKI Sponsor's manager, supervisor, or superior officers;
- Law enforcement or counterintelligence agents;
- Agents of U.S. Federal Courts; and,
- Any person or organization authorized by the NSS PKI PMA or ANMA via an authenticated communication.

4.12.2.3 Processing Key Recovery Requests

The RA Officer only accepts requests signed with a wet signature if the request is submitted in writing or using *id-CNSS-hardware* Name Signature certificate if submitted electronically. Requests may be submitted directly to the RA Officer or through a local TA.

For all requests processed through the RA Officer, the RA Officer or TA validates the identity of the requestor, and RA Officer determines the authority of the requestor to recover the escrowed key using local knowledge (directly, or through the TA). The RA Officer or TA confers with organization management and/or legal counsel, as appropriate.

If a TA receives the request, the TA validates the authority of the individual using local knowledge and forwards the request (in a format that allows the RA Officer to validate the requestor's signature) via a digitally signed email to the RA Officer. The TA states the basis for accepting the requestor's authority. The RA Officer authenticates the information in the request.

For all manual key recovery operations, once the RA Officer has completed validating the recovery request, the RA Officer initiates the key recovery process, which requires the participation of two RA Officers, as follows:

The original RA Officer (called the 1st RA Officer) provides all information to a 2nd RA Officer at the same location. The 2nd RA Officer verifies the information using the same process as the 1st RA Officer;

The 1st RA Officer obtains a signed acknowledgement of responsibilities from the requestor stating that the Third Party requestor agrees to be bound, by legal and policy means, to the key protection and other provisions of this CP, including use of activation data that complies with Section 6.4.1;

Once both RA Officer s are satisfied, the 1st RA Officer authenticates to the TPS using the 1st RA Officer's *id-CNSS-hardware* RA Officer certificate;

After the 1st RA Officer has successfully authenticated, the 1st RA Officer identifies the certificate for the key to be recovered to the system and, specifies whether the key will be recovered in software or to a token (TPS will provide options based on policy OID and token state);

The 1st RA Officer then provides the request identification information to the 2nd RA Officer.

The 2nd RA Officer authenticates to the TPS using the 2nd RA Officer's *id-CNSS-hardware* RA Officer certificate. The 2nd RA Officer ensures that the specific request information matches the documentation provided and approves the 1st RA Officer to recover the key;

For recovery to software:

The 1st RA Officer receives the system generated password used to encryp the private key into the PKCS12 file;

The 2nd RA Officer receives and accounts for PKCS#12 file containing the certificate and private key; and,

The RA Officers transmit the recovered key and password to the requestor using the process described in Sections 6.1.2 and 6.2.6.

For recovery to a Token:

Each RA Officer prints the CRI presented by the system. Each CRI contains half of the authentication information required to recover the key to the token.

The 1st RA Officer formats a token with the Key Recovery phone home URL;

If the requestor will recover the key directly, the 1st RA Officer sends the Token to the requestor as specified in section 6.2.1. Each RA Officer forwards the partial password CRI to the requestor in a digitally signed and encrypted email. The requestor uses the Token and the user name and combined CRI password to obtain the Private Key;

If the RA Officers will recover the key to the Token, the two RA Officers work together, each providing half of the CRI password to obtain the Key. The 1st RA Officer maintains control of the Token and the 2nd RA Officer inputs and maintains control the PIN for the Token. Token and PIN are sent to the Requestor as specified in Section 6.1.2.

4.12.2.4 Notification of Key Recovery to Subscriber

For manual recovery, the RA Officer sends an email to PKI Sponsor's email address when responding to a request to recover any escrowed keys based on a request signed the PKI Sponsor's private key.

4.12.2.5 Notification of Key Recovery by the CA to Other Entities

There is no requirement to notify other entities of key recovery requests.

5 FACILITY, MANAGEMENT, AND OPERATIONAL CONTROLS

5.1 PHYSICAL CONTROLS

Special care is taken to protect RA equipment, including cryptographic modules, from theft, loss, and unauthorized access at all times. RA Equipment is marked "For DoD/NSS PKI Authorized Use Only" and is physically protected as described in Section 5.1.2. Only applications required to perform PKI functions are allowed on the RA equipment.

5.1.1 Site Location and Construction

All NSS PKI RA equipment and operations are located in facilities and/or office areas approved by agency security officials as constructed for processing of classified information of the highest classification that will be asserted in or protected by use of a certificate issued by or through that equipment or SECRET, whichever is higher.

5.1.2 Physical Access

The RA Officer /LRA is present whenever the cryptographic module is installed and activated.

The RA will implement physical access controls to reduce the risk of equipment tampering even when the cryptographic module is not installed and activated. A variety of mechanisms may be used to protect the RA equipment from tampering. Any of the following are acceptable:

- The RA equipment is in a secured facility with controlled access; only people on an access list may enter the room where the RA equipment is located. The identity of people accessing the RA equipment is recorded by someone other than those accessing the RA equipment, along with access times and dates;
- The RA equipment is located in a facility controlled at a level above the classification of the network to which it is connected and only people with appropriate clearances are allowed unescorted access to the RA/LRA equipment;
- When not in use, the RA equipment is in a locked container as specified below for storage of cryptographic modules, to which only authorized RAs have access;
- Tamper evident seals are placed on the RA equipment in access controlled facilities, and these seals are inspected weekly by the RA Officer or IAO – a record of the inspections is maintained for inspection during compliance audits.

The PKI Sponsor keeps the deactivated cryptographic module under the direct physical control or locks the token in a container to which only that person has access. In unclassified spaces (normally a government controlled space), RA tokens are stored in a safe, securely locking file cabinet or similar container. Any loss of control is immediately reported to an RA Officer.

5.1.3 Power and Air Conditioning

RA equipment is supplied with sufficient power and air conditioning sufficient to provide reliable operation.

5.1.4 Water Exposures

Except in tactical environments, RA equipment is installed in a manner to preclude water damage. In areas susceptible to flooding, moisture detectors are installed. In a tactical environment, the RA equipment will be protected from water damage to the extent operationally feasible.

5.1.5 Fire Prevention and Protection

Except in tactical environments, RA equipment is installed in a manner to minimize the potential of fire damage. Smoke detectors are installed. In a tactical environment, the RA equipment will be protected from fire damage to the extent operationally feasible.

5.1.6 Media Storage

All media is stored away from sources of heat, and away from obvious sources of water (e.g., away from water pipes) or other obvious hazards to the extent possible based on the operational situation. Electromagnetic media (e.g., tapes, diskettes) are stored away from obvious sources of strong magnetic fields (e.g., audio speakers, monitors). Material not required for daily operation or not required to remain with the RA equipment is stored in a room or building separate from the RA equipment until it is transferred to the archive location.

RA Officer/TAs control tokens that do not contain private keys such that they are not subject to unauthorized access.

The RA Officer handles, packages and stores media containing private key material as SECRET unless the cryptographic module is specifically approved as unclassified when locked. The RA Officer advises PKI Sponsors of this requirement and the requirements to protect keys as specified in Section 5.1.2. In addition to the above, RA Officer private key material is protected as specified in Section 6.2.

5.1.7 Waste Disposal

RA Operations Staff remove and destroy normal office waste as specified in local policy. Classified media and papers, and media used to collect information as specified by Section 9.4 is destroyed using processes approved for the destruction of classified information.

Media containing private key material is destroyed using an NSA approved process for the destruction of SECRET materials.

5.1.8 Off-site Backup

The IAO or SA will back up the RA electronic audit logs monthly using the audit log backup procedures. Audit log backup will be stored as specified in Section 5.4.5.

5.2 PROCEDURAL CONTROLS

5.2.1 Trusted Roles

A trusted role is one whose incumbent performs functions that can introduce security problems if not carried out properly, whether accidentally or maliciously.

Since improper actions, whether malicious or inadvertent can weaken the integrity of the CAS, all persons filling trusted roles related to RA operations are held accountable to perform designated actions correctly.

The functions performed in these roles form the basis of trust in the entire NSS PKI. Two approaches are taken to increase the likelihood that these roles can be successfully carried out. The first approach is to ensure that the person filling the role is trustworthy and properly trained. The second is to distribute the functions of the role among several people, so that any malicious activity requires collusion.

DISA or the approving RA Officer forwards contact information, including names, organizations, and contact information, of RA Officers to the CAS when the RA is established and whenever there are changes to the list. RAs maintain a list of SAs, IAOs, and TAs supporting the RA.

The only trusted roles defined by this RPS are the RA Operations Staff (including RA Officers), TAs, and Security Auditors.

5.2.1.1 CAS Operations Staff

Not applicable.

5.2.1.2 RA Operations Staff

RA Operations Staff consists of the SA and the RA Officer, and are the individuals holding trusted roles that operate and manage RA components. RA Operations Staff is responsible for the following:

- Installation, configuration, and maintenance of the RA;
- Establishing and maintaining RA operating system and application accounts; and,
- Routine operation of the RA equipment such as system backup and recovery or changing recording media.

RA Officers are considered part of the RA Operations Staff and may perform some or all of the above functions. In addition, RA Officers are specifically responsible for the following:

- Registering new Name Subscriber and requesting the issuance of certificates (RA/LRA);
- Registering new Role and System and Device Subscriber and requesting the issuance of certificates (RA Only);
- Verifying the identity of PKI Sponsors (RA/LRA);
- Verifying the accuracy of information included in certificates (RA/LRA);
- Approving and executing the issuance of certificates (RA/LRA);
- Requesting (RA/LRA), approving, and executing the suspension, restoration, and revocation of certificates (RA only);

- Verifying the identity and authorization of entities requesting recovery of escrowed key material (RA/LRA);
- Authorizing and facilitating the recovery of escrowed key material (RA Only);
- Recovering escrowed key material if assigned that responsibility by the ANMA (RA Only);
- Generating keys for Code Signing Certificates (RA Only);
- Distributing recovered copies of escrowed keys to requestors, with protection as described in Sections 6.2.6 and 6.4.1 (RA Only); and,
- Initializing and distributing SIPRNET hardware tokens and user information on control of the token and PIN. (RA/LRA).

5.2.1.3 Trusted Agent

A Trusted Agent is defined in Section 1.3.4 as an individual holding a trusted role that assists in performing RA Officer responsibilities. However, a TA does not have privileged access to any CAS components to authorize certificate issuance, certificate revocation, suspension, restoration, or key recovery. A TA may be responsible for the following:

- Verifying the identity of PKI Sponsors;
- Verifying the accuracy of information to be included in certificates;
- Verifying the identity and authorization of entities requesting certificate revocation, suspension, or restoration;
- Verifying the identity and authorization of entities requesting recovery of escrowed key material.; and,
- Initializing (if authorized by CC/S/A) and distributing SIPRNET hardware tokens and user information on control of the token and PIN.

5.2.1.4 Security Auditor

RA Security Auditor is the RA IAO and is responsible for auditing RAs as defined in Section 5.4. Security Auditors are responsible for the following:

- Reviewing, maintaining, and archiving audit logs; and,
- Performing or overseeing internal audits to ensure that RAs are operating in accordance with the associated CPS and RPS.

5.2.2 Number of Persons Required per Task

See [CAS CPS] for CA related information.

Third Party Key Recovery is the only required multi party control activity described in this RPS and the process uses two RAs to accomplish it as described in Section 4.12.2.

5.2.3 Identification and Authentication for Each Role

All PKI related communications between a TA and an RA Officer or between RA Officers is digitally signed using the *id-CNSS-hardware* Name Signature certificate issued to the individual.

If necessary for privacy or to protect "need to know" (e.g., transfer of activation data), information will be encrypted using the *id-CNSS-software* Name encryption certificate. RA Officer communication to the CA is authenticated and encrypted using Client-authenticated TLS using the RA Officer's *id-CNSS-hardware* Name Identity certificate and the CA Device certificate.

RA Officer credentials are only used for RA functions.

Local users authenticate to the RA workstations using a strong password or, if joined to a domain enabled for certificate based login, using their *id-CNSS-hardware* Name Identity certificate.

The RA Officers for a CC/S/A operating under this RPS are nominated by the CC/S/A to the ANMA for appointment/approval. Other trusted roles within the CC/S/A are nominated by the local command. An RA Officer appoints/approves LRAs and TAs that will work with the RA Officer to provide PKI services and SA and IAO personnel for the RA Workstation. An LRA appoints/approves TAs that will work with the LRA and SA and IAO personnel for the LRA Workstation.

Appointment/approval is documented in a formal appointment memorandum. Individuals acknowledge the appointment to a trusted role using the [DD FORM 2841] or by endorsement of the appointment memo to the appointing official. Acceptance may be via wet signature or digital signature using the individual's *id-CNSS-hardware* Name Signature certificate. A copy of the appointment and acknowledgement are sent to the primary CC/S/A RA Officer for inclusion in the archives.

5.2.4 Roles Requiring Separation of Duties

The Security Auditor (IAO) for an RA has no other trusted role within the NSS PKI.

No RA Officer holds any other trusted role on the CAS.

Compliance auditors appointed by the DoD PKI PMO never perform any other role on the RA undergoing Compliance Audit.

Only the IAO performs security audit function on the RA equipment.

5.3 PERSONNEL CONTROLS

5.3.1 Qualifications, Experience, and Clearance Requirements

The nominating official is responsible for ensuring that all personnel nominated to fill a trusted role comply with the following:

- Be employees of a CNSS member agency or be a contractor/vendor employee contracted to a CNSS member agency;
- Be within the administrative control of an identified administrator who is a CNSS member agency employee or a civilian contractor/vendor employee of equivalent or greater responsibility and compensation;
- Have not been denied a security clearance or had a security clearance revoked;
- Be appointed in writing;

- Hold a minimum clearance of a final U.S. SECRET;
- Be a U.S. citizen;
- Have successfully completed an appropriate training program;
- Have demonstrated the ability to perform their duties;
- Have no other duties that would interfere or conflict with their responsibilities as defined in Section 5.2.1;
- Have not been previously relieved of trusted role duties for reasons of negligence or non-performance of duties; and,
- Have not been convicted of a felony offense.

The nomination is signed by the nominating official via wet signature or digital signature using the individual's id-CNSS-*hardware* Name Signature certificate.

5.3.2 Background Check Procedures

The nominating official is responsible for ensuring that all personnel nominated have a final U.S. SECRET Clearance (as stated in Section 5.3.1). The release of details with respect to the individual's background check information is under the control of the individual's local security office.

5.3.3 Training Requirements

All personnel assigned to a trusted role under an RA (RA Officer, IAO, SA, TA) are provided with training on the stipulations of [CNSSI 1300], any appropriate local guidance, and the PKI duties they are expected to perform (e.g., LRA, Registration/Revocation, Key Recovery). RA Operations Staff are also instructed on RA operational and security principles, mechanism, and procedures to include disaster recovery and business continuity, and any PKI specific details of the software/hardware that is used for RA operations. RA Officers trained for the DoD PKI SIPRNET Pilot do not require initial training.

All individual training is documented in the individual's local training record.

5.3.4 Retraining Frequency and Requirements

Significant changes to RA operations are generally covered in CAS level training awareness plans. The office that nominates CC/S/A RA Officer's determines if there is a need for other training. All individual training is documented in training records maintained by the organization.

5.3.5 Job Rotation Frequency and Sequence

Not applicable.

5.3.6 Sanctions for Unauthorized Actions

The CC/S/A official with administrative/disciplinary authority over the individual is notified of violations of [CNSSI 1300], the applicable CPS/RPS or other procedures along with an ANMA recommendation for action. The CC/S/A official determines the appropriate action.

Any person, including the ANMA, who becomes aware of a suspected security violation or compromise, reports the suspected security violation or compromise to the appropriate security officials.

5.3.7 Independent Contractor Requirements

Contractor personnel employed to operate any part of the PKI are subject to the same criteria as a US Government employee and are cleared to the level of the information protected by the certificates the PKI issues. The contracts of these contractor personnel will stipulate that the contractor will be liable for any loss associated with any violation of the CP or this RPS, to include misuse of the equipment provided to it (e.g., private key, certificate, hardware token, and work station).

If a vendor provides RA services to the DoD via a subcontractor, the vendor will establish written procedures to ensure that any subcontractors perform in accordance with this RPS. Such procedures are made available during compliance audits.

5.3.8 Documentation Supplied to Personnel

The CC/S/A Primary RA Officer determines the documentation (if any) required for each role. If there is documentation, it is provided during training. If the documentation is updated each appropriate individual receives a copy of the update.

RA Officers, SAs and IAOs are provided appropriate system, application and cryptographic module documents that are retained at the RA location. They will have access to:

- Operating System and application on-line documentation (help files); and,
- ANMA approved RPS.

TAs will have:

- ANMA approved RPS; and,
- Local operating procedures, if provided by CC/S/A RA Officer /LRA.

The CC/S/A RA Officer determines if other documentation is required for each role. If the documentation is updated each appropriate individual receives a copy of the update.

5.4 AUDIT LOGGING REQUIREMENTS

Audit log files are generated for all events related to the security of the CAS or RA. Where possible, security audit logs shall be automatically collected. Where this is not possible, a logbook, paper form, or other physical or electronic mechanism is used. Physical logbooks are bound to allow for the detection of the removal of pages. Logbooks are bound and entries are

made in indelible ink providing protection against removal of pages and against alteration or deletion of entries. All security audit logs, both electronic and non-electronic, are retained and made available during compliance audits. The security audit log for each auditable event defined in this section is maintained in accordance with Section 5.5.2.

5.4.1 Types of Events Recorded

Any security auditing capabilities of the underlying RA equipment operating system are enabled during installation.
No matter what form, audit entries captured in RA operation include:

- The type of event;
- The date and time the event occurred;
- For signing, revocation, escrow, or recovery processes, a success or failure indicator;
- The identity of the entity or operator that caused the event; and,
- For messages from any source requesting an action by the RA, the message date and time, source, destination and contents.

At a minimum, the events identified in the Table 5-1 are recorded by each system that performs the action:

Table 5-1: Auditable Events

Event Type	Event	Where recorded
Security Audit	• Any changes to the Audit parameters, e.g., audit frequency, type of event audited • Any attempt to delete or modify the Audit logs	• IAO Manual log/ Operating System Log • Operating System Log
Identification and Authentication	• Successful and unsuccessful attempts to assume a role	• Operating System Log
	• The value of maximum authentication attempts is changed	• Operating System Log
	• The maximum number of unsuccessful authentication attempts occurs during a user login • Operating System Log	• Operating System Log
	• An Administrator unlocks an account that has been locked as a result of unsuccessful authentication attempts	• Operating System Log
	• An Administrator changes the type of authenticator, e.g., from password to biometrics	• Operating System Log
Local Data Entry	• Any security-relevant data that is entered in the system (e.g., account management, directory access, policy or privilege change)	• Operating System Log
Remote Data Entry	• Any security-relevant messages that are received by the system	• Operating System Log/email Logs

Event Type	Event	Where recorded
Data Export and Output	• Any successful and unsuccessful requests for private, sensitive, classified, or security-relevant information	• Operating System Log
Key Generation	• Whenever the CAS generates a key (Not mandatory for single session or one-time use symmetric keys)	• Not applicable
Private Key Load and Storage	• The loading of Component private keys • Any access to certificate subject private keys retained within the CAS for key recovery purposes	• Operating System Log
Trusted Public Key Entry, Deletion, and Storage	• Any changes to the trusted public keys, including additions and deletions	• Operating System Log
Private Key Export	• The export of private keys (keys used for a single session or message are excluded)	• Operating System Log
Certificate Registration	• Any certificate requests	• Email/manual Logs
Certificate Status	• Any certificate revocation, modification, suspension, re-key, or renewal requests	• Email/manual Log
Certificate Status Change Approval	• The approval or rejection of a certificate status change request	• Email/manual Log
CAS or RA Configuration	• Any security-relevant changes to the configuration of the CAS or RA • Configuration changes to the CAS or RA involving hardware, software, operating system, patches, or security profiles.	• See Configuration Documentation
Account Administration	• Roles and users are added or deleted	• Operating System Log
	• The access control privileges of a user account or a role are modified	• Operating System Log
Certificate Profile Management	• All changes to the certificate profile	• Not applicable
Revocation Profile Management	• All changes to the revocation profile	• Not applicable
CRL Profile Management	• All changes to the CRL profile	• Not applicable
Personnel Controls	• Appointment of an individual to a trusted role	• Email/manual Logs
	• Designation of personnel for multiparty control	• Not applicable
	• Training of individuals appointed to the RA role	• Organization Training records
Miscellaneous	• Installation of CAS and RA operating systems and applications	• Operating System Logs
	• Physical access to, loading, zeroizing, transferring keys to or from, backing-up, acquiring, or destruction of cryptographic	• Manual Log

Event Type	Event	Where recorded
	modules	
	• Installing hardware cryptographic modules	• Operating System Log
	• Removing hardware cryptographic modules	• Operating System Log
	• Receipt, servicing (e.g., keying or other cryptologic manipulations), and shipping hardware cryptographic modules	• Manual Log
	• System startup	• Operating System Log
	• Logon attempts to CAS or RA applications	• Not applicable
	• Receipt of hardware / software	• Manual Log
	• Attempts to set passwords	• Operating System Log
	• Attempts to modify passwords	• Operating System Log
	• Backing up CAS or RA internal databases	• Manual Logs
	• Restoring CAS or RA internal databases	• Manual Logs
	• File manipulation (e.g., creation, renaming, moving)	• Operating System Log
	• Posting of any material to a repository	• Not applicable
	• Access to CAS or RA internal databases	• Operating System Logs
	• All certificate compromise notification requests	• Email/manual Logs
	• Re-key of the any component private keys to include the CAS	• Not applicable
	• A message from any source received by any CAS requesting an action related to the operational state of the CAS	• Not applicable
	• Any requests and actions taken in response to messages requesting CAS actions not covered elsewhere	• Not applicable
	• Installation, access, and modification (to include changes in configuration files, security profiles, and administrator privileges) of CAS and RA system	• Operating System Logs
	• Any use of the CA signing key	• Not applicable
	• Any use of the RA signature key	• Not applicable
	• Messages received from any source requesting RA actions, (certificate requests, compromise notification, key recovery requests, key recovery approval)	• Email/manual Logs
	• Any actions taken in response to requests for RA actions	• Email/manual Log
Physical Access	• Personnel access to room housing CAS	• Not applicable

Event Type	Event	Where recorded
and Site Security	• Physical access to the CAS	• Not applicable
	• Known or suspected violations of physical security	• Manual Log
	• Any known or suspected violations of physical security, suspected or known attempts to attack the RA equipment via network attacks, equipment failures, power outages, network failures, or violations of this certificate policy	• Manual Log
Anomalies	• Software error conditions	• Operating System Log
	• Software check integrity failures	• Operating System Log
	• Receipt of improper messages	• Email/manual Log
	• Misrouted messages	• Email/manual Log
	• Network attacks (suspected or confirmed)	• Manual Log
	• Equipment failure	• Manual Log
	• Electrical power outages	• Manual Log
	• Uninterruptible power supply (UPS) failure	• Manual Log
	• Obvious and significant network service or access failures	• Manual Log
	• Violations of certificate policy	• Manual Log
	• Violations of certification practice statement	• Manual Log
	• Resetting operating system clock	• Operating System Log
	• Network failures	• Manual Log
Key Escrow and Recovery	• Server installation, access, and modification (to include changes in configuration files, security profiles, administrator privileges)	• Not applicable
	• Key escrow database application access (e.g., logon/logoff)	• Not applicable
	• Messages received from any source requesting key escrow database actions, (e.g., escrowed key retrieval requests)	• Manual Logs
	• Messages sent to any destination authorizing key recovery actions, (e.g., first party escrowed key retrieval authorizations, second party key recovery approvals)	• Manual Logs
	• Actions taken in response to requests for key escrow database actions	• Manual Logs
	• Physical access to, loading, zeroizing, transferring keys to or from, backing-up, acquiring or destroying key escrow database cryptographic modules	• Not applicable

Event Type	Event	Where recorded
	• Receipt of keys for escrow and posting of these keys to the key escrow database	• Not applicable
	• Retrieval, packaging (e.g., keying or other cryptologic manipulations), securing, and shipping copies of escrowed keys;	• Manual Log
	• Transfer of escrowed keys to requestors	• Manual Log
	• Any security-relevant actions performed in support of delivery of escrowed keys	• Manual Log
	• Requestor identity and authorization verification (including copies of authorizations; e.g., court orders) supporting key recovery requests	• Manual Log

5.4.2 Frequency of Processing Log

The IAO reviews the RA manual and operating system audit logs monthly. The review includes at least 33% of the data collected since the last audit.

5.4.3 Retention Period of Audit Log

The information generated on the RA equipment is kept on the RA equipment until the information is moved to an appropriate archive facility. The IAO conducts a review prior to deletion from the operational system. Only the IAO ever deletes security audit data from the RA equipment. Security audit data is retained on-site for at least two months, then off-site as archive records in accordance with Section 5.5.2.

5.4.4 Protection of Audit Log

The operating system interface allows only persons with administrator privileges (i.e., IAO and SA) to start, stop, view, backup, modify, delete, or otherwise manage audit logs. The IAO investigates any suspicious gaps in the audit record that might indicate unauthorized deletion of audit records.

Until transferred to the offsite archive facility, audit data is retained either on the RA equipment or secured in a facility under the direct control of the IAO.

The SA or IAO checks on a weekly basis to ensure there is sufficient space for at least two weeks of audit data. If there is not sufficient space, the IAO copies off the current audit data and deletes sufficient records to ensure sufficient space.

The RA Officer transfers all filled log books to the IAO. The SA transfers all backups of operating system logs and electronic records to the IAO. The IAO ensures that the RA Officer has no access to audit records in his/her control. The IAO or SA deletes on-line audit data only after successfully creating the backup and transferring control of the archived audit files to the IAO.

5.4.5 Audit Log Backup Procedures

The IAO or SA will back up the RA operating system audit log monthly using the audit log backup procedures. Each month, a copy of that month's backup(s) will be moved to an offsite facility.

5.4.6 Audit Collection System (Internal Vs. External)

The audit system is internal to the RA equipment and is configured to be invoked on system startup and cease operation only at system shutdown. There is no "RA Application" or separate application logs. The RA Officer does not have the privileges to impact, in any way, audit configuration.

If the audit function overflows or otherwise ceases to function, the RA Officer will not perform RA functions, except entering revocation/suspension information on the CA, until the audit data can again be collected. Immediately after backing up audit data from the workstation and restarting the auditing function, the IAO will open a ticket with the DISA Helpdesk (disa-esmost@okc.disa.mil) identifying the RA Officers by their certificate CNs and the fact that the Audit Data Overflowed along with the period for which CA audit data must be reviewed (beginning of audit failure event to time when audit function is restored). The Ticket will request that the CA administrator review the CA server audit data to ensure that the RA Officers have not performed any functions other than revocation/suspension during the time period specified.

5.4.7 Notification to Event-Causing Subject

No notification is given to event-causing subjects.

5.4.8 Audit Log Assessments

The IAO will, as part of its security audit review, verify that the audit logs have not been tampered with by checking audit configuration and the continuity of security audit data. Then review the data for events such as account creation, changes to accounts, changes to audit parameters, changes to password, failed login attempts, access violations, repeated failed actions, requests for privileged information, attempted access of system files, and unauthenticated responses. Suspicious activity will be logged/explained in an audit log summary and reported to the local site administrator or commander (not to the RA Officer). If a subsequent investigation finds fraudulent behavior, then the IAO reports this result to the ANMA through the CC/S/A CPMWG Representative. The IAO records the results of the audit log review by making an audit log summary entry in the log book.

The RA Officer and RA SA and IAO will be watchful for anomalies and attempts to violate the integrity of the system, including the equipment, its physical location, and its personnel.

5.5 RECORDS ARCHIVAL

5.5.1 Types of Records Archived

When determining if a specific item should be placed in the archive, the RA uses the following as a guide: "Archive records shall be sufficiently detailed to establish the validity of a signature

and determine the proper operation of the RA." At a minimum, that RA archives the following data – using the described mechanisms:

- RA system equipment configuration and updates – physical record;
- RA System Certification and Accreditation documentation – paper or electronic records;
- All RPSs that the RA has been operating in accordance with – paper or electronic record;
- Any contractual or other agreements related to RA operations – paper or electronic record;
- All security audit data as defined in Section 5.4.1 – in electronic or paper form as appropriate;
- Appointment of individual to a trusted role – Physical record;
- Audit review summaries, actions taken as a result of the review, and other remedial actions such as resulting from anomalies detected by the DoD NSS Subordinate CAS operations staff – Physical record;
- Subscriber and RA identity authentication documentation as required by Section 3.2.3.1 – physical record [DD FORM 2841] and [DD FORM 2842];
- Documentation of receipt and acceptance of certificates/subscriber agreements as described in Section 4.4.1 – physical record [DD FORM 2841] and [DD FORM 2842] or electronic record digitally signed with a hardware certificate;
- Documentation of receipt of tokens - paper record or electronic record digitally signed with a hardware certificate;
- All requests to create certificates (including any hard copies) – in electronic or paper form as appropriate;
- All requests to revoke/suspend/restore certificates (including any hard copies) – in electronic or paper form as appropriate;
- Documentation of the identity of the recipient of an escrowed key – in electronic or paper form as appropriate;
- Documentation of the reason for key recovery – in electronic or paper form as appropriate;
- Documentation of the verification of authorization for recovery of escrowed key – in electronic or paper form as appropriate;
- Software applications and associated software user documentation required to access electronic archive records – appropriate electronic media;
- All work related communications to or from the PMA, the ANMA, other CMAs, and compliance auditors, including remedial action reports – in electronic or paper form as appropriate;
- Violations of the CP or applicable CPS/RPS - in electronic or paper form as appropriate; and,

- Compliance Audit Reports – paper.

The current physical audit log (e.g., log book) and other paper audit records will be stored in a locked container to which only RA personnel have access. Only RA personnel will have access to the physical log and only authorized RA Officers will make entries in it. Paper log books are bound, so as to make removal of pages evident, and all entries are made using non-erasable ink.

Note: The RA maintains the current [CNSSI 1300] and [CAS CPS] but does not maintain them as part of the RA archive as they are archived at a higher level.

5.5.2 Retention Period of Archive

RA Archive records are kept for a period of ten years and six months. Electronic data is placed on CD-ROM/DVD when removed from the originating workstation.

5.5.3 Protection of Archive

The IAO will maintain a list of authorized persons with access, modify, and/or delete to archive data and provides it to the RA Officer.

CD-ROM/DVD is used for long term storage of electronic media and does not degrade within the required archive period. Only IAO personnel will have access to original archive data. The SA transfers all backups of operating system logs and electronic records to the IAO. Estimated data retention of the media exceeds the required archive period.

Paper records required to be archived in accordance with Section 5.5.1 are transferred by the RA Officer to the IAO when they are no longer required for ongoing RA operations.

The IAO ensures that the RA Officer has no access to audit records in his/her control.

The IAO controls release of the archive data and ensures that sensitive archive information is only be released in accordance with Section 9.4.

Archive data is kept in a location separate from the RA site in a safe, secure storage facility. The archive data is labeled with the RA workstation designation, the date, and classification prior to being placed in the archive.

All archive data is stored and protected as SECRET.

5.5.4 Archive Backup Procedures

Archive information is not backed up.

5.5.5 Requirements for Time-Stamping of Records

The RA electronic records use the system clock on the RA Workstation. The RA personnel use the workstation clock for the time on manual records.

5.5.6 Archive Collection System (Internal vs. External)

Archive data may be collected in any expedient manner.

5.5.7 Procedures to Obtain and Verify Archive Information

Not applicable.

5.6 KEY CHANGEOVER

Not applicable.

5.7 COMPROMISE AND DISASTER RECOVERY

5.7.1 Incident and Compromise Handling Procedures

If a hacking attempt or other form of potential compromise of a RA workstation or RA credential becomes known, the IAO initiates an investigation in order to determine the nature and the degree of damage.

5.7.2 Computing Resources, Software, and/or Data are Corrupted

If it becomes necessary to rebuild the RA workstation, the RA Officer will ensure that the SA first captures existing system audit data to the extent possible. If audit data cannot be completely captured, the IAO will ensure that the RA documents the extent of audit data lost in the RA manual log.

5.7.3 Entity Private Key Compromise Procedures

In the event of the compromise of an RA Officer's private key, the revoking RA Officer investigates to determine the earliest known good time of the RA certificate and enters the revocation information on the CA for the certificate corresponding to the compromised key using the date determined as the date of compromise. The revoking RA Officer forwards a request to the CAS to identify certificates issued based on the compromised key from the date of compromise and to identify any private keys recovered based on authentication from the compromised key. The revoking RA Officer revokes any certificates identified. Affected Subscribers are notified and directed to apply for new certificates if still required.

In the event of the compromise of a TA key, the revoking RA Officer investigates to determine the earliest known good time of the TA certificate and enters the revocation information on the CA for the certificate corresponding to the compromised key using the date determined as the date of compromise. The revoking RA Officer reviews the records of subscriber certificates issued and keys recovered to identify actions based on the compromised TA key from the date of compromise. The revoking RA Officer revokes any certificates identified. Affected Subscribers are notified and directed to apply for new certificates if still required.

5.7.4 Business Continuity Capabilities after a Disaster

Not applicable.

5.8 CA, RA, OR TA TERMINATION

5.8.1 CA Termination

Not applicable.

5.8.2 RA Termination

If an RA is terminated, the RA Officer's RA certificates are revoked. If the termination is for cause (e.g., negligence, possible unauthorized use of the private key), all certificates issued or recovered based on that RA certificate are revoked. See Section 5.7.3. Affected Subscribers are notified and directed to apply for new certificates if still required. The revoking RA Officer notifies the CAA to remove the terminated RA Officer from the RA Officer from any privilege group on the CA.

For any RA termination, another RA takes possession of any archive records and any security audit logs since the last archive maintained by that RA. If there is no available RA, the CC/S/A transfers the RA archive records a designated the CC/S/A archive facility.

5.8.3 TA Termination

If a TA is terminated for cause (e.g., negligence, possible unauthorized use of the private key), it is treated as a compromise effective the date when the activity causing the termination started. See Section 5.7.3. TAs do not maintain archive records.

6 TECHNICAL SECURITY CONTROLS

6.1 KEY PAIR GENERATION AND INSTALLATION

6.1.1 Key Pair Generation

A private key is considered to be generated by the NSS PKI entity that first comes into possession of it: Subscriber, PKI Sponsor, RA Officer, or CAS.

All Name and Role subscriber key generation and Pseudo-random numbers used for key generation are generated using a FIPS approved method on the NSA approved token or hardware cryptographic module. System and Device subscriber certificate key generation and Pseudo-random numbers used for key generation are generated using a FIPS approved method on the NSA approved software or hardware cryptographic module.

Subscriber private keys associated with certificates that assert the *id-CNSS-hardware* Policy OID, to include RA keys, are generated on the Subscriber token – an NSA approved device. Encryption keys are generated off token as described in [CAS CPS], placed in escrow, and inserted into the Subscriber token during the issuance process. The NSA token selection criterion precludes tokens which can export the private key.

The private key associated with the *id-CNSS-device* Policy OID that is generated in software modules is only exported in encrypted form.

6.1.2 Private Key Delivery to Subscriber

In all cases, PINs, Passwords, PKCS#12 files (p12 files), and tokens not approved by NSA as unclassified[3] used on the SIPRNET are treated as classified SECRET. Physical transfer is always done in a manner approved for the transfer of classified information.

For keys and certificates being delivered on an NSA approved hardware token (e.g., smartcard, USB), the keys are protected by a PIN as specified in Section 6.4.1. After the keys and certificates are generated by the RA Officer or recovered to a token, the RA Officer immediately places the keyed token into a serialized tamper-evident envelope. If not shipped immediately, the envelope will be stored in a locked container and the PIN is secured in a separate container, approved for classified storage until shipment. The keyed token and PIN are delivered to the PKI Sponsor (Requestor is the PKI Sponsor for a key recovered to a token) in one of the following ways:

(PKI Sponsor and TA) The token, in the tamper evident package, is prepared for shipment as classified information unless it is specifically approved as unclassified. It is sent to the PKI Sponsor using continuously accountable means (e.g., US Registered Mail with return receipt, Federal Express). If the RA Officer has been provided with a PKI Sponsor email address, the RA Officer sends a digitally signed email to the PKI Sponsor with the serial number for the seal and expected delivery date. The RA Officer sends the PIN to the TA via signed and encrypted email on SIPRNET using NSS PKI. The TA authenticates the PKI Sponsor's identity and

[3] The SC 650 token has been approved by NSA as unclassified when locked.

obtains a signed Certificate of Acceptance and Acknowledgement of Responsibilities before delivering the PIN to the PKI Sponsor.

(Two TAs) The token, in the tamper evident package, is prepared for shipment as classified information unless it is specifically approved as unclassified. It is sent to the TA assisting the RA Officer using continuously accountable means (e.g., US Registered Mail with return receipt, Federal Express). The RA Officer sends a digitally signed email with the serial number for the seal and expected delivery date to the TA. The RA Officer sends a second TA the PIN via digitally signed and encrypted email on SIPRNET using NSS PKI at the same time the token is shipped. The two TAs are present and present the PIN and token to the PKI Sponsor after one of the TAs authenticates the PKI Sponsor's identity and obtains a signed Certificate of Acceptance and Acknowledgement of Responsibilities.

(PKI Sponsor with CNSS PKI) The token, in the tamper evident package, is prepared for shipment as classified information unless it is specifically approved as unclassified. It is sent to the PKI Sponsor using continuously accountable means (e.g., US Registered Mail with return receipt, Federal Express). If the RA Officer has been provided with a PKI Sponsor email address, the RA Officer sends a digitally signed email to the PKI Sponsor with the serial number for the seal and expected delivery date. Upon receipt of the Subscriber acknowledgment of receipt of the token (digitally signed email or a signed Certificate of Acceptance and Acknowledgement of Responsibilities), the RA Officer sends the PIN to the PKI Sponsor via a digitally signed and encrypted email on SIPRNET using NSS PKI. Alternatively, the RA Officer may ship it to the PKI Sponsor via continuously accountable means. In this case, and if the RA Officer has been provided with a PKI Sponsor email address, the RA Officer sends a digitally signed email to the PKI Sponsor with the shipping date, method of shipping, and expected delivery date.

An RA Officer that uses the 90Meter Certificate Issuance Workstation - Batch software for bulk enrollment may send the PINs for individual tokens as specified above or the RA Officer may send the log file with multiple PINs. If sending multiple PINs, the RA Officer only sends the PINs to a TA and ensures that only the PINs for the PKI Sponsors at the TA's location are sent to the TA.

If the PKI Sponsor or TA suspects that the delivery of either the token or PIN may have been compromised, the RA Officer will revoke the certificates. If, upon receipt of the PIN, the PKI Sponsor is not able to activate the Token, the PKI Sponsor reports this to the RA Officer or TA. This is treated as a compromise of the private key and the certificates are revoked and, if needed, a new set of certificates issued.

The PKI Sponsor is told to change their PIN when they receive a keyed PKI Token. If a new CRI is required by the implementation to perform PIN Reset, the RA Officer generates and sends a new CRI form to the PKI Sponsor with the PIN.

The RA Officer will require the PKI Sponsor to return a delivery receipt for the activation data.

Keys and certificates that are stored in a P12 file are protected by a password of 20 or more characters with a minimum of two upper, two lower, two numbers and two special characters interspersed throughout the password. P12 files are never retained on the computer in an unencrypted form. RA Officers immediately delete P12 files once they have been processed for

transfer. Personnel receiving P12 files are advised to immediately remove the file from the file system once the keys have been imported into the user's cryptographic module.

For software key recovery, the 2nd RA Officer receives recovered encryption keys in a P12 (PKCS12) file as described in Section 4.12.2.3. The 1st RA Officer receives a system generated password for the P12 file. The password does not resemble dictionary words; differs from words or names by at least two characters that are not simple number-for-letter substitutions and does not consist of words or names followed by 1-4 digits. The password/passphrase also does not contain sequences, repeated characters, date formats, or license plate formats.

When possible, the P12 file will be delivered directly to the requestor in an encrypted email using the requestor's *id-CNSS-software* Name encryption certificate. If the requestor does not have a valid NSS Email Encryption certificate, the .p12 file will be written to removable media (e.g., CD-ROM, DVD), immediately placed into a serialized tamper-evident envelope, and delivered to the requestor directly using continuously accountable means (e.g., US Registered Mail with return receipt, Federal Express). If not shipped immediately, the envelope will be stored in a locked container until shipment.

In either case, the requestor is directed to acknowledge receipt of the P12 file to the 2nd RA Officer (digitally signed email or a signed Certificate of Acceptance and Acknowledgement of Responsibilities).

Once the 2nd RA Officer has received the acknowledgement, the 1st RA Officer then sends the password to the requestor via a digitally signed and encrypted email using *id-CNSS-software* Name encryption certificate. If the requestor does not have a valid *id-CNSS-software* Name encryption certificate, the 1st RA Officer ships it to the requestor via continuously accountable means.

If the requestor suspects that the delivery of either the P12 file or password may have been compromised, they immediately notify the sending RA Officer, and the RA Officer will revoke the certificate and notify the PKI Sponsor if not part of the process. Once the process is completed, the RA Officer destroys all copies of the P12 file.

6.1.3 Public Key Delivery to Certificate Issuer

Not applicable.

6.1.4 CA Public Key Delivery to Relying Parties

The primary method for DoD relying parties to obtain the NSS Root, Intermediate and Signing CA signing certificates is via controlled service/agency standard software load (e.g., gold disk). The CC/S/A RA Officer interacts with the service/agency organization responsible for maintaining the standard software load to advise them of changes that are required.

The RA Officer provides the NSS Root CA, Intermediate CA, and Signing CA signing certificates to any relying party that requests it by directing them to http://iase.disa.smil.mil/pki-pke. The CRI issued to the Subscriber has a hash of the Root certificate which is used to verify the self-signed certificate.

6.1.5 Key Sizes

Not applicable.

6.1.6 Public Key Parameters Generation and Quality Checking

For Subscriber encryption keys, see [CAS CPS]. Other Subscriber RSA key pairs are generated and checked on the NSA approved cryptographic module in compliance with FIPS 186-3.

Requirements related to selection of domain parameters is not applicable, as the PKI is using the RSA algorithm.

6.1.7 Key Usage Purposes (as per X.509 v3 Key Usage Field)

Not applicable.

6.2 PRIVATE KEY PROTECTION AND CRYPTOGRAPHIC MODULE ENGINEERING CONTROLS

6.2.1 Cryptographic Module Standards and Controls

The Subscriber hardware token is the SAFENET 650. Other hardware tokens or software cryptographic modules are selected from a list maintained by the DoD PKI PMO. The PMO process for maintaining the list ensures that the token and associated middleware or software cryptographic module is approved by NSA for use in the DoD implementation of the NSS PKI.

For hardware tokens, the CC/S/A RA Officer who initially acquires the tokens is responsible for ensuring that the tokens are accounted for. That RA Officer may distribute tokens singly or in bulk. Tokens may be distributed to individual PKI Sponsors, RA Officers or TAs. Unless the token is hand delivered, the tokens are sent in serialized tamper-evident packaging using continuously accountable means (e.g., US Registered Mail with return receipt, Federal Express). The person sending the tokens sends a digitally signed email to the recipient stating the serial number of the seal and the expected arrival date. Upon receipt, the recipient verifies that there is no evidence of tampering and then acknowledges receipt in a digitally signed email. The sending RA Officer maintains a log of all tokens issued and the identity of the RA Officer/TA that received the token in the RA audit records.

Recipient RA Officers may further distribute tokens to RAs or TAs operating under them using the process described above.

If there is evidence of tampering, the recipient advises the transmitting RA Officer. If the recipient is a TA, the TA returns the entire shipment to the RA Officer. The first RA Officer to receive the returned tokens destroys them. If the first RA Officer is not the originating RA Officer, the originating RA is advised date of destruction and the serial numbers of the tokens involved.

If not done prior to receipt, the tokens used by Name or Role subscribers that require initialization are initialized by an RA prior to issuance to the PKI Sponsor.

See Section 4.12.2 for RA processes to ensure security of escrowed keys.

Name certificates that assert non-Repudiation are under the exclusive control of the PKI sponsor when they are generated or, if generated by the RA, once the Sponsor acknowledges receipt of the key. Role and System or Device certificates never assert non-Repudiation.

The SAFENET 650 is approved by NSA in CNSS 014-2010, *Approval of Continued Use of SC650 Token – DECISION MEMORANDUM* [CNSS 014-2010] as a Subscriber hardware token and is unclassified when removed from the workstation. [CNSS 014-2010] provides detailed instructions for control of the SAFENET 650 token. If NSA approves other token for use, the approval may provide additional instructions related to use of the token. The RA Officer or TA informs the PKI Sponsors of the instructions provided in the NSA approval memo.

6.2.2 Private Key (n out of m) Multi-Person Control

Not applicable.

6.2.3 Private Key Escrow

Not applicable.

6.2.4 Private Key Backup

For Name or Role *id-CNSS-hardware* certificates, PKI Sponsors are not permitted to backup or otherwise copy their own private keys.

If the token can export keys, the PKI Sponsors are told to never backup or copy Subscriber private keys from the token.

If the PKI Sponsor receives a copy of the encryption private key via the key recovery process, the sponsor is reminded of the requirement to store the .p12 file only on removable media, not to back it up on-line, and to protect continuously the private key at least at a level commensurate with the level of the data the key provides access to or protects as outlined in Section 6.2.7.

For Software System or Device certificates, the PKI Sponsor is permitted to make operational copies of private keys for each application that requires the key in a different location or format; however, private keys stored in each of these applications or locations are kept in cryptographic modules that have been approved by NSA. All key transfers are done from an approved cryptographic module, and the key is encrypted during the transfer. The PKI Sponsor is responsible for ensuring that all copies of private keys, including those that might be embedded in System or Device backups, are protected, including protecting any workstation on which any of its private keys reside.

6.2.5 Private Key Archival

Not applicable.

6.2.6 Private Key Transfer into or from a Cryptographic Module

All private keys are generated in the subscriber cryptographic module or by the CA and inserted into the subscriber cryptographic module. Private keys never exist outside an approved cryptographic module except in encrypted form. For keys that will be transported outside a

cryptographic module, the encryption strength must be commensurate with the strength of the key being protected. See Section 6.1.2 for details transport of private key outside the cryptographic module. Only authorized parties are given access to the password.

6.2.7 Private Key Storage on Cryptographic Module

See Section 6.2.1.

6.2.8 Method of Activating Private Key

Private keys are activated using a PIN as specified in Section 6.4.1. The user interface does not display the PIN as it is typed.

6.2.9 Method of Deactivating Private Key

PKI Sponsors are instructed to provide appropriate protection to an activated Cryptographic module to ensure there is no unauthorized access. Generally, this is being present when the module is in use. When not in use, the Cryptographic Module on a token is deactivated by removing it from the card reader or passive timeout. PIN, PKCS#12 files, and tokens used on the SIPRNet are treated as classified and are shipped using means appropriate for classified information. The PKI Sponsor removes the hardware cryptographic module and stores it in accordance with Section 5.1.2 when not in use.

Recovered encryption keys in software are deactivated by timeout feature of the software or by logging out of the workstation.

Keys for software System or Device certificates are deactivated when the system or device is shut down.

If the token has been approved by NSA as UNCLASSIFIED when locked, it may be handled as described in the approval.

6.2.10 Method of Destroying Private Key

Private keys associated with Identity or Signature certificates that do not assert *keyEncipherment* or *keyAgreement* and any keys used to transport them, where possible, are destroyed when the certificates to which they correspond expire or are revoked. Private keys associated with encryption certificates are destroyed when they are no longer needed. The approved method(s) used for the destruction of keys is specified in the NSA approval to use the Cryptographic Module.

6.2.11 Cryptographic Module Rating

See Section 6.2.1.

6.3 OTHER ASPECTS OF KEY PAIR MANAGEMENT

6.3.1 Public Key Archival

The public key is archived as part of the certificate archival.

6.3.2 Certificate Operational Periods and Key Pair Usage Periods

For Code Signing Certificates – the key and certificate lifetimes are 8 years. However, the RA Officer ensures that the PKI Sponsor of the Code Signing certificate is aware that the limit on active use of the private key for signing is three years, after which the private key is destroyed and, if necessary, the PKI Sponsor obtains a new certificate and key pair via the initial issuance or rekey process.

6.4 ACTIVATION DATA

6.4.1 Activation Data Generation and Installation

All Name and Role Subscribers use a PIN. PINs will be a minimum of 8-16 digits in length. The individual that authenticates to the TPS to request certificates selects the PIN as part of the process. If the token allows characters other than digits, Subscribers are encouraged to use them. The SC650 is currently set during formatting to lock after 5 incorrect tries at entering the PIN. NSA should provide specific guidance when approving other tokens for use.

If the System and Device software uses activation data, it is protected by an alphanumeric pass-phrase.

People are instructed to select a PIN or pass-phrase that is not related to their personal identity, history, or environment and is also told that sequences, repeated characters or numbers, social security numbers, dictionary words or names, date or license plate formats, or other easily guessed numbers. When alphanumeric pass-phrases are used, an interspersed mix of eight characters, including at least two interspersed digits, is used. They also differ from words or names by at least two characters that are not simple number-for-letter substitutions and do not consist of words or names followed by one to four digits.

The NSA token approval may provide additional instructions on activation data. If it does, the RA Officer or TA informs the PKI Sponsors of the instructions.

If a new CRI is required by the implementation to perform PIN Reset, the RA Officer generates the CRI and provides it to the PKI Sponsor. When generating the CRI, the RA Officer verifies that the information displayed for the certificates on the token is for the PKI Sponsor making the request. If the token is not locked, PKI Sponsor may request new CRI via a digitally signed email using the *id-CNSS-hardware* Name Signature certificate on the token. Otherwise, the PKI Sponsor may request the new CRI using any available means. Prior to handing the CRI to the PKI Sponsor, the RA Officer or TA on behalf of the RA Officer verifies the identity of the PKI Sponsor as the authorized holder of the token by use of personal knowledge or the use of a government issued photo identity credential.

If the RA Officer uses the 90Meter Certificate Issuance Workstation - Batch software for bulk enrollment, the RA Officer only choses either the “random PIN” or the “Locked Token” options.

6.4.2 Activation Data Protection

Activation data should be memorized, not written down. If activation data are written down, it is classified SECRET, and will not be stored with the cryptographic module.

The PKI Sponsor is the only person authorized to have the activation data for a token containing a Name certificate once the token and activation data is in the possession of the PKI Sponsor.

RA Officers will immediately encrypt any file containing PINs and delete unencrypted versions of these files resident on any workstation.

The RA Officer provides the password for the .p12 file directly to the requestor as specified in Section 6.1.2.

6.4.3 Other Aspects of Activation Data

For transmission of activation data, see Section 6.1.2.

RA Officers change the activation data on the RA cryptographic module whenever their certificates are re-keyed.

See [CAS CPS] for CA related information.

6.5 COMPUTER SECURITY CONTROLS

6.5.1 Specific Computer Security Technical Requirements

See [CAS CPS] for CA and Repository related information.

90Meter Certificate Issuance Workstation - Batch enrollment processing is only performed on a workstation which is configured to meet RA workstation standards and is operated and controlled as an RA workstation.

The RA workstation uses an operating system approved by the CC/S/A DAA. The workstation operating system and security products and services, including any used for remote management below, are configured in accordance with the Federal Desktop Common Configuration as modified by the CC/S/A and all applicable NSA-endorsed configuration guides (http://www.nsa.gov/ia/guidance). The RA workstation operates with the minimal number of accounts required for administration and operation.

RA workstation are either managed locally (i.e., remote login is disabled) or remote management is conducted through a Virtual Private Network. VPN Cryptography uses a minimum of 112 bit cryptography using FIPS approved algorithms.

RA workstations that are joined to the network domain will operate within the following parameters.

- If the issued RA credential has the RA, LRA or NVO PCC code in the UPN, the RA uses that UPN and associated network account to authenticate to the RA workstation to perform RA functions. If the RA credential does not have the RA or LRA PCC code, the RA Officer uses the RA Officer's individual account. The network account used will not have privileges to perform SA or IAO functions on the RA workstation. A separate

network account will be created if the individual's normal network account provides him/her with privileges to perform SA and/or IAO functions.

- For individuals performing SA and IAO roles directly on the workstation, the individual's network account will be the account used to authenticate to the RA workstation to perform SA or IAO functions. The workstation will be configured with the appropriate privileges for these accounts to perform the SA and/or IAO function by adding them to the Local Administration group.
- If feasible, authentication to the RA workstation will be via Certificate Based Logon. The RA Officer uses a token distinct from the token used for normal user access.
- The RA workstation will be restricted to only those network accounts associate to the authorized RA Officers, SAs, and IAOs. All other network accounts will not be able to authenticate to the network via the RA workstation.
- RA workstation system and software updates will be applied via a DAA approved Windows Server Update Service (WSUS) server, Windows System Management Server (SMS), System Center Configuration Manager (SCCM) or Windows Update. If used, Windows Update will be configured to retrieve and install critical security updates on a daily basis. If SCCM is available it should be used in preference over SMS.
- Remote access to the RA workstation via SMS, SCCM or Remote Desktop, formerly known as Windows Terminal Services (WTS), will be restricted to authorized SAs of the RA workstation for the purposes of remote maintenance only. TELNET and file transfer protocol (FTP) will not be used or enabled at the RA workstation.
- When static IP addresses are not used, Dynamic Host Configuration Protocol (DHCP) will be used to assign IP addresses in accordance with NSA guidance [NSADHCP], particularly with regard to lease expiration. All external DHCP requests are blocked at the boundary protection NPE(s) unless secure remote access is authorized using a VPN. All addresses, once assigned, are reserved and associated with the MAC address of the workstation network interface. The DHCP Server is configured to record detection of any address it did not issue.

All network service applications will be implemented and used in accordance with the appropriate NSA guidance as provided at http://www.nsa.gov/ia/guidance.

Network protocols not required for RA operations or remote administration are disabled on the RA workstation. TELNET and File Transfer Protocol are not enabled.

6.5.2 Computer Security Rating

No stipulation.

6.6 LIFE CYCLE TECHNICAL CONTROLS

6.6.1 System Development Controls

RA hardware and software is procured using standard CC/S/A workstation procurement processes and is not identified for RA use until after delivery.

There is no specific government developed software on RA workstations.

6.6.2 Security Management Controls

RA hardware and software is dedicated to the RA's PKI function. Only applications, hardware devices, network connections, and software necessary for RA operations are installed. Software Restriction Policy is enabled on Windows XP and later version of Windows operating systems and configured to lock the system down to only the approved applications.

The local network operations' formal configuration control system is used to document and control the configuration and modifications of the RA workstation and software.

The IAO verifies that there have been no unauthorized modifications made to the RA system as part of the monthly audit reviews.

If a virus or unauthorized software is detected, all operational use of the workstation is halted, the IAO and RA Officer are immediately notified, and the IAO takes immediate action to address the problem.

6.6.3 Life Cycle Security Controls

RA software is loaded using the DAA approved master disk.

Data on RA equipment will be scanned for malicious code on first use and periodically afterward.

RA hardware and software is procured using standard CC/S/A workstation procurement processes and is not identified for RA use until after delivery. Logical access is recorded as specified in Section 5.4.1. Physical access requirements are addressed in Section 5.1.2.

There is no RA specific software. RA hardware and software updates are procured using standard CC/S/A processes and are not identified for RA use. Installation is done by the RA's system administrator as specified for the update.

6.7 NETWORK SECURITY CONTROLS

RA equipment except the RA token is classified as SECRET as it resides on the SIPRNET.

RA equipment only has the services, ports, and protocols enabled that are required to perform RA functions.

The enclave boundary protection is configured to reject a packet originating outside the network that is using an address from the range used by internal networks.

The RA equipment is protected by the local enclave Intrusion Detection System and firewall. The firewall is configured in accordance with NSA 60 Minute Guide to Network Security, limit services allowed to and from the RA equipment to those required to perform CMA functions and has the following security features:

- Audit of security events;
- Protection of security audit log;
- Identification & Authentication with Secure Action Upon Authentication Failure;

- No data is communicated with Network Intrusion Detection System (IDS) components;
- All communications from any external source flows through the firewall and the firewall implements self-protection; and,
- Ability to filter packets based on source, destination, and port number.

6.8 TIME STAMPING

Not applicable.

7 CERTIFICATE, CRL, AND OCSP PROFILES

Not applicable.

8 COMPLIANCE AUDIT AND OTHER ASSESSMENTS

8.1 FREQUENCY AND CIRCUMSTANCES OF ASSESSMENT

The DoD PKI Program office conducts an annual audit of all RAs.

The NSS PKI PMA and NSS PKI Member Governing Body may require aperiodic compliance audits of CASs, RAs, or TAs operating under [CNSSI 1300]. The NSS PKI PMA or Member Governing Body is required to state the reason for any aperiodic compliance audit.

8.2 IDENTITY/QUALIFICATIONS OF ASSESSOR

The RA Compliance Auditor is selected by the DoD PKI PMO to meet all requirements of Sections 8.2 and 8.3 of [CNSSI 1300]. CC/S/As may nominate a Compliance Auditor to the PKI. The nomination provides the identity of the proposed Compliance Auditor and sufficient information to allow the PMO to determine the qualifications and independence of the auditor as required in Sections 8.2 and 8.3 of [CNSSI 1300].

8.3 ASSESSOR'S RELATIONSHIP TO ASSESSED ENTITY

The RA auditor is selected/approved by the DoD PKI PMO to meet all requirements of Sections 8.2 and 8.3 of [CNSSI 1300].

8.4 TOPICS COVERED BY ASSESSMENT

8.4.1 Initial Compliance Audit

Not applicable.

8.4.2 Full Compliance Audit

The RA compliance auditor verifies that the RA properly implements all applicable portions of the RA's approved RPS. The auditor is also required to verify that the RA has a means to assure the quality of the services provided (e.g., periodic customer surveys).

The audit report content is the responsibility of the compliance auditor and should conform to the requirements for [CNSSI 1300].

8.4.3 Alternative Review

Not applicable.

8.5 ACTIONS TAKEN AS A RESULT OF DEFICIENCY

Compliance audit actions taken as a result of the audit are the responsibility of the compliance auditor and should conform to the requirements for [CNSSI 1300].

If any substantive or critical discrepancies are found, the DoD PKI PMO determines if RA will receive a follow-up audit to confirm the implementation and effectiveness of the remedy.

8.6 COMMUNICATION OF RESULTS

The communication of results is the responsibility of the compliance auditor and should conform to the requirements for [CNSSI 1300].

The compliance auditor should also provide a copy to the audited RA and the head of the organization under which the RA operates.

9 OTHER BUSINESS AND LEGAL MATTERS

9.1 FEES

9.1.1 Certificate Issuance or Renewal Fees

No stipulation.

9.1.2 Certificate Access Fees

No stipulation.

9.1.3 Revocation or Status Information Access Fees

Not applicable.

9.1.4 Fees for Other Services

RAs do not charge for services.

9.1.5 Refund Policy

No stipulation.

9.2 FINANCIAL RESPONSIBILITY

See [CNSSI 1300].

9.2.1 Insurance Coverage

No stipulation.

9.2.2 Other Assets

No stipulation.

9.2.3 Insurance or Warranty Coverage for End-Entities

No stipulation.

9.2.4 Fiduciary Relationships

See [CNSSI 1300].

9.3 CONFIDENTIALITY OF BUSINESS INFORMATION

9.3.1 Scope of Business Confidential Information

Not applicable. See Section 9.4 for privacy requirements.

9.3.2 Information Not Within the Scope of Business Confidential Information

Not applicable. See Section 9.4 for privacy requirements.

9.3.3 Responsibility to Protect Business Confidential Information

Not applicable. See Section 9.4 for privacy requirements.

9.4 PRIVACY OF PERSONAL INFORMATION

9.4.1 Privacy Plan

Not applicable.

9.4.2 Information Treated as Private

Not applicable.

RA Officers and TAs keep secure all personally identifying information that is collected but not included in certificates from unauthorized disclosure. RA Officers and TAs handle all such information as sensitive, and restrict access to those with an official need-to-know in order to perform their official duties.

Private keys associated with signature certificates are always under the control of the PKI Sponsor. Private keys associated with encryption certificates are generated on the CA, inserted into the subscriber token and placed in escrow. Copies of these keys are only provided and controlled as specified in Section 4.12.2. Private keys never appear in unencrypted form outside an approved cryptographic module.

9.4.3 Information Not Deemed Private

Not applicable.

9.4.4 Responsibility to Protect Private Information

See Section 4.12 for information on release of private keys.

RA Officers and TAs keep secure all personally identifying information that is collected but not included in certificates from unauthorized disclosure. RA Officers and TAs handle all such information as sensitive, and restrict access to those with an official need-to-know in order to perform their official duties.

The RA limits access to information on the reason for actual or potential revocations to the parties involved, auditors and appropriate command authorities.

9.4.5 Notice and Consent to Use Private Information

Not applicable.

9.4.6 Disclosure Pursuant to Judicial or Administrative Process

Not applicable.

TAs refer all requests to the RA. RA Officers refer all requests to the CA which is responsible for processing information requests.

9.4.7 Other Information Disclosure Circumstances

Not applicable.

9.5 INTELLECTUAL PROPERTY RIGHTS

Not applicable.

9.6 REPRESENTATIONS AND WARRANTIES

9.6.1 CAS Representations and Warranties

Not applicable.

9.6.2 RA Representations and Warranties

An RA Officer that performs registration functions as described in this RPS is required to comply with the stipulations of [CNSSI 1300], and comply with the provisions of an RPS approved by the appropriate ANMA for use with [CNSSI 1300]. An RA Officer who is found to have acted in a manner inconsistent with these obligations is subject to revocation of the RA certificate, termination of RA responsibilities by the sponsoring agency, and potentially adverse administrative or disciplinary action under Agency regulations. An RA Officer supporting [CNSSI 1300] is required to conform to the stipulations of this document, including the following:

- Maintaining its operations in conformance with this RPS;
- Including only valid and appropriate information in certificate requests, and maintaining evidence that due diligence was exercised in validating the information contained in the certificate; and,
- Ensuring that obligations are imposed on PKI Sponsors in accordance with Section 9.6.3, and that PKI Sponsors are informed of the consequences of not complying with those obligations.

9.6.3 PKI Sponsor Representations and Warranties

As specified in Section 4.4.1, prior to being able to make effective use of a PKI certificate, the PKI Sponsor sign's an acknowledgement of responsibilities related to protection of the private key and use of the certificate.

PKI Sponsors are required to do the following:

- Accurately represent themselves in all communications with NSS PKI authorities;

- Protect their private keys at all times, in accordance with [CNSSI 1300], as stipulated in their certificate acceptance agreements, and local procedures;
- Promptly notify an RA Officer or TA upon suspicion of loss or compromise of their private keys—such notification is made directly or indirectly through mechanisms consistent with the CAS's CPS;
- Promptly notify an RA Officer or TA of any changes to the information contained in their certificates;
- Abide by all the terms, conditions, and restrictions levied upon the use of their private keys and certificates; and,
- Upon notification of the recovery of an escrowed private key, determine if revocation of the associated certificate is necessary, and request the revocation if needed.

9.6.4 Relying Party Representations and Warranties

See [CNSSI 1300].

9.6.5 Representations and Warranties of Other Participants

9.6.5.1 Repository Representations and Warranties

Not applicable.

9.6.5.2 NSS PKI PMA

Not applicable.

9.6.5.3 ANMA

Not applicable.

9.6.5.4 Agency POC

Not applicable.

9.7 DISCLAIMERS OF WARRANTIES

RA Officers operating under this RPS, [CAS CPS] and [CNSSI 1300] may not disclaim any responsibilities described in these documents.

9.8 LIMITATIONS OF LIABILITY

Not applicable.

9.9 INDEMNITIES

No stipulation.

9.10 TERM AND TERMINATION

9.10.1 Term

This RPS becomes effective when approved by the ANMA. It remains in effect until either a new RPS is approved by the ANMA or the ANMA terminates all RAs operating under it.

9.10.2 Termination

The requirements of this RPS related to archive remain in effect through the end of the archive period for the last certificate issued under this RPS.

9.10.3 Effect of Termination and Survival

The responsibilities for protecting business confidential and personal information, and for protecting intellectual property rights, survive termination of the RA operating under this RPS.

Intellectual property rights are in accordance with the Intellectual Property laws of the United States.

The archive requirements of [CNSSI 1300] remain in effect for this RPS through the end of the archive period for the last certificate issued under this RPS.

9.11 INDIVIDUAL NOTICES AND COMMUNICATIONS WITH PARTICIPANTS

Not applicable.

9.12 AMENDMENTS

9.12.1 Procedure for Amendment

Changes to this RPS are submitted to the ANMA

9.12.2 Notification Mechanism and Period

Not applicable.

9.12.3 Circumstances under which OID must be Changed

Not applicable.

9.13 DISPUTE RESOLUTION PROVISIONS

Not applicable.

9.14 GOVERNING LAW

Not applicable.

9.15 COMPLIANCE WITH APPLICABLE LAW

Not applicable.

9.16 MISCELLANEOUS PROVISIONS

9.16.1 Entire Agreement

No stipulation.

9.16.2 Assignment

No stipulation.

9.16.3 Severability

Should it be determined that one section of this RPS is incorrect or invalid, the other sections shall remain in effect until the RPS is updated. The process for updating this RPS is described in Section 9.12.1. Responsibilities, requirements, and privileges of this document are merged to the newer edition upon release of that newer edition.

9.16.4 Enforcement (Attorney's Fees and Waiver of Rights)

No stipulation.

9.16.5 Force Majeure

No stipulation.

9.17 OTHER PROVISIONS

No stipulation.

APPENDIX A. REFERENCES

The following documents are referenced in this RPS:

ABA DSG	American Bar Association, *Digital Signature Guidelines*, August 1996.
CNSSI 1300	Committee on National Security Systems Instruction No. 1300, *Instruction for National Security Systems Public Key Infrastructure X.509 Certificate Policy*, Version 1.1, June 2011.
CNSSI 4009	Committee on National Security Systems Instruction No. 4009, *National Information Assurance (IA) Glossary*, June 2006.
CNSS 014-2010	CNSS National Manager, *Approval of Continued Use of SC650 Token – DECISION MEMORANDUM*, February 2010.
CAS CPS	*National Security Systems (NSS) Public Key Infrastructure (PKI): Department of Defense (DoD) Subordinate Certification Authority (CAS) Certification Practice Statement (CPS),* DoD PKI PMO, V1, 18 March 2010.
DD FORM 2841	*Department of Defense Public Key Infrastructure Registration Official Certificate of Acceptance and Acknowledgement of Responsibilities*, August 2009.
DD FORM 2842	*Department Of Defense Public Key Infrastructure Subscriber Certificate Of Acceptance and Acknowledgement Of Responsibilities*, August 2009.
FIPS 201	National Institute of Standards and Technology, Federal Information Processing Standard 201, *Personal Identity Verification (PIV) of Federal Employees and Contractors*, March 2006.
FORM I-9	OMB No. 1615-0047, Form I-9, *Employment Eligibility Verification*, August 2009.
NPE CA CPS	*National Security Systems (NSS) Public Key Infrastructure (PKI): Department of Defense (DoD) NPE Certification Authority System (CAS) Certification Practice Statement (CPS),* DoD PKI PMO, V1, under development.
RFC 1034	Internet Engineering Task Force, RFC 1034, *Domain Names – Concepts and Facilities*, November 1987.
RFC 3647	Internet Engineering Task Force, RFC 3647, *Internet X.509 Public Key Infrastructure Certificate Policy and Certification Practices Framework*, November 2003.
RFC 3986	Internet Engineering Task Force, RFC 1034, *Uniform Resource Identifier (URI): Generic Syntax*, January 2005.
RFC 5322	Internet Engineering Task Force, RFC 5322, *Internet Message Format*, October 2008.
SP 800-57	National Institute of Standards and Technology, Special Publication 800-57, *Recommendation for Key Management – Part 1: General*, March 2007.

APPENDIX B. ACRONYMS

The following acronyms are used in this RPS:

ANMA	Agency NSS PKI Management Authority
CA	Certification Authority
CAA	Certification Authority Administrator
CAC	Common Access Card
CAS	Certification Authority System
CC/S/A	Combatant Command/Service/Agency
CN	Common Name
CNSS	Committee on National Security Systems
CNSSI	Committee on National Security Systems Instruction
CP	Certificate Policy
CPMWG	Certificate Policy Management Working Group
CPS	Certification Practice Statement
CRI	Certificate Registration Instructions
CRL	Certificate Revocation List
CSAA	Code Signing Attribute Authority
CSOR	Computer Security Objects Register
CSS	Certificate Status Server
DEERS	Defense Enrollment Eligibility Reporting System
DITPR	Defense Information Technology Portfolio Repository
DN	Distinguished Name
DoD	Department of Defense
EDIPI	Electronic Data Interchange Personal Identifier
FIPS	Federal Information Processing Standard
GUID	Globally Unique Identifier
HTTP	Hyper Text Transfer Protocol
IA	Information Assurance
IAM	Information Assurance Manager
IAO	Information Assurance Officer
ID	Identification
IDS	Intrusion Detection System
IP	Internet Protocol
ITU	International Telecommunications Union
KES	Key Escrow System
LDAP	Lightweight Directory Access Protocol

LRA	Local Registration Authority
NPE	Non-Person Entity
NSA	National Security Agency
NSS PKI	National Security Systems PKI
NVO	NPE Verifying Official
OCSP	Online Certificate Status Protocol
OID	Object Identifier
PCC	Personnel Category Code
PIN	Personal Identification Number
PIV	Personal Identity Verification
PKI	Public Key Infrastructure
PMA	Policy Management Authority
PMO	Program Management Office
POC	Point of Contact
RA	Registration Authority
RFC	Request For Comment
RPS	Registration Practice Statement
SA	System Administrator
TA	Trusted Agent
TLS	Transport Layer Security
TPS	Token Processing System
UPN	User Principle Name
UID	Unique Identifier
UPS	Uninterruptible Power Source
U.S.	United States

APPENDIX C. DEFINITIONS

Term	Definition
Agency NSS PKI Management Authority (ANMA)	The entity within an agency that operates a CA under this policy that is responsible for all aspects of management of the NSS PKI program for that agency, and for participating in the NSS PKI Member Governing Body.
Agency NSS PKI Point of Contact (POC)	The entity within an agency that does not operate a CA under this policy but that obtains certificates from a Common Services Provider CA operated under this policy. The POC is responsible for all aspects of management of the NSS PKI program for that agency and is responsible for participating in the NSS PKI Member Governing Body.
Agency Repository	A repository maintained by each agency that operates a CA. The repository shall support HTTP or LDAP to provide CA certificates and CRLs and collects information from the central repository for use by systems on that agency's network.
Authentication	Security measure designed to establish the validity of a transmission, message, or originator, or a means of verifying an individual's authorization to receive specific categories of information. [CNSSI 4009]; A process used to confirm the identity of a person or to prove the integrity of specific information
Bits of Security	See Security Strength.
Central Repository	A repository that provides CA certificates and CRLs that supports overall NSS PKI operations with both HTTP and LDAP interfaces. The central repository function may consist of one or more repositories to support overall NSS PKI operations at the discretion of the NSS PKI Member Governing Body or the PMA. The central repository shall collect necessary information from the agency repositories.
Certificate	A digital representation of information which at least • Identifies the certification authority issuing it; • Names or identifies its Subscriber; • Contains the Subscriber's public key; and, • Identifies its operational period, and (5) is digitally signed by the certification authority issuing it. [ABA DSG]
Certification Authority (CA)	An entity authorized to create, sign, and issue public key certificates.
Certification Authority System (CAS)	The collection of hardware, software, and operating personnel that create, sign, and issue public key certificates to Subscribers.
Certificate Policy (CP)	A named set of rules that indicates the applicability of a certificate to a particular community and/or class of application with common security requirements. For example, a particular CP might indicate applicability of a type of certificate to the authentication of parties engaging in business-to-business transactions for the trading of goods or services within a given price range. [RFC 3647]
Certificate Policy OID	The certificate policy object identifier (OID) is a numeric string that is used to uniquely identify the set of certificate policy requirements stipulated in a CP.
Certificate Revocation List (CRL)	These are digitally signed "blacklists" of revoked certificates. CAs periodically issue CRLs, and users can retrieve them on demand via repositories.
Certificate Status Server (CSS)	An authority that provides status information about certificates on behalf of the CA through online transactions (e.g., an Online Certificate Status Protocol (OCSP) responder).

Term	Definition
Certification Practice Statement (CPS)	A document representing a statement of practices a CA employs in issuing certificates.
CNSS	Committee on National Security Systems, a U.S. government organization providing guidance for the security of national security systems.
Code Signing Certificate	A certificate issued for the purpose of digitally signing executables and scripts to confirm the software author and guarantee that the code has not been altered or corrupted since it was signed by use of a cryptographic hash.
Common Services Provider	A provider of services, typically CA services, to agencies that do not operate their own CA.
Confidentiality	Assurance that information is not disclosed to unauthorized entities or processes. [CNSSI 4009]
Content Signing Certificate	A certificate issued for the purpose of digitally signing information (content) to confirm the author and guarantee that the content has not been altered or corrupted since it was signed by use of a cryptographic hash.
Cross Certificate	A certificate issued from a CA that signs the public key of another CA not within its trust hierarchy that establishes a trust relationship between the two CAs. (Note: This is a more narrow definition than described in X.509.)
Encryption Certificate	A certificate containing a public key that can encrypt or decrypt electronic messages, files, documents, or data transmissions, or establish or exchange a session key for these same purposes. Key management sometimes refers to the process of storing protecting and escrowing the private component of the key pair associated with the encryption certificate.
Identity Certificate	A certificate that provides authentication of the identity claimed. Within the NSS PKI, identity certificates may be used only for authentication or may be used for both authentication and digital signatures.
Integrity	Protection against unauthorized modification or destruction of information. [CNSSI 4009]
Intermediate Certification Authority (CA)	A CA that is signed by a superior CA (e.g., a Root CA or another Intermediate CA) and signs CAs (e.g., another Intermediate or Subordinate CA). The Intermediate CA exists in the middle of a trust chain between the Trust Anchor, or Root, and the subscriber certificate issuing Subordinate CAs.
Key Compromise	Disclosure of the private key to unauthorized persons, or a violation of the security policy of the PKI in which unauthorized intentional or unintentional disclosure, modification, destruction, or loss of the private key may have occurred.
Key Escrow	The retention of the private component of the key pair associated with a Subscriber's encryption certificate to support key recovery.
Key Escrow System (KES)	The system responsible for storing and providing a mechanism for obtaining copies of private keys associated with encryption certificates, which are necessary for the recovery of encrypted data.
Key Recovery	The process for obtaining a copy of an escrowed private key from the KES.
Legacy NSS PKI	An operational PKI on an agency's classified network prior to the establishment of the NSS PKI.
Local Registration Authority	A Registration Authority which does not have the authority to take final action on revocation, suspension/restoration, key recovery requests.
Modification	The process of creating a new certificate with a new serial number that differs in one or more fields from the old certificate. The new certificate may have the same or different subject public key.

Term	Definition
Name Subscriber	A Name Subscriber is an individual (i.e., person) whose name appears as the subject in a certificate. The Name subscriber is tightly coupled with the name certificate in which they are named.
NSS PKI	A Public Key Infrastructure (PKI) for SECRET-high collateral classified networks.
NSS PKI Member Governing Body	The organization established from the participating agencies to assist the PMA and provide governance and oversight to the NSS PKI.
PKI Sponsor	A person who is responsible for the private key associated with a certificate and who asserts that the certificate and associated private key are being used in accordance with this CP.
Policy Management Authority (PMA)	Individual or body established to oversee the creation and update of Certificate Policies, review Certification Practice Statements, review the results of CA audits for policy compliance, evaluate non-domain policies for acceptance within the domain, and generally oversee and manage the PKI certificate policies.
Private Key	A mathematical key (kept secret by the holder) used to create digital signatures and, depending upon the algorithm, to decrypt messages or files encrypted (for confidentiality) with the corresponding public key.
Public Key	A mathematical key that has public availability and that applications use to verify signatures created with its corresponding private key. Depending on the algorithm, public keys can encrypt messages or files that the corresponding private key can then decrypt.
Public Key Infrastructure (PKI)	The architecture, organization, techniques, practices, and procedures that collectively support the implementation and operation of a certificate-based public key cryptographic system. Framework established to issue, maintain, and revoke public key certificates.
Registration Authority (RA)	An entity authorized by the CAS to collect, verify, and submit information provided by potential Subscribers which is to be entered into public key certificates. The term RA refers to hardware, software, and individuals that collectively perform this function.
Registration Authority (RA) Officer	A trusted role, performed by an individual who is responsible for any of the duties of certificate issuance, certificate revocation, or key recovery.
Registration Practice Statement (RPS)	A document representing a statement of practices an RA employs when performing RA duties for a CAS.
Re-Key	The process of creating a new certificate with a new validity period, serial number, and public key while retaining all other Subscriber information in the original certificate
Relying Party	An entity that relies on the validity of the binding of the Subscriber's name to a public key to verify or establish the identity and status of an individual, role, or system or device; the integrity of a digitally signed message; the identity of the creator of a message; or confidential communications with the Subscriber
Renewal	The act or process of extending the validity of the data binding asserted by a public key certificate by issuing a new certificate.
Repository	A trustworthy system for storing and retrieving certificates or other information relevant to certificates. [ABA DSG]
Restoration	The process of changing the status of a suspended (i.e., temporarily invalid) certificate to valid.
Revocation	The process of permanently ending the binding between a certificate and the identity asserted in the certificate from a specified time forward.

Term	Definition
Role Subscriber	A Role Subscriber is a role, group, or organization whose name appears as the subject in a certificate.
Root Certificate Authority (CA)	The CA that issues the first certificate in a certification chain.
Security Auditor	A trusted role that is responsible for auditing the security of CASs and RAs, including reviewing, maintaining, and archiving audit logs and performing or overseeing internal audits of CASs and RAs.
Security Strength	A number associated with the amount of work (that is, the number of operations) that is required to break a cryptographic algorithm or system. In this policy, security strength is specified in bits and is a specific value from the set {80, 112, 128, 192, 256}. [SP 800-57]
Signature Certificate	A public key certificate that contains a public key intended for verifying digital signatures rather than authenticating, encrypting data, or performing any other cryptographic functions.
Subordinate Certificate Authority (CA)	In a hierarchical PKI, a CA whose certificate signing key is certified by another CA, and whose activities are constrained by that other CA.
Subscriber	An entity that (1) is the subject named or identified in a certificate issued to such an entity, and (2) holds a private key that corresponds to a public key listed in that certificate. [ABA DSG]
Suspension	The process of changing the status of a valid certificate to suspended (i.e., temporarily invalid)
System or Device Certificate	A System or Device certificate contains a system or device name as the subject. Examples of systems or devices are workstations, guards, firewalls, routers, web server, database server, and other infrastructure components
System or Device Subscriber	A System or Device Subscriber is the system or device whose name appears as the subject in a certificate.
Technical Non-Repudiation	The contribution public key mechanisms make to the provision of technical evidence supporting a non-repudiation security service.
Trusted Agent (TA)	An individual explicitly aligned with one or more RA Officers who has been delegated the authority to perform a portion of the RA functions. A TA does not have privileged access to CAS components to authorize certificate issuance, certificate revocation, or key recovery.

APPENDIX D. NOMINATION OF AGENCY REGISTRATION AUTHORITY OFFICER

MEMORANDUM FOR: Defense Information Systems Agency
DoD Public Key Infrastructure Program Management Office
6910 Cooper Avenue
Ft. Meade, MD 20755-7088

SUBJECT: Designation of NSS PKI Registration Authority Officer for _____
(name of organization)

REFERENCES: (a) CNSS Instruction (CNSSI) No. 1300, Instruction for National Security Systems Public Key Infrastructure X.509 Certificate Policy Under CNSS Policy No. 25

(b) _____
(PMO Memo approving the Organization to use the DoD RPS)

1. In accordance with References (a) and (b), the following individuals are hereby designated as Registration Authority (RA) Officer for the above named organization/network. They are charged with executing the responsibility of an RA Officer as set forth in Reference (a) and the Registration Practice Statement (RPS) identified in Reference (b).

   Name:

   RA Officer functions: ( ) Registration/Revocation/NPE Verifying Official ( ) Key Recovery

   Grade/Rank:

   Unique Identification Number (EDIPI/UID):

   Email:

   Telephone (commercial & DSN):

   Mailing Address:

   (Repeat above for each designee.)

2. I have verified that the person or persons nominated for this trusted role meets all of the requirements of Section 5.3.1 of Reference (a).

3. This authority is rescinded when an individual is relieved of duties or leaves the Agency whichever occurs first.

4. If additional information or assistance is required, the point of contact for this action is as follows:

   Point of Contact:

   Phone number:

_____
Director
(CC/Service/Agency)

APPENDIX E. NOMINATION OF LOCAL REGISTRATION AUTHORITY/NON-PERSON ENTITY VERIFYING OFFICIAL

FROM: Local Nominating Command/Organization

TO: _____ Registration Authority
(name of organization)

SUBJECT: Designation of NSS Local Registration Authority (LRA)/Non-Person Entity (NPE) Verifying Official (NVO) for _____
(name of organization)

REFERENCES: (a) CNSS Instruction (CNSSI) No. 1300, Instruction for National Security Systems Public Key Infrastructure X.509 Certificate Policy Under CNSS Policy No. 25

(b) _____
(PMO Memo approving the Organization to use the DoD RPS)

1. In accordance with References (a) and (b), the following individual(s) are hereby designated as Local Registration Authorities (LRAs)/Non-Person Entity (NPE) Verifying Official (NVO) for the above named organization. They are charged with executing the responsibility of an LRA/NVO as set forth in Reference (a) and the Registration Practice Statement (RPS) identified in Reference (b).

   Name:

   RA Officer functions: ( ) Registration ( ) NPE Verifying Official

   Grade/Rank:

   id-CNSS-hardware Name Identity CN (e.g., last-name. first-name.initial.EDIPI):

   Email:

   Telephone (commercial & DSN):

   Mailing Address:

   (Repeat above for each designee.)

2. I have verified that the person or persons nominated for this trusted role meets all of the requirements of Section 5.3.1 of Reference (a).

3. This authority is rescinded when an individual is relieved of duties or leaves the Agency whichever occurs first.

4. If additional information or assistance is required, the point of contact for this action is as follows:

   Point of Contact:

   Phone number:

_____
Director
(CC/Service/Agency Organization)

APPENDIX F. DESIGNATION OF TRUSTED AGENT

Prepare a Memo on organizational letterhead.

MEMORANDUM FOR: _____ RA or LRA
(name of organization)

SUBJECT: Designation of Trusted Agent (TA) for _____
(name of organization)

REFERENCE: (a) _____
(PMO Memo approving the Organization to use the DoD RPS)

1. The following individual(s) is/are hereby designated as a Trusted Agent(s) for the above named organization. She/he/they is/are charged with executing the responsibilities of a Trusted Agent as stipulated in Section 5.2.1. 3 of the Registration Practice Statement (RPS) specified in Reference (a) for the NSS Public Key Infrastructure.

   (Additional responsibilities deemed appropriate at the local level may be stipulated here.)

   Name (enter designee name(s) exactly as on their photo ID card):

   Grade/Rank:

   id-CNSS-hardware Name Identity CN (e.g., last-name.first-name.initial.EDIPI):

   Email (use SMTP E-mail address for their .mil account):

   Telephone (commercial & DSN):

   (Repeat above for each designee.)

2. I have verified that the person or persons nominated for this trusted role meets all of the requirements of Section 5.3.1 of the RPS specified in Reference (a).

3. I understand this designation must be rescinded when an individual is relieved of duties or leaves the organization.

4. My point of contact for additional information or assistance regarding this (these) appointment(s) is name, position, phone (commercial/DSN):

_____
Name

_____
Title (i.e., Commander, Director, or designee)

APPENDIX G. ACKNOWLEDGEMENT OF TRUSTED AGENT RESPONSIBILITIES

I acknowledge that I have received training to act as a Trusted Agent for the National Security System (NSS) Public Key Infrastructure (PKI) Program. I understand that as a Trusted Agent I will be responsible for the following:

- Validation that the Subscriber is eligible to be registered (U.S. Military, DoD civilian, contractor or others using government furnished equipment and working in government spaces).
- Gathering and forwarding Subscriber registration information to the Registration Authority (RA)/Local Registration Authority (LRA).
- Delivering Certificate Registration Instructions (CRI) and initialized tokens or keyed tokens and/or activation data to Subscribers.
- Verifying the identity of each Subscriber as specified in Section 3.2.3 of the DoD Registration Practice Statement (RPS).
- Assist Subscribers in the downloading and installation of their certificates.
- Reporting to the RA/LRA if a Subscriber suspects a compromise or loss of a private key.
- Abiding by all of the applicable requirements of the DoD Registration Practice Statement (RPS) and executing the responsibilities listed in Section 5.2.1. 3.

Trusted Agent Name: _____

Signature: _____

Unit/Organization: _____

ID Type (Military, Installation Pass): _____

Photo ID Number: _____

Verification of Trusted Agent Identity: I have verified the identity of the person named above by physically checking an U.S. Government issued Photographic Identification Card.

Name of Verifier: _____

Signature: _____

Unit/Organization: _____

Duty Position (LRA, Commander): _____

Date: _____

APPENDIX H. PROCEDURE FOR GETTING THE INITIAL TA'S IN PLACE AT LOCATIONS REMOTE FROM AN ESTABLISHED RA/TA

1. The RA Officer, who will oversee the operations of the remote TA, is advised of the need to establish a TA at a location where no NSS PKI RA or TA is currently available.

2. The RA Officer sends a request to the organization commander/director or their designee to identify two people who can be trained to perform the Identification and authentication functions of a TA. The qualifications required of the TA are included in the request. The RA Officer also informs the commander/director that they must complete and verify all information in the Designation of Trusted Agent (No NSS PKI Certificates) memo and send the memo to the RA Officer, as well as obtain a signed Acknowledgement of Responsibilities form from each nominated party, verify the signature on the form is that of the nominated party, and send the form to the RA Officer.

3. The organization commander/director provides a TA nomination memo as shown in Annex 1 of this Appendix.

4. The RA Officer provides instructions to the designated TAs on identity proofing requirements and instructs them to acknowledge their responsibilities using the memo at Appendix G of the RPS, and have the nominating official verify their identity as specified on the form. The form is sent to the RA Officer.

5. Once the RA has the TA acknowledgement of responsibilities from the two nominees, the RA Officer then prepares a CRI for one of the TAs (the PKI Sponsor).

6. If the PKI Sponsor will directly interface with TPS to complete the certificate issuance process:

The RA Officer sends the CRI, wrapped for classified transfer, via continuously accountable means (e.g., US registered Mail with return receipt, FedEx) to the other TA (Authenticating TA) along with an initialized token. The RA Officer emails the Authenticating TA the token serial number and expected arrival date.

Upon receipt, the Authenticating TA validates the PKI Sponsor's identity, executes the DD Form 2842 with the PKI Sponsor and provides the token and CRI to the PKI Sponsor. See Section 4.2.1 of the RPS for procedures if the PKI Sponsor cannot authenticate to the CA using the CRI.

The PKI sponsor executes the certificate issuance process.

The Authenticating TA sends the DD Form 2842 back to the RA Officer.

The Authenticating TA sends an email to the RA Officer, digitally signed with the Authenticating TAs DoD MediumHardware certificate, providing the RA with the Common

Name of the PKI Sponsor's CNSS Signature certificate. The RA Officer verifies that this certificate matches the information in the certificate request.

7. If the RA will interface with TPS to complete the certificate issuance process:

The RA Officer uses the CRI to obtain the certificates.

The RA Officer packages the keyed token in serialized, tamper evident packaging and sends the token to the PKI Sponsor using continuously accountable means (e.g., US Registered Mail with return receipt, Federal Express). The RA Officer sends the PKI Sponsor a digitally signed email with the tamper serial number, the token serial number, and expected delivery date.

Upon receipt of the package the PKI Sponsor inspects it. If the package is not received within a reasonable amount of time or the PKI Sponsor or Authenticating TA has reason to believe the private keys may have been compromised (e.g., a problem with the tamper evident packaging), the Authenticating TA will notify the RA Officer. The RA Officer will investigate and take appropriate steps to resolve the situations, possibly including revoking the certificates and regenerating the keys and certificates. The PKI Sponsor informs the Authenticating TA of receipt and they execute the identity proofing and DD Form 2842.

The authenticating TA sends the DD Form 2842 to the RA Officer.

Upon receipt of the PKI Sponsor's DD Form 2842, the RA Officer sends the PIN, wrapped for classified transfer, to the PKI Sponsor via continuously accountable means.

8. The PKI Sponsor now assumes the role of TA and supports the issuance of certificates to the Authenticating TA and others through the normal process.

ANNEX 1. DESIGNATION OF TRUSTED AGENT (NO NSS PKI CERTIFICATES)

Prepare a Memo on organizational letterhead.

MEMORANDUM FOR: _____ RA or LRA
(name of organization)

SUBJECT: Designation of Trusted Agent (TA) for _____
(name of organization)

REFERENCE: (a) _____
(PMO Memo approving the Organization to use the DoD RPS)

1. The following individual(s) is/are hereby designated as a Trusted Agent(s) for the above named organization. She/he/they is/are charged with executing the responsibilities of a Trusted Agent as stipulated in Section 5.2.1.3 of the Registration Practice Statement (RPS) specified in Reference (a) for the NSS Public Key Infrastructure.

   (Additional responsibilities deemed appropriate at the local level may be stipulated here.)

   Name (enter designee name(s) exactly as on their photo ID card):

   Grade/Rank:

   DoD PKI MediumHardware Certificate CN (e.g., last-name.first-name.initial.EDIPI):

   Email (use SMTP E-mail address for their .mil account):

   Telephone (commercial & DSN):

   Mailing Address:

   (Repeat above for each designee.)

5. I have verified that the person or persons nominated for this trusted role meets all of the requirements of Section 5.3.1 of the RPS specified in Reference (a).

6. I understand this designation must be rescinded when an individual is relieved of duties or leaves the organization.

7. My point of contact for additional information or assistance regarding this (these) appointment(s) is name, position, phone (commercial/DSN):

_____
Name

_____
Title (i.e., Commander, Director, or designee)

CyberSecurity – ProjID – [PROJ ID]

PROJECT CHANGE REQUEST

(Not Related to USD CR)

DOCUMENT HISTORY		
Date	**What Changed**	**Author**
	Initial document created	

REVIEWERS	
Name	**Role / Title**
Aaa	xxx
Bbb	yyy
Ccc	zzz

Project / Phase:	Project Name / Phase #	**Sponsor:**	Name
Project Manager:	Name	**Requesting Division:**	Name
Tech Lead:	Name	**Application Lead:**	Name
Raised By:	Name	**Date Raised:**	Date
		Need By Date:	Date

Change Description High Level (1-2 lines only)					
Status:	Pending / Approved / Declined	**Approver:**	Name	**Date:**	xx

Detailed Change Description (what it is)

Change Justification

Impact if Change Is Not Implemented

Alternatives

Change Implementation Plan

Impact Assessment – Scope

Impact Assessment – Service Interruption and SLA

Impact Assessment – Procurement of HW / SW/ PS

Impact Assessment – Schedule

Impact Assessment – Resources

Impact Assessment – Risks

Impact Assessment – Customer Satisfaction

Impact Assessment – Contractual

[PROJECT NAME] – ProjID – [PROJ ID]

REQUIREMENTS DOCUMENT

DOCUMENT HISTORY		
Date	**What Changed**	**Author**
	Initial document created	

Project / Phase:	Project Name / Phase #	**Sponsor:**	Name
Project Manager:	Name	**Requesting Division:**	Name
Tech Lead:	Name	**POC:**	Name
		Application Lead:	Name

APPROVERS	
Name	**Role / Title**
aaa	xxx
bbb	yyy
ccc	zzz

REVIEWERS	
Name	**Role / Title**
aaa	xxx
bbb	yyy
ccc	zzz

ID	Requirement	Meets Req	Ref #

Xxx
Xxx
Xxx

Appendix A – Requirements Check List

Not an exhaustive list.

- Solution New / Replacement / Modification / Improvement
- Design Constraints
- Location
- Data
    - Source
    - Destination
    - Migration
    - Security
    - Discarding Data
- Monitoring & Reporting
- Operational
    - Uptime
    - Performance
    - SLA
    - Escalation Path
- Users Experience
- Security
- Scalability
- Regulatory & Compliance
- Interface
- Administration
- Quality
- Testing
- UAT
- Training
    - Systems
    - Client
- Procurement
    - Hardware
    - Software
    - Professional Services
- SharePoint
- Announcements
    - Internal to Systems
    - External to Systems

Project Management

The project management lifecycle shall be consistent with the Systems Development Lifecycle (SDLC) and cover all necessary aspects of Project Planning, Initiation, Execution, Monitoring and Control, and Closeout to effectively manage and control project performance and progress towards stated time-lines, milestones, task/s and objectives.

The Contractor shall establish and maintain a DMDC Systems Program / Project Management Team function to include but not limited to the following:

- Program / Project Office Core Components
- Life Cycle Management
- Project Portfolio / Resource Management
- Stakeholder Engagement and Outreach
- Formalized Measurement, Auditing and Compliance
- Requirements / Demand Management (Business / User Interface level)
- Manage Project Delivery at Acceptable Resource, Risk, Quality, On-time Completion Levels
- Provide a central point of communication and Risk Management for critical production issues, planned and unplanned outages, and transition issues.

Additionally, these services should include: uninterrupted support at levels by the contractor, identifying project scope, defining schedules to avoid schedule and resource collisions and actionable task items, tracking of progress and milestones, and reporting of project status, and completing projects on-time with allocated resources while providing Government visibility into ongoing efforts.

All Department leaders and Team Leads within the Systems Division will be trained in the Project Management Lifecycle Method (PLcM) to ensure standardized templates, and process will be used by all Teams consistently, including System offsite locations.

Contractor will ensure that the following key attributes and capabilities exist within the Program / Project Management Function:

- Establish a Best Practice, consistent, effective (workload planning) centralized Project Management Methodology via SharePoint and/or contractor recommended tool.
- Perform Risk Management on every authorized Project with a start to finish projected date based upon complexity of the project.

The Project Management Team will partner with the other ITSM functions, including Service Level Management, Change Management, and Problem Management and government staff ensuring timelines, milestones and need by dates or met.

Contractor will be responsible to deliver on-time Projects based upon reasonable dates. Exception may be but not limited to: government procurements, resources, deliveries, complexity, additional external contracts and government changes to the Project.

Contractor will prioritize major projects using Best Practices, with government assistance based on Agency Requirements, complexity, etc. It should be with the understanding that "need by dates" be met unless senior Systems management grants a delay in the phase or scope of the project. “Need by date” must not be missed if: “need by date” is reasonable and project sponsor expectations are valid.

Contractor to use and improve Project Management Process Maturity Level (pursuant to existing DMDC CMMI-ITIL Assessment Criteria and Assessment Baseline documentation).

AQLs:

AQL: Project managers must meet the defined milestones and metrics in the government approved project plan with no more than a 10% deviation. Any deviation from the plan or request for extension must be approved by the government project lead or COR.

AQL: "Need By Date" of identified critical path (milestone or major task) item/s for a Project Plan must be escalated to government oversight prior to 20 days of a missed milestone date.

Deliverables:

- Semi-monthly, schedule and conduct project reviews with government oversight. Project review will include status, forecasted at completion statistics; risk management review; critical path and other milestone progress checks and updates; resource requirements; as well as technical content review.
- Contractor will perform a series of monthly internal reviews, audits, operational metric reports that will be provided to government oversight to determine the Project Health Program.
- 90 days after contract award, develop and implement Standardized Project Management Training and Best Practices to all Division staff, with specialized training for all contractor Team Leads and POCs.
- 90 days after contract award, develop and implement high-level Project Dashboard/Scoreboard with real time Project Status indicators, including Project Health.
- Provide semi-monthly a series of stats, reports, metrics, gaps, trends, major accomplishments during each project life cycle.
- 30 days after contract award, review and revise Project Lifecycle Plan. Work hand-in hand with external users for preparing reasonable dates, timelines, process delivery, assessment score and documented goals (government to review).
- As new project/s are identified, the contractor shall provide a Project Management Plan that describes the status of activities in terms of status, cost (when solicited), schedule changes, performance and risk. Project plans will include schedule constraints, risks, dependencies, critical path milestones, procedures for accomplishing staff requirements and allotment of available resources to various phases of projects.

Requirements for Project Manager:
Project Managers shall have extensive experience with large IT systems and applications, as well as, managing system integration team efforts. The ultimate goal is to put a solid structure around Project Plan so the successful delivery and expectations are met.

Certifications: PMP or five years project management experience.

DMDC Systems Projects

Status Report Template

YYYY-MM-DD

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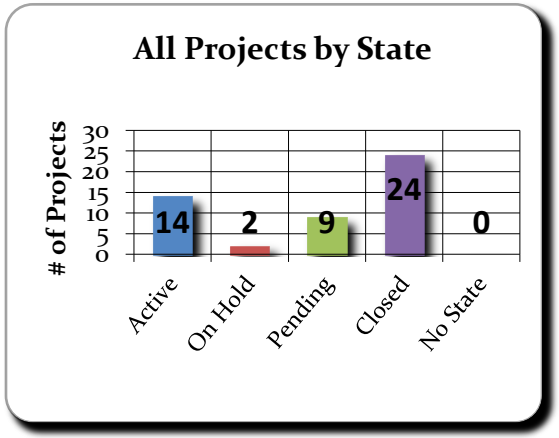
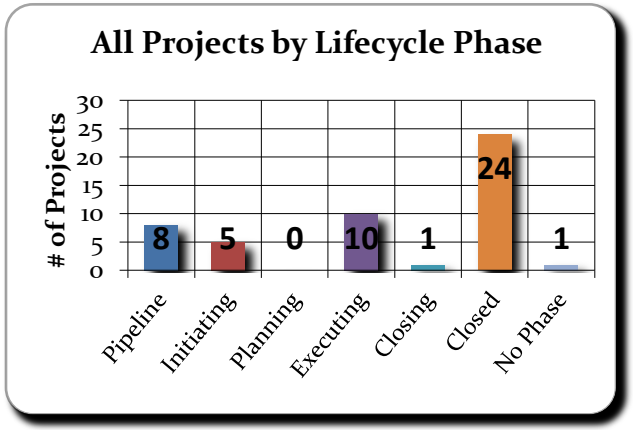
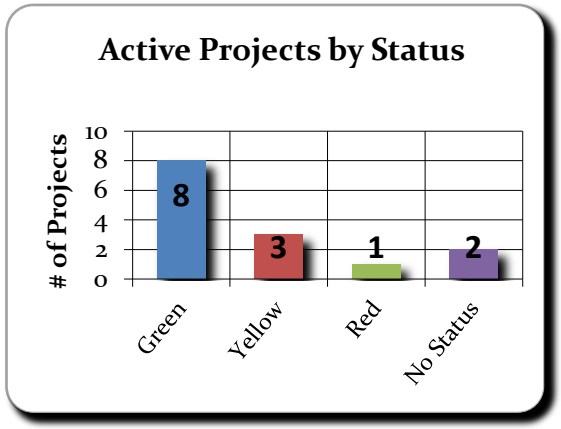
Portfolio at a Glance

View Portfolio on SharePoint







TOP PRIORITY / RANKING PROJECTS

Project ID	PROJECT NAME/DESC	TECH LEAD	PM	REQUESTOR	DATE SUBMITTED	TARGET DATE	PR	STATUS
052420	AH Migration to SS	n/a	Bill R	Wade S	04-01-13	05-24-14	1	TBD
563013	AH and Seaside T950/Brocade/HUS150 installation project	Andrew P	Greg K	Ralph N	05/10/12	09/01/14	1	
562613	Rhett/Butler Upgrade	n/a	Uri E	Wade S	04/02/13	06/21/14	1	
150114	Classified IT Enterprise CyberSecurity – Task9	Amolak M	Dave W			07-07-14	1	
371013	Oracle Web Optimization	Sulo W	Jim L	Wade S	09-06-13	Sep-2014	2	

Updated Ranking as of 03-27

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Portfolio (cont'd)

View Portfolio on SharePoint

- On Track to meet target date
- Target date at risk but expected to be achieved
- Lower probability of meeting target date

Project ID	PROJECT NAME/DESC	TECH LEAD	PM	REQUESTOR	DATE SUBMITTED	TARGET DATE	P RI	STATUS
571713	Set up two new test environments (Silver & Gold)	Andrew P	Uri E	Pankaj P	?	07/18/14		
574913	Initiate stress test environment	n/a	Greg K	Pankaj P	07/03/13	04/04/14		
374513	PERSEREC	Sunil M	Jim L	Steve C	?	n/a		
234414	Upgrade all Win2003 Servers to 2008 and migrate apps	n/a	Greg K	Sunil M	09-17-13	n/a	4	Initiating
243314	Trail-Mix Implementation	n/a	n/a	Dan O	11-28-12	n/a	4	Pipeline
374513	VDI Phase 3	n/a	Hai N	Wade S	08-13-13	06-30-14	2	Closing
253909	VDI Phase 4	n/a	Dave W	Wade S	04-09-14	n/a	2	Initiating
241914	Implementation of IEEE 802.1X across DMDC Ent	n/a	n/a	Wade S	03-28-13	n/a	4	Pipeline
365313	Create the TOPCO database	Dan D	Greg K	Pankaj P	01/22/13	04/25/14		
141024	ChangeGear Implementation	Josh L	Dave W	Uri E	03-24-14	n/a	3	Initiating
241914	Implementation of IEEE 802.1X across DMDC Ent	n/a	n/a	Wade S	03-28-13	n/a	4	Pipeline
583113	Three server RAC cluster	n/a	Greg K	Pankaj P	04/02/13	n/a		HOLD
143010	Systems Tools Analysis	n/a	Dave W	Denise M	04/10/14	n/a	3	Initiating
174914	PBX Replacement – 2nd Phase	n/a	n/a	Ronald C	08/30/13	n/a	3	Pipeline
200814	DMDC Specific Exchange Infrastructure Decommissioning	n/a	n/a	Hemendra P	04/09/13	n/a	3	Pipeline
202714	Upgrade DSO Service Desk to r12.7	n/a	n/a	John S	04/12/13	n/a	3	Pipeline
213714	Perform POC Testing for the New Proposed URL Syntax	n/a	n/a	Robert B	05/13/13	n/a	4	Pipeline
220214	Incorporate SPOT Testing and TOPSS into DMDC	n/a	n/a	David S	05/27/13	n/a	4	Pipeline
231014	Resolve Missed ProdSup AppMonitor Notification	n/a	n/a	Robert B	08/07/13	n/a	4	Pipeline
525021	LogStash Implementation	n/a	n/a	Denise M	03/21/14	n/a	4	Pipeline

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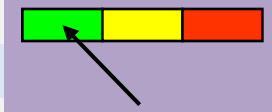
ProjID	562613	**Project Name:**	*Project name*		
Sponsor:	*Name*	**PM:**	*Name*	**Tech Lead:**	*Name*
Submitted:	*MM/DD/YY*	**Need By:**	*MM/DD/YY*	**Planned Completion:**	*MM/DD/YY*
Description:	*Description*				

On Track



Project Status Meter

MILESTONES	TARGET	PROGRESS	STATUS
M562613-1:	*Mm/dd/yy*		*On Track*
M562613-2:	*Mm/dd/yy*		*Not Started*
M562613-3:	*Mm/dd/yy*		*Not Started*
M562613-4:	*Mm/dd/yy*		*Not Started*
M562613-5:	*Mm/dd/yy*		*Not Started*
M562613-6:	*Mm/dd/yy*		*Not Started*

ACCOMPLISHED THIS WEEK	OWNER	TARGET	STATUS
	name	*Mm/dd/yy*	*Completed*
	name	*Mm/dd/yy*	*Completed*
	name	*Mm/dd/yy*	*Completed*
	name	*Mm/dd/yy*	*In progress*

PLANNED FOR NEXT WEEK	OWNER	TARGET	STATUS
	name	*Mm/dd/yy*	*On track*
	name	*Mm/dd/yy*	*On track*
	name	*Mm/dd/yy*	*Not Started*
	name	*Mm/dd/yy*	

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ProjID	562613	**Project Name:**	*Project name*		
Sponsor	*Name*	**PM:**	*Name*	**Tech Lead:**	*Name*
Submitted	*MM/DD/YY*	**Need By:**	*MM/DD/YY*	**Planned Completion:**	*MM/DD/YY*
Description:	*Description*				

KEY RISKS	PROB	IMPACT	MITIGATION	OWNER	STATUS
R36918-1: **IF** *"aaa"* **THEN** *"bbb"*	1/5	4/5	*Description*	*Name*	*Closed*
R36918-2: **IF** *"xxx"* **THEN** *"yyy"*	4/5	2/5	*Description*	*Name*	*Open*

ISSUES	ACTION PLAN	OWNER	STATUS
		Name	*Open*

CHANGE (approved / rejected)	IMPACTS (risk/resources/schedule/customer satisfaction)	OWNER	STATUS
		Name	*Closed*

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What Qualifies as a Project?

- If the Service Catalog indicates it is
- Coordination is required across multiple groups
- Overall risk score is high / very high
- Planning is required to meet the objectives
- The work is temporary, with a planned start and end (Vs. recurring)
- Has a significantly high level of executive visibility
- Estimated effort exceeds a net of 50 hours
- Estimated duration exceeds 4 weeks
- Management override

Above criteria is intended to be pointers for an evaluation

Service Level Management

The Service Level Management process involves both the customer and the IT service provider. Together they define, negotiate, agree and monitor levels of service. This continuous communication provides a stronger relationship between IT Service Management and its customers. The focus is reaching an agreement.

The Contractor shall establish, document and maintain a fully functional ITIL Service Level Management Program to include but not limited to the following:

- Service Level Agreements (SLA's)
- Operational Level Agreements (OLA's)
- Underpinning Contracts (UC's)
- Service Catalog (Business and Technical) Manage Quality of IT Services in line with Business Requirements. Listed are just a few but not limited to this requirement:
    - Overview of services and products
    - Deliverables, Service times, maintenance times, support times, delivery times
    - Quality targets
    - Requirements
    - Request and Change Procedure
    - Revised/updated CMDB

The Contractor shall deliver IT Services as Agreed to by Customers and the Business stakeholders. In order to set reasonable customer expectations, the Contractor shall operate a customer focused Data Center and provide DMDC IT Technical Support based upon service delivery model ITIL V3 framework.

As an integral part of this contract, Contractor shall produce a Service Catalog and Business Service Catalog that will provide the foundation for Service Level Management. The Contractor shall recommend Key Performance Indicators (KPI) and critical success factors for provided services; report on SLA's and metrics; making recommendations on performance measurement; implementing measurement capabilities; and providing reports on service performance.

The Contractor shall also establish a continuous service improvement process that includes: root cause analysis when target metrics fall below established thresholds; participation in audits to ensure SLA and KPI measurements and processes are transparent and accurate; make recommendations to improve service levels.

Contractor will Identify, develop, negotiate and implement SLA's and OLA's with DMDC (within and across the C Division at all levels of the DMDC Enterprise). Close Business Liaison work with Business Units will be required. All SLA's and OLA's will include the following key attributes but not limited to: Roles and Responsibilities of each Party: Start, end and review dates Scope of the Agreement and Description of the Service provided, Service Hours, Support details with acceptable tolerance levels, Service Availability, Change Orders, Security and service delivery

Contractor will demonstrate measurable improvement of critical success factors during quarterly review cycles, as measured by positive quarterly trends in the efficiency and CMMI-ITIL Process Maturity rates for Service Level Management.

Contractor will follow the CMMI-ITIL Maturity rates to be measured as an aggregate score and assigned an overall Process Rating (1.0 through 5.0), Process Foundation, Delivery, Interfaces, Organizational Elements, Tool, and Measurement &Control.

AQL: SLA's produced within 14 days of final negotiation/notification, based on government review and approval at 90% of time.

AQL: Service catalog maintained at 90% accuracy rate

AQL: OLA's produced within 30 days of final negotiation/notification, based on government review and approval at 90% of time.

AQL: Dashboard maintained at 95% accuracy rate.

Measureable: Quarterly Review Audits with government, identifying gaps, improvement areas and non-deliverables.

Deliverables:

- Provide a Quarterly Health Assessment Report to the Government which will include but limited to: major Accomplishments, primary gaps remaining, target objective by government and SLM Service Management Plan.
- 120 days after contract award, the Contractor shall establish the ITIL Service Catalog (Business and Technical) to the Government.
- Contractor will perform a series of ongoing reviews, audits and operational metric reports that will be required on a Daily, Weekly, Monthly, Quarterly and Annual basis but not limited to:
    - Monitor performance and quality of service and report on efficiency and effectiveness of the Service Level Management process.
    - Ensure Continuous Process Improvement.
    - Number , type, and resolution of incidents
    - System capacity and availability
    - Change and release management
    - Helpdesk operations
    - Information Assurance compliance
    -
- Contractor shall measure and report on the following Operational Metrics and Key Performance Indictors (KPI's) related to the Service Level Management function with continual process improvement to include the following:
    - Number of Services Delivered to Customers / Business (SLA's), without SLA's, Internal Services Support SLA's (OLA's), Internal Support Services without OLA's, Supporting Services Delivered by external Vendors.
    - Number of Vendor Delivered Services without agreed Service Targets and Underpinning Contracts (UC's).
    - Number of Services not represented in DMDC Business or Technical Service Catalog.
    - Service Level Management Process Maturity Level (pursuant to existing DMDC CMMI-ITIL Assessment Criteria and Assessment Baseline documentation).
    - Gap Analysis and deliverables for Required Service.

- Technical Services Catalog (draft) reviewed/modified (if needed) with recommendations by government. Then finalized NLT 30 days after contract award.
- Business Services Catalog (draft) reviewed/modified (if needed) with recommendations by government. Then finalized NLT 30 days after contract award.
- Create automated Service Catalogue Dashboard
- Project Plan NLT 45 days after each new project assignment

TeamQuest® Performance Software Statistics Reference Manual

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About This Manual

TeamQuest Performance Software is a suite of four integrated products that help organizations optimize IT services while minimizing infrastructure costs and mitigating risks. TeamQuest Manager®, a component of the TeamQuest CMIS® product, is the required software that provides the services for the TeamQuest Performance Software suite. When TeamQuest Manager is installed on a host system, it supplies the capabilities to collect, store, manage, and administer your performance data.

Purpose

This manual is to be used as a supplement to the *TeamQuest Performance Software Administration Guide*.

Scope

This manual provides descriptions of the statistics collected by the collection agents of TeamQuest Manager®. This manual also contains derived statistic descriptions for use with TeamQuest Alert® and TeamQuest View®.

Audience

This manual is intended for those who are interested in performance analysis and capacity management of computer systems. TeamQuest Performance Software addresses the needs of the performance analyst and the capacity planner. The performance analyst, who is typically interested in detailed data, can use TeamQuest Manager to collect system data at a fine granularity.

The capacity planner can use TeamQuest Manager to collect data across long periods of time. Marketing representatives and technical managers who are interested in the capacity management of computer systems can also use TeamQuest Manager.

Prerequisites

This manual assumes that you have basic knowledge of the operating system environment. (For example, you can log into the system, edit files, run commands, and so on.)

How to Use This Manual

This manual is to be used with the TeamQuest Performance Software applications that report or use the statistics collected by the TeamQuest Manager collection agents.

Organization

This manual is organized as follows:

Section 1. Introduction

This section provides background information about the parameter hierarchy, table data, and performance data collectors.

Section 2. AutoPredict Statistics

This section provides descriptions of the statistics collected by the AutoPredict Agent.

Section 3. DB2 Universal Database (UDB) Server

This section provides descriptions of the statistics collected by the DB2 UDB Agent.

Section 4. Hewlett-Packard HP-UX Systems

This section provides descriptions of the statistics for Hewlett-Packard HP-UX systems.

Section 5. Hyper-V Statistics

This section provides descriptions of the statistics collected by the Hyper-V Agent.

Section 6. IBM AIX Systems

This section provides descriptions of the statistics for IBM AIX systems.

Section 7. KVM Systems

This section provides descriptions of the statistics collected by the Libvirt Agent.

Section 8. Linux Systems

This section provides descriptions of the statistics for Linux systems.

Section 9. Microsoft Windows Systems

This section provides descriptions of the statistics collected by the System Activity Agent and the Process-Workload Agent. It also provides a description of the derived statistics in the performance database.

Section 10. Network Applications

This section provides descriptions of the statistics collected by the Network Application Agent.

Section 11. Network Devices

This section provides descriptions of the statistics collected by the Network Device Agent.

Section 12. Oracle Database Server

This section provides descriptions of the statistics collected by the Oracle Data Agent and the Oracle Alarm Agent.

Section 13. Oracle Solaris Systems

This section provides descriptions of the statistics for Oracle Solaris systems.

Section 14. PostgreSQL Database Agent

This section provides descriptions of the statistics collected by the PostgreSQL Database Agent for PostgreSQL databases.

Section 15. Sybase ASE Server

This section provides descriptions of the statistics collected by the Sybase ASE Agent.

Section 16. System Alarm Statistics

This section provides descriptions of the statistics recorded in the System Alarm table by the Alarm Service.

Section 17. VMware Systems

This section provides descriptions of the statistics collected by the VMware Infrastructure Agent.

Section 18. Web Server

This section provides descriptions of the statistics collected by the Web Server Agent.

Related Product Information

The following related documents may be helpful to you when using TeamQuest Performance Software. Use the version that corresponds to the level of software in use at your site.

***TeamQuest Administration Console User Guide* (TQ–40321)**

This guide tells you how to use the TeamQuest Administration Console. The TeamQuest Administration Console provides the capabilities to administer a large number of systems running TeamQuest Manager from one central location. This guide includes deployment strategies and recommendations, introductory information, and overall workflow descriptions. It includes information about the overall product and user interface features. It also describes the tasks necessary for all types of users to implement the TeamQuest Administration Console.

***TeamQuest Analyzer User Guide* (TQ–40242)**

This guide tells you how to use TeamQuest Analyzer. TeamQuest Analyzer provides a network accessible, browser-based user interface for detailed data reporting and analysis of your enterprise.

***TeamQuest CMIS Installation Guide* (TQ–50015)**

This guide provides installation instructions for the product components of TeamQuest CMIS. TeamQuest CMIS includes TeamQuest Manager, the PostgreSQL server, and the TeamQuest Administration Console.

***TeamQuest Performance Software Administration Guide* (TQ–40020)**

This guide provides information for using TeamQuest Manager to administer your TeamQuest performance databases. It tells you how to use the TeamQuest Manager interface to configure the collection agents that collect and store data in the performance database. It also provides information for configuring the TeamQuest system and service agents, maintaining the various TeamQuest policies, and performing the day-to-day activities involved when using TeamQuest Manager.

***TeamQuest Performance Software Administration Reference Manual* (TQ–40022)**

This manual contains conceptual information about TeamQuest Manager and provides information to help you customize TeamQuest Manager for your site.

***TeamQuest Performance Software Command Line Interfaces Reference Manual* (TQ–40024)**

This manual provides the formats and descriptions of the command line interfaces available with the TeamQuest Performance Software.

***TeamQuest Performance Software Enterprise Solutions Administration Guide* (TQ–40212)**

This guide tells you how to use TeamQuest Manager and its associated collection and service agents in an enterprise-wide environment. It also provides information about deploying the TeamQuest Performance Software products on the systems in your enterprise, configuring data collection to store data from multiple systems into a common TeamQuest enterprise database or an open database, and using the TeamQuest Update Server.

***TeamQuest Performance Software Installation and Configuration Guide for KVM Systems* (TQ–17015)**

This guide describes how to install TeamQuest Manager for use with Kernel-based Virtual Machine (KVM). It also provides all the configuration information required to collect configuration and performance data for KVM hosts and virtual machines using TeamQuest Manager.

***TeamQuest Performance Software Installation and Configuration Guide for VMware vSphere* (TQ–18015)**

This guide describes how to install TeamQuest Manager for use with VMware vSphere. It also provides all the configuration information required to collect configuration and performance data for VMware vCenter servers, VMware hosts, and virtual machines using TeamQuest Manager.

***TeamQuest View Reports Reference Manual* (TQ–16028)**

This manual contains descriptions of the predefined reports that come with TeamQuest View.

***TeamQuest View User Guide* (TQ–01401)**

This guide describes how to use TeamQuest View. TeamQuest View is a graphical user interface that allows you to perform detailed data reporting and analysis on your PC or workstation. You use TeamQuest View to view reports from data collected by the TeamQuest collection agents.

How to Access Portable Document Format (PDF) Files

All TeamQuest product documentation is available as PDF files. PDF files can either be downloaded from the TeamQuest website or they can be viewed from your product DVD.

You must have the Adobe Reader software from www.adobe.com installed on your workstation to view the PDF files.

To download product documentation from the website:

1. Access the TeamQuest website at www.teamquest.com.
2. Click the Support menu, then Customer Area.
3. Log in to the Customer Area.
4. Click Download products, patches and documents.
5. Click Product Documentation for the desired release level and product platform.
6. Click document you want to download.
7. Open or save the PDF file.

To access product documentation from your product DVD:

1. Load the DVD in your disk drive.

   The disk contents dialog box is displayed.
2. Open the welcome.pdf file.

   The welcome.pdf file can be used to navigate to the desired PDF file.

You may wish to copy the welcome.pdf file and the pdfdocs folder to your server so multiple users have convenient access to the product documentation.

Note: *When copying the welcome file and the pdfdocs directory, you must maintain the established directory structure. If the directory structure is not maintained, the navigation links within the welcome.pdf file will not open the documents located in the pdfdocs directory.*

Notation Conventions

In this manual, the following conventions apply:

- *TQDIR* indicates the path of the directory where the TeamQuest software is installed. Whenever you see *TQDIR*, substitute the path of the directory at your site.
- *TQDATADIR* indicates the path of the directory where the performance database is installed. Whenever you see this text, substitute the path of the directory at your site.
- Program names are shown in boldface type (for example, **tqbsp**).
- For Microsoft Windows systems, when a command or directory path contains spaces, the entire specification should be enclosed in double quotation (“ ”) unless noted otherwise. For example:

  ```
  "C:\Program Files\TeamQuest\manager"
  ```

- In this manual, directory paths are shown using slash marks (/), as used in UNIX/Linux operating systems. For Microsoft Windows operating systems, you need to replace the slash marks (/) with backslashes (\).

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Section 1
Introduction

This section provides background information about the statistics stored in the TeamQuest performance database. It also provides a brief summary of the collection agents included with TeamQuest Manager.

This section contains the following topics:

- Hierarchical Structure for Statistics (see 1.1)
- Table Classification Scheme (see 1.2)
- Types of Data Stored in Performance Databases (see 1.3)
- How TeamQuest Manager Processes State Data (see 1.4)

1.1. Hierarchical Structure for Statistics

Data collected by the TeamQuest Manager agents is stored in the performance database in a hierarchical structure. The hierarchical levels consist of a statistic specification and its additional qualifiers. A statistic is defined by a hierarchy of key names that identify the statistic for retrieval from the database. The hierarchy of key names for a statistic is class, subclass, and statistic name.

For example, in the following statistic:

```
CPU:by Processor::%sys
```

CPU is the class; by Processor is the subclass; and %sys is the statistic name.

In general, statistics are grouped into two types related to the way each is stored. The statistic types differ in the kind of values that can be stored into each of them and in how they are qualified for a specific object. The two types of statistics are parameters and table fields.

- A parameter is a basic statistic stored in the aggregation sets of the database. Parameters can hold numeric values. A parameter has a fixed number of qualifying characteristics: system, resource (optional), and workload (optional). Parameters and aggregation sets are only supported with the TeamQuest database architecture. For information on the parameter hierarchy of key names, see 1.1.1.
- A table field is a statistic stored as a field in a table. A field can hold string or numeric values. Each table has a variable set of fields that identify the qualifying characteristics for each record. The remaining fields in the table contain performance metrics used to describe how the object is behaving. For information on the table field hierarchy of key names, see 1.1.2.

1.1.1. Parameter Hierarchy

A parameter is a basic statistic stored in the aggregation sets of the performance database. The term *parameter* refers to a fully qualified statistic, which consists of the statistic and its additional qualifiers (a system specification, an optional resource specification, and an optional workload specification).

The hierarchy of key names defines a parameter and has the following format with each level of the hierarchy separated by a colon (:).

```
System:Class:Subclass:Statistic:Resource:Workload Set:Workload
```

Statistic Specification

A statistic describes the information being collected and stored in the database.

The following shows the hierarchy of key names for several statistics collected by the TeamQuest Manager agents:

Class	Subclass	Statistic Name
Block Device	by Device:	avserv
CPU	by Processor:	%sys
Kernel	Buffers:	bread/s
Memory		freemem
RPC	Client:Connectionless	timeouts/s

The hierarchy of key names that is used for the classification of a statistic are the following:

- **Class** identifies a set of performance data with a general relationship. Any given system can have many classes and the class key name is used to group related subclasses. Examples of a class include Block Device, CPU, Kernel, Memory, and RPC.
- **Subclass** divides a class into a collection of related data. For example, the class Block Device contains subclasses called by Device and Summary.

  A subclass can consist of two levels. Either one or both levels can be used in the subclass name, or both levels can be empty. For example, the by Processor: subclass of the CPU class has a single level. The Client:Connectionless subclass of the RPC class has two levels. The Memory class has no subclass associated with it and both levels are empty. In the subclass key name, the two levels are separated by a colon (:). When a subclass has only one level, the second level of the subclass key name in the parameter hierarchy is empty.

  A class can also have no subclasses associated with it. When this occurs, the parameter hierarchy contains :: for the subclass key position.

- **Statistic name** is the name of the information being collected and stored in the database. For example, avserv, %sys, bread/s, freemem, and timeouts/s are statistics names.

  Using the parameter format, the statistics in the previous table (assuming they were collected on a system called saturn) would appear as follows:

  ```
  saturn:Block Device:by Device::avserv:::
  saturn:CPU:by Processor::%sys:::
  saturn:Kernel:Buffers::bread/s:::
  saturn:Memory:::freemem:::
  saturn:RPC:Client:Connectionless:timeouts/s:::
  ```

Parameter Qualifiers

The following qualifiers are used for parameters stored in the performance database:

- The **system** qualifier specifies the system on which the data was collected. A parameter must be qualified by a system name.
- A **resource** is an optional qualifier for a parameter. A resource is a specific object relating to the class and subclass to which it belongs. A resource could be a physical resource, such as a disk or tape unit, or it could be a logical resource, such as a system call. For example, a resource for disk parameters would be the name of a particular disk. In this case, a separate parameter for each disk on the system is stored in the database.

  A statistic with a hierarchy of Block Device:by Device:avserv can be further qualified by the specific disk unit of disk-0. Using the parameter format, the parameter hierarchy for this statistic would appear as:

  ```
  saturn:Block Device:by Device::avserv:disk-0::
  ```

  When a resource is not being used as a qualifier, the parameter hierarchy contains :: indicating that its key position is empty.
- A **workload** is an optional qualifier for a parameter. A workload is a logical classification of the work performed on the system. The workload classifications are site-specific and are expressed in terms that are meaningful to the business entity. For example, by defining the appropriate workloads, the CPU resources on the system could be summarized by department name (payroll, development, or marketing).

  A workload qualifier consists of a workload set name and a workload. Using the parameter format, the parameter hierarchy for a statistic with a workload qualifier would appear as follows. The workload set is Example and the workload is users.

  ```
  saturn:Workload:by Workload::%cpu::Example:users
  ```

  When a workload is not being used as a qualifier, the parameter hierarchy contains :: indicating that its key position is empty.

1.1.2. Table Field Hierarchy

A table field is a statistic stored as a field in a table. A table is a collection of records containing columns of data that are related in some way. Each record in a table contains data collected at a given time to capture a history of performance information. A record contains one set of fields (for example, column values) for the table.

The table name is specified by the class and subclass key names (for example, System.Alarms and HINV.Summary).

A table field is defined by a hierarchy of key names that identify the data for retrieval from the database. The key names used for a table field are class, subclass, and a statistic name (for example, System.Alarms.severity and HINV.Summary.CPU Type).

- **Class** identifies a general grouping of table information. Examples of a class include HINV, Oracle, Web, and System.
- **Subclass** identifies a group of table fields within the table class. Examples of subclasses within the Oracle class are LibraryCache, Rollback, and SystemWait.
- **Statistic name** identifies the information being collected and stored in the table. Examples of statistics stored in the Oracle.LibraryCache table are Actual_Interval, get_hits, gets, and reloads.

Within each table stored in the TeamQuest performance database, certain fields are designated as identifiers. Identifiers are selected fields that are used as the qualifying characteristics for records. For example, the combination of Timestamp, Sequence_Number, and System is the unique identifier for an alarm in the System.Alarms table.

Each table record contains a qualifier called System which records the system name associated with the data collected.

1.1.3. Alternate Statistic Classification

The Class, Subclass, and Statistic Name classification of statistics is used in most of the TeamQuest Performance Software (TeamQuest View, and TeamQuest Manager). However, some utilities may still use the previous classification scheme of earlier versions of the software. This previous classification scheme consisted of Category Group, Category, Subcategory, and Statistic Name for parameters; and Table Class, Table Name, and Field Name for table fields.

The mapping of the older classification to the new classification is as follows:

Category Group -> Class
Category.Subcategory -> Subclass
Statistic Name -> Statistic Name

Table Class -> Class
Table Name -> Subclass
Field Name -> Statistic Name

1.2. Table Classification Scheme

TeamQuest Analyzer and the open database architecture use a different classification scheme for referencing statistics. Each statistic, which is known as a field, is grouped into an associated table. A table name may contain one or more logical levels, each delimited by a period (.). The following are examples of table names:

SOLARIS.Process
Oracle.Session
Processor
DB2.Database.Bufferpool Summary

If any part of the table name contains a literal period (.) or a backslash (\), the character must be preceded by a backslash (\). For example, the following table names contain a period in the name and, therefore, must have a backslash before the period:

\.Net CLR Memory
ASP\.NET

Statistics in this manual, which are documented using the Class:Subclass notation, are mapped into the table/field classification scheme by converting the colons (:) to periods (.) wherever they appear.

Parameters

Table Name:	Processor
Fields:	Time, System, Available Bytes, Committed Bytes, and so on
Table Name:	DB2.Database.Bufferpool Summary
Fields:	Time, System, Instance, Resource, LogicalDataReads/s, PhysicalDataReads/s, and so on

Table Fields

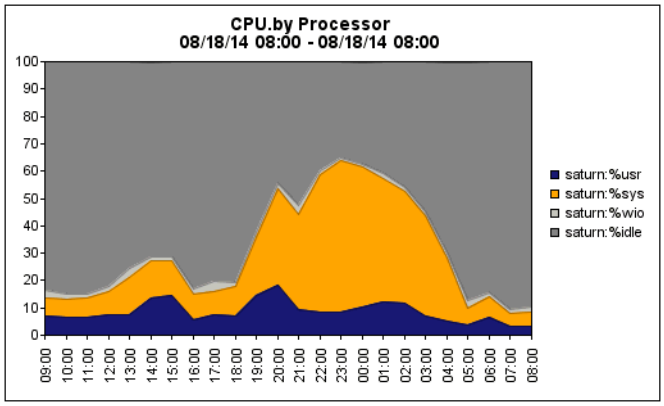
Table Name:	SOLARIS.Process
Fields:	Time, System, command, totcpu, and so on
Table Name:	Oracle.Session
Fields:	Time, System, Instance, sid, ora_user, cpu_used, sql_text, and so on

1.3. Types of Data Stored in Performance Databases

The TeamQuest Manager agents collect performance, state, and event data. This data is stored in performance databases.

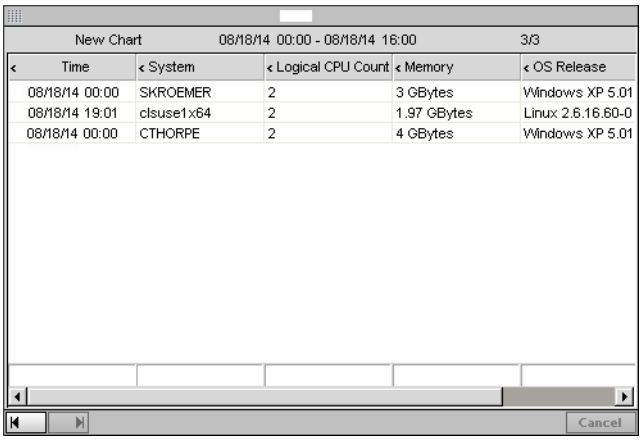
Performance Data

Performance (intervalized) data is sampled and recorded at regular time intervals. An example of performance data is a record from the CPU.by Processor table. Records from this table are typically displayed in the form of a graph with one or more data series displayed across time. The example area graph below displays four different CPU utilization statistics over a day.



State Data

State data represents a state that existed over multiple time intervals. State data is checked at regular intervals and is recorded only when the state has changed. State data may also be recorded when the collection agents are started or restarted. State data is never aggregated or consolidated. An example of state data is a record from the HINV.Summary table. Records from this table are typically displayed in the form of a table where each record represents the time and date when state information changed. The example table below shows the state of the hardware inventory information for the time period of the three systems.



New Chart 08/18/14 00:00 - 08/18/14 16:00 3/3

Time	System	Logical CPU Count	Memory	OS Release
08/18/14 00:00	SKROEMER	2	3 GBytes	Windows XP 5.01
08/18/14 19:01	clsuse1x64	2	1.97 GBytes	Linux 2.6.16.60-0
08/18/14 00:00	CTHORPE	2	4 GBytes	Windows XP 5.01

Cancel

Event Data

Event data is a record of the occurrence of events. Event records are created when events are detected. Event detection occurs at regular intervals. The time that an event occurred is saved along with the time the event was detected. Event data is never aggregated or consolidated. An example of event data is a record from the System.Alarms table. Records from this table are typically displayed in the form of a table. The example table below shows all the alarms that were triggered on a server in a 24-hour period.

New Chart 08/18/14 16:09 - 08/18/14 21:16 13/13

Time	System	Severity	Alarm ID
08/18/14 16:09	CLW2K3-6	Critical	High_Paging_Rate_Alarm
08/18/14 16:24	CLW2K3-6	Critical	Busy_Disk_Alarm [_Total]
08/18/14 16:33	CLW2K3-6	Normal	High_Paging_Rate_Alarm
08/18/14 16:43	CLW2K3-6	Normal	Busy_Disk_Alarm [_Total]
08/18/14 16:52	CLW2K3-6	Normal	Busy_Disk_Alarm [1 E:]
08/18/14 17:22	CLW2K3-6	Critical	Busy_Disk_Alarm [1 E:]
08/18/14 17:56	CLW2K3-6	Normal	Busy_Disk_Alarm [1 E:]
08/18/14 18:26	CLW2K3-6	Warning	Busy_Disk_Alarm [1 E:]
08/18/14 19:56	CLW2K3-6	Normal	Busy_Disk_Alarm [1 E:]
08/18/14 20:09	CLW2K3-6	Critical	High_Paging_Rate_Alarm
08/18/14 20:13	CLW2K3-6	Normal	High_Paging_Rate_Alarm
08/18/14 20:26	CLW2K3-6	Warning	Busy_Disk_Alarm [1 E:]
08/18/14 21:16	CLW2K3-6	Normal	Busy_Disk_Alarm [1 E:]

Update

1.4. How TeamQuest Manager Processes State Data

When selecting performance data or event data from a TeamQuest database, TeamQuest Manager retrieves data records that were recorded with timestamps within a requested time interval. When state data records are recorded, the state being recorded remains in effect until new state data records are recorded. Even though state data may have been recorded before a specified time interval, the previously recorded state remains in effect at the start of the specified interval.

When retrieving data for TeamQuest Analyzer, **tqgetm**, TeamQuest tView, or **tqharvc_open**, the state data recorded most recently before the start of the selected interval are returned. In this way, records reflecting the state during the entire selected interval are returned, even if some of the state data were recorded before the start of the interval.

For database performance reasons, limitations have been established on how far back in time TeamQuest Manager searches for previously recorded state data records. When searching backward for the state data recorded most recently before the start of the selected time interval, TeamQuest Manager searches up to 73 hours before the start of the selected time interval. If no appropriate state data is found in the 73-hour period, no additional records are returned. This limitation is not enforced when retrieving state data from an open database architecture.

As an example, HINV.Summary records are typically recorded every day at midnight. In TeamQuest Analyzer, if you want to report on the hardware inventory and select a time period of 8:00 to 12:00, you will see the HINV.Summary data recorded at midnight, even though it was not recorded during the time period of 8:00 to 12:00 because the data retrieval handles state data differently from performance data or event data. If no HINV.Summary data has been recorded for the past 4 days, no records will be returned because the record retrieval does not search backward more than 73 hours before the requested start time.

The following TeamQuest Manager tables are examples of state tables to which this processing applies:

- HINV.Devices
- HINV.FileSystem
- HINV.Summary
- VMware.Host Configuration

Section 2
AutoPredict Statistics

The AutoPredict Agent is a model-based analysis tool. Based on user-specified policies, the AutoPredict Agent automatically builds, calibrates and solves models, and stores the results into a TeamQuest performance database. The AutoPredict Agent provides information to perform TeamQuest Performance Indicator, stretch factor, and components of response analysis on your system.

This section contains a listing of the statistics collected by the agent:

- Components of Response Statistics (see 2.1)
- AutoPredict Growth Rate Statistics (see 2.2)
- AutoPredict Indicator Statistics (see 2.3)
- AutoPredict Status Statistics (see 2.4)
- AutoPredict Resources Statistics (see 2.5)

Note: *At the end of each statistic description, you will see a notation in brackets indicating the method that is used for data consolidation (for example,* [Sequential = SUM Non-Sequential = SUM]). *Sequential means that the field is consolidated over time. Non-Sequential means that the field is consolidated within a specified time interval.*

The following notations are used:

AVG = Average
DIV = Weight
FST = First
ID = Identifier
LST = Last
MAX = Maximum
MIN = Minimum
NON = None or no method was used
SUM = Summation

Because derived statistics are not stored in the performance database, the data consolidation method is not shown in the description of a derived statistic.

2.1. Components of Response Statistics

The following statistics are stored in the TeamQuest performance database by the AutoPredict Agent. These statistics are used to detect where the workload spends time on the server.

Components of response statistics represent the time CPU and I/O devices are used by the workload. These components are estimates of the time a workload is active at the resource (service time) and the time a workload is waiting for the resource (queue delay).

Table Field Hierarchy

Class:	Components of Response
Subclass:	by Workload
IT Resource Name:	TeamQuest/System/*systemname*
TeamQuest Table Name:	Components of Response.by Workload
Open Table Name:	COMPOFRSPBYWL
Collection interval:	Based on the collection period
Default retention:	1 month
Table type:	Performance

Statistic Name	Description
Actual_Interval	The actual period of time the AutoPredict Agent builds and solves models for [Sequential = SUM Non-Sequential = ID]
AutoPredict_Interval	The name of the interval used by the AutoPredict Agent [Sequential = ID Non-Sequential = ID]
Days_to_Step	The point in the future represented by this prediction step. This is the number of days from the timestamp of the data sample being analyzed. [Sequential = ID Non-Sequential = ID]
Frame	The name of the frame for the model. When a growth scenario is used, this is Growth. If no growth scenario is used, this is Frame 1. [Sequential = ID Non-Sequential = ID]
Interval	The expected duration of the interval that the AutoPredict Agent builds and solves models for [Sequential = SUM Non-Sequential = ID]
Logical_System	The name of the logical system or partition. This field is limited to 80 characters. Any Logical_System name longer than 80 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Physical_System	The name of the physical system or host system. This field is limited to 52 characters. Any Physical_System name longer than 52 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Queue_Delay	The amount of time the workload was waiting for the resource [Sequential = AVG Non-Sequential = NON]

Resource	The name of the physical device. This field is limited to 51 characters. Any Resource name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Resource_Type	The type of resource or physical device, such as CPU or disk unit. This field is limited to 51 characters. Any Resource_Type longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Sequence	The relative order of the various components of response. The CPU service time and CPU delay time are ordered first, followed by the I/O devices in order of their contribution to response time. [Sequential = AVG Non-Sequential = AVG]
Service	The amount of time the workload was active or in service at the resource [Sequential = AVG Non-Sequential = NON]
Step	The name of the step that was solved. When a growth scenario is used, this is a string that identifies the period being predicted. The period is the number of days into the future. A value of 0 indicates the baseline step. If no growth scenario is used, this is Step 1. [Sequential = ID Non-Sequential = ID]
Step_Date	The timestamp of the point in the future represented by this prediction step [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
Workload	The name of the workload. A workload represents a logical classification of work performed on the system. [Sequential = ID Non-Sequential = ID]
Workload_Set	The name of the workload set [Sequential = ID Non-Sequential = ID]

Table Field Hierarchy

Class:	Components of Response
Subclass:	Summary
IT Resource Name:	TeamQuest/System/*systemname*
TeamQuest Table Name:	Components of Response.Summary
Open Table Name:	COMPOFRSPSUM
Collection interval:	Based on the collection period
Default retention:	1 month
Table type:	Performance

Statistic Name	Description
Actual_Interval	The actual period of time the AutoPredict Agent builds and solves models for [Sequential = SUM Non-Sequential = ID]
AutoPredict_Interval	The name of the interval used by the AutoPredict Agent [Sequential = ID Non-Sequential = ID]
Days_to_Step	The point in the future represented by this prediction step. This is the number of days from the timestamp of the data sample being analyzed. [Sequential = ID Non-Sequential = ID]
Frame	The name of the frame for the model. When a growth scenario is used, this is Growth. If no growth scenario is used, this is Frame 1. [Sequential = ID Non-Sequential = ID]
Interval	The expected duration of the interval that the AutoPredict Agent builds and solves models for [Sequential = SUM Non-Sequential = ID]
Logical_System	The name of the logical system or partition. This field is limited to 80 characters. Any Logical_System name longer than 80 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Physical_System	The name of the physical system or host system. This field is limited to 52 characters. Any Physical_System name longer than 52 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Queue_Delay	The amount of time the workload was waiting for the resource [Sequential = AVG Non-Sequential = NON]
Resource	The name of the physical device. This field is limited to 51 characters. Any Resource name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Resource_Type	The type of resource or physical device, such as CPU or disk unit. This field is limited to 51 characters. Any Resource_Type longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]

Sequence	The relative order of the various components of response. The CPU service time and CPU delay time are ordered first, followed by the I/O devices in order of their contribution to response time. [Sequential = AVG Non-Sequential = AVG]
Service	The amount of time the workload was active or in service at the resource [Sequential = AVG Non-Sequential = NON]
Step	The name of the step that was solved. When a growth scenario is used, this is a string that identifies the period being predicted. The period is the number of days into the future. A value of 0 indicates the baseline step. If no growth scenario is used, this is Step 1. [Sequential = ID Non-Sequential = ID]
Step_Date	The timestamp of the point in the future represented by this prediction step [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
Workload_Set	The name of the workload set. [Sequential = ID Non-Sequential = ID]

2.2. AutoPredict Growth Rate Statistics

The following statistics are stored in the TeamQuest performance database by the AutoPredict Agent. One record is written when a new growth rate is calculated. If the growth rate analysis period is a day, a record is written each day. If the growth rate analysis period is a week, a record is written each week. If the growth rate analysis period is a month, a record is written each month.

Table Field Hierarchy

Class:	AutoPredict
Subclass:	Growth Rate
IT Resource Name:	TeamQuest/System/*systemname*
TeamQuest Table Name:	AutoPredict.Growth Rate
Open Table Name:	APGROWTH
Collection interval:	Based on the collection period
Default retention:	5 years
Table type:	Performance

Statistic Name	Description
AutoPredict_Growth_ Rate	The name of the AutoPredict Growth Rate object as named in the TeamQuest Administration Console. This field is limited to 80 characters. [Sequential = ID Non-Sequential = ID]
Evaluation Statistic	The statistic name that is used to calculate the growth rate. The format of this field is <table name>:<statistic name>. [Sequential = ID Non-Sequential = ID]
Goodness_of_Fit	The goodness of fit describes how well the calculated growth rate fits the set of observations. This field can be any number between 0.0 and 1.0, where 0.0 is the worst goodness of fit and 1.0 is the best goodness of fit. [Sequential = ID Non-Sequential = ID]
Growth_Rate	The annualized growth rate. This growth rate is used for calculating the growth per step. This field can be any number between -100.00 percent and a very large percentage. [Sequential = ID Non-Sequential = ID]
Growth_Rate_Type	The growth rate type is always a compound percentage. [Sequential = ID Non-Sequential = ID]
Logical_System	The name of the logical system or partition. This field is limited to 80 characters. Any Logical_System name longer than 80 characters is truncated. [Sequential = ID Non-Sequential = ID]
Physical_System	The name of the physical system or host system. This field is limited to 52 characters. Any Physical_System name longer than 52 characters is truncated. [Sequential = ID Non-Sequential = ID]

Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
Where_Clause	A where clause that is supplied by the user in the TeamQuest Administration Console. If no where clause is supplied, this field is N/A. For more information on where clauses, see the section on working with policies in the *TeamQuest Administration Console User Guide*. [Sequential = ID Non-Sequential = ID]
Workload	The name of the workload. A workload represents a logical classification of work performed on the system. If no workload is supplied, this field is N/A. [Sequential = ID Non-Sequential = ID]
Workload_Set	The name of the workload set. If no workload is supplied, this field is N/A. [Sequential = ID Non-Sequential = ID]

2.3. AutoPredict Indicator Statistics

The following statistics are stored in the TeamQuest performance database by the AutoPredict Agent.

The TeamQuest Performance Indicator (TPI) is an expression of the comparison between the actual performance of a workload and the theoretical optimal performance. The TPI is an important value for indicating bottlenecks in your system. It is calculated by dividing the total service time by the total response time (service time + queue delay) times 100. If the queue delay at a resource increases, the value for TPI decreases. In a perfect system with no queuing, the value for TPI is 100. In a system where the service time and queue delay are equal, a value for TPI is 50. A value less than 50 indicates you may be experiencing more queue delay than service and indicates a possible bottleneck.

Table Field Hierarchy

Class:	AutoPredict Indicators
Subclass:	by Workload
IT Resource Name:	TeamQuest/System/*systemname*
TeamQuest Table Name:	AutoPredict Indicators.by Workload
Open Table Name:	APINDBYWL
Collection interval:	Based on the collection period
Default retention:	1 month
Table type:	Performance

Statistic Name	Description
Actual_Interval	The actual period of time the AutoPredict Agent builds and solves models for [Sequential = SUM Non-Sequential = ID]
AutoPredict_Interval	The name of the interval used by the AutoPredict Agent [Sequential = ID Non-Sequential = ID]
Capacity_Rule_Exceeded	When one or more maximum capacity rules are exceeded, this field contains a description of a rule that was exceeded. If no maximum capacity rules are exceeded, this field contains <N/A>. The format of the maximum capacity rule description is <rule name> <rule component> < predicted value comparison>. [Sequential = ID Non-Sequential = ID]
Days_to_Step	The point in the future represented by this prediction step. This is the number of days from the timestamp of the data sample being analyzed. [Sequential = ID Non-Sequential = ID]
Frame	The name of the frame for the model. When a growth scenario is used, this is Growth. If no growth scenario is used, this is Frame 1. [Sequential = ID Non-Sequential = ID]
Interval	The expected duration of the interval that the AutoPredict Agent builds and solves models for [Sequential = SUM Non-Sequential = ID]

Logical_System	The name of the logical system or partition. This field is limited to 80 characters. Any Logical_System name longer than 80 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Physical_System	The name of the physical system or host system. This field is limited to 52 characters. Any Physical_System name longer than 52 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Response_Time	The predicted average response time for a transaction for the workload, in seconds [Sequential = AVG Non-Sequential = AVG]
Step	The name of the step that was solved. When a growth scenario is used, this is a string that identifies the period being predicted. The period is the number of days into the future. A value of 0 indicates the baseline step. If no growth scenario is used, this is Step 1. [Sequential = ID Non-Sequential = ID]
Step_Date	The timestamp of the point in the future represented by this prediction step [Sequential = ID Non-Sequential = ID]
Stretch_Factor	The stretch factor for the workload [Sequential = DIV Non-Sequential = DIV]
Throughput	The predicted throughput for the workload, in units of transactions per second Sequential = AVG Non-Sequential = AVG]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
TPI	The TeamQuest Performance Indicator (TPI) for the workload. [Sequential = DIV Non-Sequential = DIV]
Workload	The name of the workload. A workload represents a logical classification of work performed on the system. [Sequential = ID Non-Sequential = ID]
Workload_Set	The name of the workload set [Sequential = ID Non-Sequential = ID]

Table Field Hierarchy

Class:	AutoPredict Indicators
Subclass:	Summary
IT Resource Name:	TeamQuest/System/*systemname*
TeamQuest Table Name:	AutoPredict Indicators.Summary
Open Table Name:	APINDSUM
Collection interval:	Based on the collection period
Default retention:	1 month
Table type:	Performance

Statistic Name	Description
Actual_Interval	The actual period of time the AutoPredict Agent builds and solves models for [Sequential = SUM Non-Sequential = ID]
AutoPredict_Interval	The name of the interval used by the AutoPredict Agent [Sequential = ID Non-Sequential = ID]
Days_to_Step	The point in the future represented by this prediction step. This is the number of days from the timestamp of the data sample being analyzed. [Sequential = ID Non-Sequential = ID]
Frame	The name of the frame for the model. When a growth scenario is used, this is Growth. If no growth scenario is used, this is Frame 1. [Sequential = ID Non-Sequential = ID]
Interval	The expected duration of the interval that the AutoPredict Agent builds and solves models for [Sequential = SUM Non-Sequential = ID]
Logical_System	The name of the logical system or partition. This field is limited to 80 characters. Any Logical_System name longer than 80 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Physical_System	The name of the physical system or host system. This field is limited to 80 characters. Any Physical_System name longer than 80 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Step	The name of the step that was solved. When a growth scenario is used, this is a string that identifies the period being predicted. The period is the number of days into the future. A value of 0 indicates the baseline step. If no growth scenario is used, this is Step 1. [Sequential = ID Non-Sequential = ID]
Step_Date	The timestamp of the point in the future represented by this prediction step [Sequential = ID Non-Sequential = ID]
Stretch_Factor	The stretch factor for the work on the system [Sequential = DIV Non-Sequential = DIV]

Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
TPI	The TeamQuest Performance Indicator (TPI) for the workload. [Sequential = DIV Non-Sequential = DIV]
Workload_Set	The name of the workload set [Sequential = ID Non-Sequential = ID]

2.4. AutoPredict Status Statistics

The following statistics are stored in the TeamQuest performance database by the AutoPredict Agent. One record is written per model, and it contains the summary for all steps. These statistics are the results of the automatic evaluation of model results.

Table Field Hierarchy

Class:	AutoPredict
Subclass:	Status
IT Resource Name:	TeamQuest/System/*systemname*
TeamQuest Table Name:	AutoPredict.Status
Open Table Name:	APSTATUS
Collection interval:	Based on the collection period
Default retention:	1 month
Table type:	Performance

Statistic Name	**Description**
Actual_Interval	The actual period of time represented by the model built and stored by the AutoPredict Agent [Sequential = SUM Non-Sequential = ID]
AutoPredict_Interval	The name of the interval used by the AutoPredict Agent [Sequential = ID Non-Sequential = ID]
Capacity_Rule_Exceeded	When one or more maximum capacity rules are exceeded, this field contains a description of a rule that was exceeded. If no maximum capacity rules are exceeded or depending on the Solver_Status value, this field contains <N/A>. The format of the maximum capacity rule description is <rule name> <rule component> <predicted value comparison>. [Sequential = ID Non-Sequential = ID]
Compliance_Status	The status of compliance with capacity rules. “Noncompliance” indicates at least one capacity rule is out of compliance. “Compliance” indicates all capacity rules are in compliance. “No rule” indicates that there were no compliance rules to evaluate. This field may contain <N/A>, depending on the Solver_Status value. [Sequential = ID Non-Sequential = ID]

Critical_Resource	When one or more maximum capacity rules are exceeded, this field contains the name of the resource where the workload spends most of its time. If no maximum capacity rules are exceeded or depending on the Solver_Status value, this field contains <N/A>. This will take its data from the Components of Response Summary table. [Sequential = ID Non-Sequential = ID]
Days_To_Noncompliance	The number of days from the baseline model date when the system goes to a noncompliance state. A value of -1 indicates that the system is in compliance for all modeled periods. This field may contain <N/A>, depending on the Solver_Status value. [Sequential = ID Non-Sequential = ID]
Frame	The name of the frame for the model. When a growth scenario is used, this is Growth. If no growth scenario is used, this is Frame 1. [Sequential = ID Non-Sequential = ID]
Interval	The expected duration of the interval that the AutoPredict Agent builds and solves models for [Sequential = SUM Non-Sequential = ID]
Logical_System	The name of the logical system or partition. This field is limited to 80 characters. Any Logical_System name longer than 80 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Noncompliance_Date	The predicted date when the system goes to a noncompliance state. A value of zero indicates that the system is in compliance for all modeled periods. This field may contain <N/A>, depending on the Solver_Status value. [Sequential = ID Non-Sequential = ID]
Physical_System	The name of the physical system or host system. This field is limited to 52 characters. Any Physical_System name longer than 52 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Solver_Status	The status of the Solver. The status can be any of the following: Success = The model solved successfully. Data Not Available = The data needed to solve the model could not be found. Calibration Failure = The model could not be calibrated. Calibration Timeout = The calibration took too long to complete. Solve Step <Step Name> Failed = The step with the given name failed. Solve Step <Step Name> Timeout = The step with the given name took too long to solve. If the Solver_Status value is Data Not Available, Calibration Failure, Calibration Timeout, or if the very first step fails or times out, the values for compliance related fields will be <N/A>. If the Solver_Status value is Success or if a step greater than 1 has failed or timed out, the compliance related fields will be populated with data from the successful steps. [Sequential = ID Non-Sequential = ID]

Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
Workload_Set	The name of the workload set [Sequential = ID Non-Sequential = ID]

2.5. AutoPredict Resources Statistics

The following statistics are stored in the TeamQuest performance database by the AutoPredict Agent. Some of these statistics are for automatic evaluation of modeling results. These statistics will most likely be used for manual, after the fact, analysis.

Table Field Hierarchy

Class:	AutoPredict
Subclass:	Resources
IT Resource Name:	TeamQuest/System/*systemname*
TeamQuest Table Name:	AutoPredict.Resources
Open Table Name:	APRESOUR
Collection interval:	Based on the collection period
Default retention:	1 month
Table type:	Performance

Statistic Name	Description
Actual_Interval	The actual period of time the AutoPredict Agent builds and solves models for [Sequential = SUM Non-Sequential = ID]
AutoPredict_Interval	The name of the interval used by the AutoPredict Agent [Sequential = ID Non-Sequential = ID]
Days_to_Step	The point in the future represented by this prediction step. This is the number of days from the timestamp of the data sample being analyzed. [Sequential = ID Non-Sequential = ID]
Frame	The name of the frame for the model. When a growth scenario is used, this is Growth. If no growth scenario is used, this is Frame 1. [Sequential = ID Non-Sequential = ID]
Interval	The expected duration of the interval that the AutoPredict Agent builds and solves models for [Sequential = SUM Non-Sequential = ID]
Logical_System	The name of the logical system or partition. This field is limited to 80 characters. Any Logical_System name longer than 80 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Percent_Busy	The predicted percent utilization of the resource [Sequential = AVG Non-Sequential = AVG]

Physical_System	The name of the physical system or host system. This field is limited to 52 characters. Any Physical_System name longer than 52 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Queue_Length	The predicted queue length (in service plus waiting) of the resource [Sequential = AVG Non-Sequential = SUM]
Resource	The name of the physical device. This field is limited to 51 characters. Any Resource name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Resource_Type	The type of resource or physical device, such as CPU or disk unit. This field is limited to 51 characters. Any Resource_Type longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Step	The name of the step that was solved. When a growth scenario is used, this is a string that identifies the period being predicted. The period is the number of days into the future. A value of 0 indicates the baseline step. If no growth scenario is used, this is Step 1. [Sequential = ID Non-Sequential = ID]
Step_Date	The timestamp of the point in the future represented by this prediction step [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
Workload_Set	The name of the workload set [Sequential = ID Non-Sequential = ID]

Section 3
DB2 Universal Database (UDB) Server

The DB2 UDB Agent collects information on DB2 Universal Database (UDB) instances. The agent obtains instance summary data pertaining to sorts, connections, and agents. It also gathers database summary data relating to connections, agents, lock summary information, bufferpool I/O, sorts, SQL counts, row I/O counts, log space usage, and memory usage. Additional detailed information about bufferpools, tablespaces, tables, applications, instance status, instance configuration, database status, and database configuration is retrieved by the agent as well.

This section contains a listing of the statistics collected by the agent:

- DB2 Application Detail Statistics (see 3.1)
- Bufferpool Statistics (see 3.2)
- Database Configuration Statistics (see 3.3)
- Database Statistics (see 3.4)
- Database Status Statistics (see 3.5)
- Instance Configuration Statistics (see 3.6)
- Instance Statistics (see 3.7)
- Instance Status Statistics (see 3.8)
- Table Statistics (see 3.9)
- Tablespace Statistics (see 3.10)

Note: *At the end of each statistic description, you will see a notation in brackets indicating the method that is used for data consolidation (for example,* [Sequential = SUM Non-Sequential = SUM]). *Sequential means that the field is consolidated over time. Non-Sequential means that the field is consolidated within a specified time interval.*

The following notations are used:

AVG = Average
DIV = Weight
FST = First
ID = Identifier
LST = Last
MAX = Maximum
MIN = Minimum
NON = None or no method was used
SUM = Summation

If you are using TeamQuest View to view aggregation set data, the sequential method is used for data consolidation.

Because derived statistics are not stored in the performance database, the data consolidation method is not shown in the description of a derived statistic.

In addition, the end of each statistic description contains a notation in brackets relating to any DB2 monitor switches that need to be enabled in order to collect the particular statistic (for example, [Switch = table]*). This notation is in the form* [Switch = switchname]*, where* switchname *is the name of the DB2 switch needed. The following switch names are used: none, bufferpool, lock, sort, statement, table, and uow.*

3.1. DB2 Application Detail Statistics

Detailed information about the applications for each DB2 instance is stored within the DB2.Application Detail table in the TeamQuest performance database.

Table Field Hierarchy

Class:	DB2
Subclass:	Application Detail
IT Resource Name:	/TeamQuest/System/*systemname*/DB2/*instancename*
TeamQuest Table Name:	DB2.Application Detail
Open Table Name:	DB2APPDETAIL
Collection interval:	1 minute (default)
Default retention:	1 day
Table type:	Performance

Statistic Name	Description
acc_cur_reqs	The number of times that a request by the application for an I/O block was accepted during the interval [Sequential = SUM Non-Sequential = SUM] [Switch = none]
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the application started within the given sample interval. [Sequential = SUM Non-Sequential = ID] [Switch = none]
agent_id	The agent identifier of the agent serving the application [Sequential = ID Non-Sequential = ID] [Switch = none]
agent_pid	The process identifier (UNIX/Linux systems) or thread identifier (Windows systems) of a DB2 UDB Agent [Sequential = ID Non-Sequential = ID] [Switch = none]
agent_sys_cpu	The amount of time in seconds spent by the agents for this application executing system calls during the interval [Sequential = SUM Non-Sequential = SUM] [Switch = none]
agent_usr_cpu	The amount of time in seconds spent by the agents for this application executing database manager code during the interval [Sequential = SUM Non-Sequential = SUM] [Switch = none]
agents_stolen	The number of times an agent was stolen from the application during the interval [Sequential = SUM Non-Sequential = SUM] [Switch = none]

appl_id	The unique identifier for the application [Sequential = ID Non-Sequential = ID] [Switch = none]
appl_name	The name of the application running on the client as known to the database manager [Sequential = ID Non-Sequential = ID] [Switch = none]
appl_status	The current status of the application [Sequential = LST Non-Sequential = ID] [Switch = none]
assoc_agents	The number of subagents associated with the application [Sequential = LST Non-Sequential = SUM] [Switch = none]
auth_id	The authorization identifier of the user who invoked the application that is being monitored [Sequential = ID Non-Sequential = ID] [Switch = none]
avg_d_rds	The average number of sectors that are read per direct read request during the interval. Not stored by default. [Sequential = AVG Non-Sequential = AVG] [Switch = bufferpool]
avg_d_rdtime	The average time in milliseconds spent direct reading a sector by the application during the interval [Sequential = AVG Non-Sequential = AVG] [Switch = bufferpool]
avg_d_wrts	The average number of sectors that are written per direct write request during the interval. Not stored by default. [Sequential = AVG Non-Sequential = AVG] [Switch = bufferpool]
avg_d_wrttime	The average time in milliseconds spent direct writing a sector by the application during the interval [Sequential = AVG Non-Sequential = AVG] [Switch = bufferpool]
avg_lckwtime	The average amount of time in milliseconds spent by the application waiting for a lock during the interval [Sequential = AVG Non-Sequential = AVG] [Switch = lock]
avg_rdtime	The average time in milliseconds spent reading a page by the application during the interval [Sequential = AVG Non-Sequential = AVG] [Switch = bufferpool]
avg_sort_time	The average amount of time in milliseconds per sort by the application during the interval [Sequential = AVG Non-Sequential = AVG] [Switch = sort]

avg_wrttime	The average time in milliseconds spent writing a page by the application during the interval [Sequential = AVG Non-Sequential = AVG] [Switch = bufferpool]
binds	The number of binds and pre-compiles attempted by the application during the interval [Sequential = SUM Non-Sequential = SUM] [Switch = none]
catc_heap_full	The number of times an insert into the catalog cache for the application failed due to a heap-full condition in the database heap during the interval [Sequential = SUM Non-Sequential = SUM] [Switch = none]
catc_inserts	The number of times the system tried to insert table descriptor information into the catalog cache for the application during the interval [Sequential = SUM Non-Sequential = SUM] [Switch = none]
catc_lookups	The number of times the catalog cache was referenced by the application to obtain table descriptor information during the interval [Sequential = SUM Non-Sequential = SUM] [Switch = none]
catc_max_mem	The maximum amount of memory in kilobytes used in the catalog cache by the application [Sequential = MAX Non-Sequential = SUM] [Switch = none]
catc_overflows	The number of times an insert into the catalog cache for the application failed due to the catalog cache being full during the interval [Sequential = SUM Non-Sequential = SUM] [Switch = none]
clnt_addr	The communication address of the client [Sequential = ID Non-Sequential = ID] [Switch = none]
clnt_comm	The communication protocol that the client application is using to communicate with the server. Not stored by default. [Sequential = ID Non-Sequential = ID] [Switch = none]
clnt_nname	The node name in the database manager configuration file at the client node [Sequential = ID Non-Sequential = ID] [Switch = none]
clnt_pid	The process identifier of the client application that made the connection to the database [Sequential = ID Non-Sequential = ID] [Switch = none]

clnt_platform	The operating system on which the client application is running [Sequential = ID Non-Sequential = ID] [Switch = none]
clnt_prdid	The product and version that is running on the client [Sequential = ID Non-Sequential = ID] [Switch = none]
clnt_userid	The user id that the user specified when logging into the operation system [Sequential = ID Non-Sequential = ID] [Switch = none]
codepage_id	The code page identifier for the application [Sequential = ID Non-Sequential = ID] [Switch = none]
commit_sqls	The number of commit SQL statements attempted by the application during the interval [Sequential = SUM Non-Sequential = SUM] [Switch = none]
conn_end_time	The timestamp that the application completed a connection request [Sequential = LST Non-Sequential = ID] [Switch = none]
conn_start_time	The timestamp that the application started a connection request [Sequential = FST Non-Sequential = ID] [Switch = none]
coord_agent_pid	The process identifier (UNIX/Linux systems) or thread identifier (Windows systems) of the coordinator agent for the application [Sequential = ID Non-Sequential = ID] [Switch = none]
country_code	The country code of the database for which the monitor data is collected [Sequential = ID Non-Sequential = ID] [Switch = none]
d_rd_reqs	The number of requests to perform direct read operations by the application during the interval. Not stored by default. [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]
d_rds	The number of read operations by the application that do not use a bufferpool during the interval [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]
d_rdtime	The amount of time in milliseconds spent direct reading a sector by the application during the interval. Not stored by default. [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]
d_wrt_reqs	The number of requests to perform direct write operations by the application during the interval. Not stored by default. [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]

d_wrts	The number of write operations by the application that do not use a bufferpool during the interval [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]
d_wrttime	The amount of time in milliseconds spent direct writing a sector by the application during the interval. Not stored by default. [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]
data_wrts	The number of data pages written by the application during the interval. Not stored by default. [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]
database	The name of the database to which the application is connected [Sequential = ID Non-Sequential = ID] [Switch = none]
ddl_sqls	The number of data definition language (DDL) SQL statements executed by the application during the interval. Not stored by default. [Sequential = SUM Non-Sequential = SUM] [Switch = none]
deadlocks	The number of deadlocks by the application during the interval [Sequential = SUM Non-Sequential = SUM] [Switch = lock]
dynamic_sqls	The number of dynamic SQL statements attempted by the application during the interval. Not stored by default. [Sequential = SUM Non-Sequential = SUM] [Switch = none]
eff_lock_waits	The number of times the application was waiting for a lock at the beginning of the sample interval or started waiting for a lock during the sample interval. [Sequential = SUM Non-Sequential = SUM] [Switch = lock]
exec_time	The current amount of time in milliseconds spent executing statements from the application [Sequential = LST Non-Sequential = SUM] [Switch = statement]
failed_sqls	The number of failed SQL statements by the application during the interval [Sequential = SUM Non-Sequential = SUM] [Switch = none]
hit_ratio	The percentage of logical reads that were satisfied for the application without having to invoke a read from disk during the interval [Sequential = AVG Non-Sequential = AVG] [Switch = bufferpool]

idle_time	The amount of time in seconds since the application last issued a request to the server [Sequential = LST Non-Sequential = ID] [Switch = statement]
idx_wrts	The number of index pages written by the application during the interval. Not stored by default. [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]
Instance	The name of the instance from which data is obtained. Up to 24 characters are displayed. [Sequential = ID Non-Sequential = ID] [Switch = none]
int_commits	The number of commit SQL statements initiated internally by the database manager during the interval. Not stored by default. [Sequential = SUM Non-Sequential = SUM] [Switch = none]
int_dl_rbs	The number of rollback SQL statements due to deadlocks initiated internally by the database manager during the interval. Not stored by default. [Sequential = SUM Non-Sequential = SUM] [Switch = none]
int_rebinds	The number of rebinds initiated internally by the database manager during the interval. Not stored by default. [Sequential = SUM Non-Sequential = SUM] [Switch = none]
int_rollbacks	The number of rollback SQL statements initiated internally by the database manager during the interval. Not stored by default. [Sequential = SUM Non-Sequential = SUM] [Switch = none]
int_rows_deleted	The number of row deletions initiated internally by the application during the interval. Not stored by default. [Sequential = SUM Non-Sequential = SUM] [Switch = none]
int_rows_inserted	The number of row inserts initiated internally by the application during the interval. Not stored by default. [Sequential = SUM Non-Sequential = SUM] [Switch = none]
int_rows_updated	The number of row updates initiated internally by the application during the interval. Not stored by default. [Sequential = SUM Non-Sequential = SUM] [Switch = none]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = ID] [Switch = none]
l_data_rds	The number of logical read requests of data pages by the application during the interval. Not stored by default. [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]

l_idx_rds	The number of logical read requests of index pages by the application during the interval. Not stored by default. [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]
l_rds	The number of logical read requests of data and index pages by the application during the interval [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]
lckwtime	The amount of time in milliseconds spent by the application waiting for locks during the interval [Sequential = SUM Non-Sequential = SUM] [Switch = lock]
loc_cursors	The number of local cursors currently open by the application. This value includes cursors that use I/O blocking, as well as those that do not. [Sequential = LST Non-Sequential = SUM] [Switch = none]
loc_cursors_blk	The number of local cursors that use I/O blocking currently open by the application [Sequential = LST Non-Sequential = SUM] [Switch = none]
lock_escals	The number of times locks by the application were escalated during the interval [Sequential = SUM Non-Sequential = SUM] [Switch = none]
lock_exescals	The number of times locks by the application were escalated to exclusive during the interval [Sequential = SUM Non-Sequential = SUM] [Switch = none]
lock_timeouts	The number of times a lock request by the application timed-out during the interval [Sequential = SUM Non-Sequential = SUM] [Switch = none]
lock_waits	The number of times the application had to wait for a lock during the interval [Sequential = SUM Non-Sequential = SUM] [Switch = lock]
locks_held	The current number of locks held by the application [Sequential = LST Non-Sequential = SUM] [Switch = none]
locks_waiting	The current number of agents waiting on a lock [Sequential = LST Non-Sequential = SUM] [Switch = none]
max_assoc_agents	The maximum number of subagents associated with the application [Sequential = MAX Non-Sequential = MAX] [Switch = none]

node_num	The node identifier where the application connected to the instance [Sequential = ID Non-Sequential = ID] [Switch = none]
num_uow	The number of units of work (such as commits, rollbacks, internal commits, and internal rollbacks) generated by the application during the interval [Sequential = SUM Non-Sequential = SUM] [Switch = none]
p_data_rds	The number of physical read requests of data pages by the application during the interval. Not stored by default. [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]
p_idx_rds	The number of physical read requests of index pages by the application during the interval. Not stored by default. [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]
p_rds	The number of physical read requests of data and index pages by the application during the interval [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]
p_wrts	The number of data and index pages written by the application during the interval [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]
pkgc_inserts	The number of times the application requested a section that was not available and the section had to be loaded into the package cache during the interval [Sequential = SUM Non-Sequential = SUM] [Switch = none]
pkgc_lookups	The number of times the application looked for a section or package in the package cache during the interval [Sequential = SUM Non-Sequential = SUM] [Switch = none]
pre_wait_time	The time in milliseconds spent waiting for an I/O server (prefetcher) to finish loading pages into a bufferpool in the database for the application during the interval [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]
priority	The priority of the agents working for this application [Sequential = LST Non-Sequential = ID] [Switch = none]

priority_type	The operating system priority type for the agent working on behalf of the application, represented by one of the following one-character codes: D = Dynamic S = Static [Sequential = ID Non-Sequential = ID] [Switch = none]
rdtime	The amount of time in milliseconds spent reading pages by the application during the interval. Not stored by default. [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]
rej_cur_reqs	The number of times that a request by the application for an I/O block was rejected during the interval [Sequential = SUM Non-Sequential = SUM] [Switch = none]
rem_cursors	The number of remote cursors currently open by the application. This value includes cursors that use I/O blocking, as well as those that do not. [Sequential = LST Non-Sequential = SUM] [Switch = none]
rem_cursors_blk	The number of remote cursors that use I/O blocking currently open by the application [Sequential = LST Non-Sequential = SUM] [Switch = none]
rollback_sqls	The number of rollback SQL statements attempted by the application during the interval [Sequential = SUM Non-Sequential = SUM] [Switch = none]
rows_deleted	The number of rows deleted by the application during the interval. Not stored by default. [Sequential = SUM Non-Sequential = SUM] [Switch = none]
rows_inserted	The number of rows inserted by the application during the interval. Not stored by default. [Sequential = SUM Non-Sequential = SUM] [Switch = none]
rows_read	The number of rows read from tables by the application during the interval [Sequential = SUM Non-Sequential = SUM] [Switch = none]
rows_selected	The number of rows selected by the application during the interval. Not stored by default. [Sequential = SUM Non-Sequential = SUM] [Switch = none]

rows_updated	The number of rows updated by the application during the interval. Not stored by default. [Sequential = SUM Non-Sequential = SUM] [Switch = none]
rows_written	The number of rows written to tables by the application during the interval [Sequential = SUM Non-Sequential = SUM] [Switch = none]
Sample_End_Time	The actual timestamp of when data collection for the sample completed [Sequential = LST Non-Sequential = ID] [Switch = none]
sec_inserts	The number of inserts of SQL sections by the application from its SQL work area during the interval [Sequential = SUM Non-Sequential = SUM] [Switch = none]
sec_lookups	The number of lookups of SQL sections by the application from its SQL work area during the interval [Sequential = SUM Non-Sequential = SUM] [Switch = none]
select_sqls	The number of SQL select statements executed by the application during the interval. Not stored by default. [Sequential = SUM Non-Sequential = SUM] [Switch = none]
sort_overflows	The number of sorts by the application that ran out of sort heap and may have required disk space for temporary storage during the interval [Sequential = SUM Non-Sequential = SUM] [Switch = sort]
sort_time	The amount of time in milliseconds spent sorting by the application during the interval. Not stored by default. [Sequential = SUM Non-Sequential = SUM] [Switch = sort]
sorts	The number of sorts that have been executed by the application during the interval [Sequential = SUM Non-Sequential = SUM] [Switch = sort]
stat_chg_time	The timestamp when the application entered its current status [Sequential = LST Non-Sequential = ID] [Switch = uow]
static_sqls	The number of static SQL statements attempted by the application during the interval. Not stored by default. [Sequential = SUM Non-Sequential = SUM] [Switch = none]

stmt_cost_est	The estimated cost in timerons for the current or most recently used statement for the application. A timeron is an abstract unit of measure. It does not directly equate to any actual elapsed time, but gives an estimate of the resources (cost) required by the database manager to execute an access plan. Not stored by default. [Sequential = LST Non-Sequential = ID] [Switch = statement]
stmt_creator	The authorization identifier of the user that pre-compiled the current or most recently used package for the application. Not stored by default. [Sequential = LST Non-Sequential = ID] [Switch = statement]
stmt_cursor	The name of the cursor corresponding to the current or most recently used statement for the application. Not stored by default. [Sequential = LST Non-Sequential = ID] [Switch = statement]
stmt_etime	The amount of elapsed time in seconds spent by the current or most recently used statement for the application. Not stored by default. [Sequential = LST Non-Sequential = SUM] [Switch = statement]
stmt_operation	The current or most recently used statement operation for the application. Not stored by default. [Sequential = LST Non-Sequential = ID] [Switch = none]
stmt_package	The name of the current or most recently used package for the application. Not stored by default. [Sequential = LST Non-Sequential = ID] [Switch = statement]
stmt_row_est	The estimated number of rows to be returned for the current or most recently used statement for the application. Not stored by default. [Sequential = LST Non-Sequential = ID] [Switch = statement]
stmt_rows_read	The number of rows read from tables by the current or most recently used statement for the application. Not stored by default. [Sequential = LST Non-Sequential = SUM] [Switch = none]
stmt_rows_written	The number of rows written to tables by the current or most recently used statement for the application. Not stored by default. [Sequential = LST Non-Sequential = SUM] [Switch = none]
stmt_sec_num	The current or most recently used internal section number for the application. This value is relative to the package being used. Not stored by default. [Sequential = LST Non-Sequential = ID] [Switch = statement]

stmt_sql_text	The text of the current or most recently used statement for the application. Not stored by default. [Sequential = LST Non-Sequential = ID] [Switch = statement]
stmt_sys_cpu	The amount of time in seconds spent by the current or most recently used statement for the application executing system calls. Not stored by default. [Sequential = LST Non-Sequential = SUM] [Switch = statement]
stmt_type	The current or most recent type of statement for the application, represented by one of the following one-character codes: D = Dynamic N = Non-SQL Statement S = Static U = Unknown Not stored by default. [Sequential = LST Non-Sequential = ID] [Switch = statement]
stmt_usr_cpu	The amount of time in seconds spent by the current or most recently used statement for the application executing database manager code. Not stored by default. [Sequential = LST Non-Sequential = SUM] [Switch = statement]
System	The name of the system where the data is collected. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID] [Switch = none]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID] [Switch = none]
total_sqls	The total number of SQL statements attempted by the application during the interval [Sequential = SUM Non-Sequential = SUM] [Switch = none]
tpc_accstr	Data passed to the target database for logging purposes by the transaction manager. Not stored by default. [Sequential = ID Non-Sequential = ID] [Switch = none]
tpc_applname	The name of the application as defined by the transaction manager. Not stored by default. [Sequential = ID Non-Sequential = ID] [Switch = none]
tpc_userid	The client user id generated by a transaction manager. Not stored by default. [Sequential = ID Non-Sequential = ID] [Switch = none]

tpc_wsname	The name of the system on which the client application is located, as defined by the transaction manager. Not stored by default. [Sequential = ID Non-Sequential = ID] [Switch = none]
uid_sqls	The number of insert, update, or delete SQL statements executed by the application during the interval. Not stored by default. [Sequential = SUM Non-Sequential = SUM] [Switch = none]
unrd_pre_pgs	The number of prefetched pages that were unread during the interval [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]
uow_comp_status	The status of the current or most recent unit of work for the application. Not stored by default. [Sequential = LST Non-Sequential = ID] [Switch = uow]
uow_etime	The amount of elapsed time in seconds for the most recently completed unit of work. Not stored by default. [Sequential = LST Non-Sequential = SUM] [Switch = uow]
uow_lckwtime	The amount of time in milliseconds spent waiting for locks by the current or most recent unit of work for the application. Not stored by default. [Sequential = LST Non-Sequential = SUM] [Switch = uow]
uow_log_space	The amount of log space in kilobytes used by the current or most recent unit of work for the application. Not stored by default. [Sequential = LST Non-Sequential = SUM] [Switch = uow]
uow_prev_stop	The timestamp of when the second most recent unit of work for the application completed. Not stored by default. [Sequential = LST Non-Sequential = ID] [Switch = uow]
uow_start_time	The timestamp of when the current or most recent unit of work for the application first requested database resources. Not stored by default. [Sequential = LST Non-Sequential = ID] [Switch = uow]
uow_stop_time	The timestamp of when the most recent unit of work for the application completed. Not stored by default. [Sequential = LST Non-Sequential = ID] [Switch = uow]
wks_p_inserts	The number of times an insert of SQL sections by the application occurred in private workspaces during the interval. This statistic is not available for DB2 UDB 9.5 and later. The value is displayed as <N/A>. [Sequential = SUM Non-Sequential = SUM] [Switch = none]

wks_p_lookups	The number of times a lookup of SQL sections by the application occurred in private workspaces during the interval. This statistic is not available for DB2 UDB 9.5 and later. The value is displayed as <N/A>. [Sequential = SUM Non-Sequential = SUM] [Switch = none]
wks_p_max_mem	The maximum amount of memory in kilobytes used in private workspaces by this application. This statistic is not available for DB2 UDB 9.5 and later. The value is displayed as <N/A>. [Sequential = MAX Non-Sequential = SUM] [Switch = none]
wks_p_overflows	The number of times private workspaces overflowed the bounds of their allocated memory due to the application during the interval. This statistic is not available for DB2 UDB 9.5 and later. The value is displayed as <N/A>. [Sequential = SUM Non-Sequential = SUM] [Switch = none]
wks_s_inserts	The number of times an insert of SQL sections by the application occurred in shared workspaces during the interval. This statistic is not available for DB2 UDB 9.5 and later. The value is displayed as <N/A>. [Sequential = SUM Non-Sequential = SUM] [Switch = none]
wks_s_lookups	The number of times a lookup of SQL sections by the application occurred in shared workspaces during the interval. This statistic is not available for DB2 UDB 9.5 and later. The value is displayed as <N/A>. [Sequential = SUM Non-Sequential = SUM] [Switch = none]
wks_s_max_mem	The maximum amount of memory in kilobytes used in shared workspaces by this application. This statistic is not available for DB2 UDB 9.5 and later. The value is displayed as <N/A>. [Sequential = MAX Non-Sequential = SUM] [Switch = none]
wks_s_overflows	The number of times shared workspaces overflowed the bounds of their allocated memory due to the application during the interval. This statistic is not available for DB2 UDB 9.5 and later. The value is displayed as <N/A>. [Sequential = SUM Non-Sequential = SUM] [Switch = none]
wrttime	The amount of time in milliseconds spent writing pages by the application during the interval. Not stored by default. [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]

3.2. Bufferpool Statistics

Detailed information about the bufferpools within each DB2 database is stored within the DB2.Bufferpool Detail table in the TeamQuest performance database. To obtain this information, the bufferpool DB2 monitor switch must be enabled within the DB2 UDB Agent configuration entry for the instance.

Table Field Hierarchy

Class:	DB2
Subclass:	Bufferpool Detail
IT Resource Name:	/TeamQuest/System/*systemname*/DB2/*instancename*
TeamQuest Table Name:	DB2.Bufferpool Detail
Open Table Name:	DB2BUFFPOOLDETAIL
Collection interval:	1 minute (default)
Default retention:	1 day
Table type:	Performance

Statistic Name	Description
a_data_rd_reqs	The number of asynchronous data read requests from the bufferpool during the interval [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]
a_data_rds	The number of data pages read asynchronously into the bufferpool during the interval. Not stored by default. [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]
a_data_wrts	The number of data pages written to disk asynchronously from the bufferpool during the interval. Not stored by default. [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]
a_idx_rd_reqs	The number of asynchronous index read requests from the bufferpool during the interval [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]
a_idx_rds	The number of index pages read asynchronously into the bufferpool during the interval. Not stored by default. [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]
a_idx_wrts	The number of index pages written to disk asynchronously from the bufferpool during the interval. Not stored by default. [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]

a_rds	The number of data and index pages read asynchronously into the bufferpool during the interval [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]
a_rdtime	The amount of time in milliseconds spent reading pages asynchronously into the bufferpool during the interval. Not stored by default. [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]
a_wrts	The number of data and index pages written to disk asynchronously from the bufferpool during the interval [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]
a_wrttime	The amount of time in milliseconds spent writing pages to disk asynchronously from the bufferpool during the interval. Not stored by default. [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = ID] [Switch = none]
avg_a_data_rds	The average number of data pages read per asynchronous data read request during the interval [Sequential = AVG Non-Sequential = AVG] [Switch = bufferpool]
avg_a_idx_rds	The average number of index pages read per asynchronous index read request during the interval [Sequential = AVG Non-Sequential = AVG] [Switch = bufferpool]
avg_a_rdtime	The average time in milliseconds spent reading a page asynchronously into the bufferpool during the interval [Sequential = AVG Non-Sequential = AVG] [Switch = bufferpool]
avg_a_wrttime	The average time in milliseconds spent writing a page to disk asynchronously from the bufferpool during the interval [Sequential = AVG Non-Sequential = AVG] [Switch = bufferpool]
avg_d_rds	The average number of sectors that are read per direct read request during the interval [Sequential = AVG Non-Sequential = AVG] [Switch = bufferpool]
avg_d_rdtime	The average time in milliseconds spent direct reading a sector during the interval [Sequential = AVG Non-Sequential = AVG] [Switch = bufferpool]

avg_d_wrts	The average number of sectors that are written per direct write request during the interval [Sequential = AVG Non-Sequential = AVG] [Switch = bufferpool]
avg_d_wrttime	The average time in milliseconds spent direct writing a sector during the interval [Sequential = AVG Non-Sequential = AVG] [Switch = bufferpool]
avg_rdtime	The average time in milliseconds spent reading a page into the bufferpool during the interval [Sequential = AVG Non-Sequential = AVG] [Switch = bufferpool]
avg_wrttime	The average time in milliseconds spent writing a page to disk from the bufferpool during the interval [Sequential = AVG Non-Sequential = AVG] [Switch = bufferpool]
block_pgs	The number of pages read by block I/O during the interval [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]
block_reqs	The number of block I/O requests made during the interval [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]
bufferpool_name	The name of the bufferpool [Sequential = ID Non-Sequential = ID] [Switch = none]
curr_size	The current size in pages of the bufferpool [Sequential = LST Non-Sequential = SUM] [Switch = none]
d_rd_reqs	The number of requests to perform direct read operations during the interval [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]
d_rds	The number of direct read operations during the interval [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]
d_rdtime	The amount of time in milliseconds spent direct reading a sector during the interval. Not stored by default. [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]
d_wrt_reqs	The number of requests to perform direct write operations during the interval [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]
d_wrts	The number of direct write operations during the interval [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]

d_wrttime	The amount of time in milliseconds spent direct writing a sector during the interval. Not stored by default. [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]
data_wrts	The number of data pages written to disk from the bufferpool during the interval. This includes writes done asynchronously. Not stored by default. [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]
database	The name of the database [Sequential = ID Non-Sequential = ID] [Switch = none]
files_closed	The number of times a file had to be closed to remain under the maxfilop configuration parameter when opening a new file for use with the bufferpool during the interval [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]
hit_ratio	The percentage of logical reads that were satisfied from the bufferpool without having to invoke a read from disk during the interval [Sequential = AVG Non-Sequential = AVG] [Switch = bufferpool]
idx_wrts	The number of index pages written to disk from the bufferpool during the interval. This includes writes done asynchronously. Not stored by default. [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]
Instance	The name of the instance from which data is obtained. Up to 20 characters are displayed. [Sequential = ID Non-Sequential = ID] [Switch = none]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = ID] [Switch = none]
l_data_rds	The number of logical read requests of data pages from the bufferpool during the interval. Not stored by default. [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]
l_idx_rds	The number of logical read requests of index pages from the bufferpool during the interval. Not stored by default. [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]
l_rds	The number of logical read requests of data and index pages from the bufferpool during the interval [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]

new_size	The size in pages the bufferpool will be changed to once the database is restarted [Sequential = LST Non-Sequential = SUM] [Switch = none]
node_num	The node number where this bufferpool resides [Sequential = LST Non-Sequential = ID] [Switch = none]
num_ts	The number of tablespaces using the bufferpool [Sequential = LST Non-Sequential = SUM] [Switch = none]
p_data_rds	The number of physical read requests of data pages from the bufferpool during the interval. This includes reads done asynchronously. Not stored by default. [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]
p_idx_rds	The number of physical read requests of index pages from the bufferpool during the interval. This includes reads done asynchronously. Not stored by default. [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]
p_rds	The number of physical read requests of data and index pages from the bufferpool during the interval. This includes reads done asynchronously. [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]
p_wrts	The number of data and index pages written to disk from the bufferpool during the interval. This includes writes done asynchronously. [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]
phy_pg_maps	The number of physical page maps made during the interval. This statistic is not available for DB2 UDB 9.5 and later. The value is displayed as <N/A>. [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]
rdtime	The amount of time in milliseconds spent reading pages into the bufferpool during the interval. Not stored by default. [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]
remove_pgs_left	The number of pages left to remove from the bufferpool before the bufferpool resize is completed [Sequential = LST Non-Sequential = SUM] [Switch = none]
Sample_End_Time	The actual timestamp of when data collection for the sample completed [Sequential = LST Non-Sequential = ID] [Switch = none]

System	The name of the system where the data is collected. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID] [Switch = none]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID] [Switch = none]
unrd_pre_pgs	The number of prefetched pages that were unread during the interval [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]
vect_pgs	The number of pages read by vectored I/O during the interval [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]
vect_reqs	The number of vectored I/O requests made during the interval [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]
wrttime	The amount of time in milliseconds spent writing pages to disk from the bufferpool during the interval. Not stored by default. [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]

3.3. Database Configuration Statistics

Detailed information about the configuration of DB2 databases is stored within the DB2.Database Config table in the TeamQuest performance database. Information is only collected for databases listed in the Database List setting of the DB2 UDB Agent configuration entry for the instance.

Table Field Hierarchy

Class:	DB2
Subclass:	Database Config
IT Resource Name:	/TeamQuest/System/*systemname*/DB2/*instancename*
TeamQuest Table Name:	DB2.Database Config
Open Table Name:	DB2DBCONFIG
Collection interval:	N/A
Default retention:	1 year
Table type:	Event

Statistic Name	Description
database	The name of the database [Non-Sequential = ID] [Switch = none]
db_alias	The alias used to refer to the database [Non-Sequential = ID] [Switch = none]
Instance	The name of the instance from which data is obtained. Up to 24 characters are displayed. [Non-Sequential = ID] [Switch = none]
parameter	The name of the database manager configuration parameter [Non-Sequential = ID] [Switch = none]
Sample_End_Time	The actual timestamp of when data collection for the sample completed [Non-Sequential = ID] [Switch = none]
System	The name of the system where the data is collected. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Non-Sequential = ID] [Switch = none]

Time	The timestamp of the data sample [Non-Sequential = ID] [Switch = none]
value	The value of the database manager configuration parameter [Non-Sequential = ID] [Switch = none]

3.4. Database Statistics

Performance data relating to each specific DB2 database is stored as parameters in the TeamQuest performance database. The statistics are classified by the hierarchy of key names. A statistic marked with an asterisk (*) is a derived statistic.

Note: *Resource names for database statistics are a concatenation of the instance name and the database name, separated by a period (for example, db2stat1.prod).*

Parameter Hierarchy

Class:	DB2
Subclass:	Database.Agent
IT Resource Name:	/TeamQuest/System/*systemname*/DB2
TeamQuest Table Name:	DB2.Database.Agent
Open Table Name:	DB2DBAGENT
Resource:	database1, database2, ...
Statistic Name:	
CurrentAgents	The current number of subagents for all applications within the database [Sequential = LST Non-Sequential = SUM] [Switch = none] View Report: /report/db2/database/AgentCounts.rpt
MaxAgents	The maximum number of agents for all applications since the database was activated [Sequential = MAX Non-Sequential = SUM] [Switch = statement] View Report: /report/db2/database/AgentCounts.rpt
MaxCoordAgents	The maximum number of coordinating agents working at one time since the database was activated [Sequential = MAX Non-Sequential = SUM] [Switch = none] View Report: /report/db2/database/AgentCounts.rpt

Class:	DB2
Subclass:	Database.Bufferpool Summary
IT Resource Name:	/TeamQuest/System/*systemname*/DB2
TeamQuest Table Name:	DB2.Database.Bufferpool Summary
Open Table Name:	DB2DBBUFFPOOLSUM
Resource:	database1, database2, ...
Statistic Name:	
AsyncDataReads/s	The number of data pages per second read asynchronously into all bufferpools within the database [Sequential = AVG Non-Sequential = SUM] [Switch = bufferpool]
AsyncDataWrites/s	The number of data pages per second written to disk asynchronously from all bufferpools within the database [Sequential = AVG Non-Sequential = SUM] [Switch = bufferpool]
AsyncIndexReads/s	The number of index pages per second read asynchronously into all bufferpools within the database [Sequential = AVG Non-Sequential = SUM] [Switch = bufferpool]
AsyncIndexWrites/s	The number of index pages per second written to disk asynchronously from all bufferpools within the database [Sequential = AVG Non-Sequential = SUM] [Switch = bufferpool]
AsyncReads/s*	The number of data and index pages per second read asynchronously into all bufferpools within the database [Switch = bufferpool] View Report: /report/db2/database/BufferpoolIORates.rpt
AsyncWrites/s*	The number of data and index pages per second written to disk asynchronously from all bufferpools within the database [Switch = bufferpool] View Report: /report/db2/database/BufferpoolIORates.rpt
AvgAsyncDataReads	The average number of data pages read per asynchronous data read request [Sequential = AVG Non-Sequential = AVG] [Switch = bufferpool]
AvgAsyncIndexReads	The average number of index pages read per asynchronous index read request [Sequential = AVG Non-Sequential = AVG] [Switch = bufferpool]

AvgAsyncReadTime	The average time in milliseconds spent reading a page asynchronously into a bufferpool in the database [Sequential = AVG Non-Sequential = AVG] [Switch = bufferpool] View Report: /report/db2/database/BufferpoolTime.rpt
AvgAsyncWriteTime	The average time in milliseconds spent writing a page asynchronously from a bufferpool in the database to disk [Sequential = AVG Non-Sequential = AVG] [Switch = bufferpool] View Report: /report/db2/database/BufferpoolTime.rpt
AvgDirectReads	The average number of sectors that are read per direct read request [Sequential = AVG Non-Sequential = AVG] [Switch = bufferpool]
AvgDirectReadTime	The average time in milliseconds spent direct reading a sector [Sequential = AVG Non-Sequential = AVG] [Switch = bufferpool] View Report: /report/db2/database/BufferpoolTime.rpt
AvgDirectWrites	The average number of sectors that are written per direct write request [Sequential = AVG Non-Sequential = AVG] [Switch = bufferpool]
AvgDirectWriteTime	The average time in milliseconds spend direct writing a sector [Sequential = AVG Non-Sequential = AVG] [Switch = bufferpool] View Report: /report/db2/database/BufferpoolTime.rpt
AvgReadTime	The average time in milliseconds spent reading a page into a bufferpool in the database [Sequential = AVG Non-Sequential = AVG] [Switch = bufferpool] View Report: /report/db2/database/BufferpoolTime.rpt
AvgWriteTime	The average time in milliseconds spent writing a page from a bufferpool in the database to disk [Sequential = AVG Non-Sequential = AVG] [Switch = bufferpool] View Report: /report/db2/database/BufferpoolTime.rpt
DataWrites/s	The number of data pages per second written to disk from all bufferpools within the database. This includes writes done asynchronously. [Sequential = AVG Non-Sequential = SUM] [Switch = bufferpool]

DBFilesClosed/s	The number of times per second a file had to be closed to remain under the maxfilop configuration parameter when opening a new file for use with a bufferpool in the database [Sequential = AVG Non-Sequential = SUM] [Switch = bufferpool] View Report: /report/db2/database/BufferpoolPagingRates.rpt
DirectReads/s	The number of read operations per second that do not use a bufferpool in the database [Sequential = AVG Non-Sequential = SUM] [Switch = bufferpool] View Report: /report/db2/database/BufferpoolIORates.rpt
DirectWrites/s	The number of write operations per second that do not use a bufferpool in the database [Sequential = AVG Non-Sequential = SUM] [Switch = bufferpool] View Report: /report/db2/database/BufferpoolIORates.rpt
HitRatioPct*	The percentage of logical reads that were satisfied from the bufferpools within the database without having to invoke a read from disk [Switch = bufferpool] View Report: /report/db2/database/MemoryHitRatios.rpt
IndexWrites/s	The number of index pages per second written to disk from all bufferpools within the database. This includes writes done asynchronously. [Sequential = AVG Non-Sequential = SUM] [Switch = bufferpool]
LogicalDataReads/s	The number of logical read requests per second of data pages from all the bufferpools within the database [Sequential = AVG Non-Sequential = SUM] [Switch = bufferpool]
LogicalIndexReads/s	The number of logical read requests per second of index pages from all bufferpools within the database [Sequential = AVG Non-Sequential = SUM] [Switch = bufferpool]
LogicalReads/s*	The number of logical read requests per second of data and index pages from all bufferpools within the database [Switch = bufferpool]
LSNCleans/s	The number of times per second a page cleaner was invoked because the logging space used had reached a predefined criterion for the database [Sequential = AVG Non-Sequential = SUM] [Switch = bufferpool] View Report: /report/db2/database/BufferpoolPagingRates.rpt

PhysicalDataReads/s	The number of physical read requests per second of data pages from all the bufferpools within the database. This includes reads done asynchronously. [Sequential = AVG Non-Sequential = SUM] [Switch = bufferpool]
PhysicalIndexReads/s	The number of physical read requests per second of index pages from all bufferpools within the database. This includes reads done asynchronously. [Sequential = AVG Non-Sequential = SUM] [Switch = bufferpool]
PhysicalReads/s*	The number of physical read requests per second of data and index pages from all bufferpools within the database [Switch = bufferpool] View Report: /report/db2/database/BufferpoolIORates.rpt
PhysicalWrites/s*	The number of data and index pages per second written to disk from all bufferpools within the database [Switch = bufferpool] View Report: /report/db2/database/BufferpoolIORates.rpt
PrefetchWaitTime	The time in milliseconds spent by applications waiting for an I/O server (prefetcher) to finish loading pages into a bufferpool in the database [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]
ThresholdCleans/s	The number of times per second a page cleaner was invoked because a bufferpool had reached the dirty page threshold criteria for the database [Sequential = AVG Non-Sequential = SUM] [Switch = bufferpool] View Report: /report/db2/database/BufferpoolPagingRates.rpt
UnreadPrefetch Pages/s	The number of prefetch pages per second that were unread [Sequential = AVG Non-Sequential = SUM] [Switch = bufferpool] View Report: /report/db2/database/BufferpoolPagingRates.rpt
VictimPageCleans/s	The number of times per second a page cleaner was invoked because a synchronous write was needed during the victim replacement for the database [Sequential = AVG Non-Sequential = SUM] [Switch = bufferpool] View Report: /report/db2/database/BufferpoolPagingRates.rpt

Class:	DB2
Subclass:	Database.Catalog Cache
IT Resource Name:	/TeamQuest/System/*systemname*/DB2
TeamQuest Table Name:	DB2.Database.Catalog Cache
Open Table Name:	DB2DBCATALOGCACHE
Resource:	database1, database2, ...
Statistic Name:	
HeapFullOverflows/s	The number of times per second that an insert into the catalog cache failed due to a heap-full condition in the database heap [Sequential = AVG Non-Sequential = SUM] [Switch = none] View Report: /report/db2/database/CacheOverflows.rpt
HitRatioPct*	The percentage of lookups satisfied from the catalog cache without incurring an insert [Switch = none] View Report: /report/db2/database/MemoryHitRatios.rpt
Inserts/s	The number of times per second the system tried to insert table descriptor information into the catalog cache within the database [Sequential = AVG Non-Sequential = SUM] [Switch = none]
Lookups/s	The number of times per second the catalog cache was referenced to obtain table descriptor information within the database [Sequential = AVG Non-Sequential = SUM] [Switch = none]
MaxMemoryUsed	The maximum amount of memory in megabytes used by the catalog cache since the database was activated [Sequential = MAX Non-Sequential = SUM] [Switch = none]
Overflows/s	The number of times per second that an insert into the catalog cache failed due to the catalog cache being full [Sequential = AVG Non-Sequential = SUM] [Switch = none] View Report: /report/db2/database/CacheOverflows.rpt

Class:	DB2
Subclass:	Database.Connection
IT Resource Name:	/TeamQuest/System/*systemname*/DB2
TeamQuest Table Name:	DB2.Database.Connection
Open Table Name:	DB2DBCONN
Resource:	database1, database2, ...
Statistic Name:	
AvgConnections	The average number of applications connected to the database over the interval [Sequential = AVG Non-Sequential = SUM] [Switch = none]
Connections/s	The number of connections per second made to the database [Sequential = AVG Non-Sequential = SUM] [Switch = none] View Report: /report/db2/database/ConnectionRates.rpt
CurrentConnections	The current number of applications connected to the database [Sequential = LST Non-Sequential = SUM] [Switch = none] View Report: /report/db2/database/ConnectionCounts.rpt
Executing	The current number of applications connected to the database that are processing a unit of work [Sequential = LST Non-Sequential = SUM] [Switch = none] View Report: /report/db2/database/ConnectionCounts.rpt
MaxConnections	The maximum number of simultaneous connections to the database since it was activated [Sequential = MAX Non-Sequential = SUM] [Switch = none] View Report: /report/db2/database/ConnectionCounts.rpt
SecConnections/s	The number of connections per second made by a subagent to the database [Sequential = AVG Non-Sequential = SUM] [Switch = none] View Report: /report/db2/database/ConnectionRates.rpt

Class:	DB2
Subclass:	Database.Hash Join
IT Resource Name:	/TeamQuest/System/*systemname*/DB2
TeamQuest Table Name:	DB2.Database.Hash Join
Open Table Name:	DB2DBHASHJOIN
Resource:	database1, database2, ...
Statistic Name:	
HashJoins/s	The number of hash joins executed per second within the database [Sequential = AVG Non-Sequential = SUM] [Switch = none]
Loops/s	The number of times per second a single partition hash join was larger than the available sort heap space in the database [Sequential = AVG Non-Sequential = SUM] [Switch = none]
Overflows/s	The number of times per second that hash join data exceeded the available sort heap space [Sequential = AVG Non-Sequential = SUM] [Switch = none]
SmallOverflows/s	The number of times per second that hash join data exceeded the available sort heap space by less than 10% [Sequential = AVG Non-Sequential = SUM] [Switch = none]

Class:	DB2
Subclass:	Database.Lock
IT Resource Name:	/TeamQuest/System/*systemname*/DB2
TeamQuest Table Name:	DB2.Database.Lock
Open Table Name:	DB2DBLK
Resource:	database1, database2, ...
Statistic Name:	
AvgWaitTime	The average amount of time in milliseconds spent by applications within the database waiting for a lock [Sequential = AVG Non-Sequential = AVG] [Switch = lock] View Report: /report/db2/database/LockTime.rpt
Deadlocks/s	The number of deadlocks per second within the database [Sequential = AVG Non-Sequential = SUM] [Switch = none] View Report: /report/db2/database/LockRates.rpt

Escalations/s	The number of times per second locks were escalated within the database [Sequential = AVG Non-Sequential = SUM] [Switch = none] View Report: /report/db2/database/LockRates.rpt
ExEscalations/s	The number of times per second locks were escalated to exclusive within the database [Sequential = AVG Non-Sequential = SUM] [Switch = none] View Report: /report/db2/database/LockRates.rpt
Held	The current number of locks held by all applications in the database [Sequential = LST Non-Sequential = SUM] [Switch = none] View Report: /report/db2/database/LockCounts.rpt
MemoryUsed	The current amount of lock list memory in megabytes in use within the database [Sequential = LST Non-Sequential = SUM] [Switch = none] View Report: /report/db2/database/MemoryUsage.rpt
Timeouts/s	The number of times per second a lock request timed out within the database [Sequential = AVG Non-Sequential = SUM] [Switch = none] View Report: /report/db2/database/LockRates.rpt
Waiting	The current number of agents waiting on a lock within the database [Sequential = LST Non-Sequential = SUM] [Switch = none] View Report: /report/db2/database/LockCounts.rpt
Waits/s	The number of times per second applications within the database had to wait for a lock [Sequential = AVG Non-Sequential = SUM] [Switch = lock] View Report: /report/db2/database/LockRates.rpt
WaitTime	The amount of time in milliseconds spent by applications within the database waiting for locks [Sequential = SUM Non-Sequential = SUM] [Switch = lock]

Class:	DB2
Subclass:	Database.Log Space
IT Resource Name:	/TeamQuest/System/*systemname*/DB2
TeamQuest Table Name:	DB2.Database.Log Space
Open Table Name:	DB2DBLOGSPACE
Resource:	database1, database2, ...
Statistic Name:	
Available	The current amount of log space in megabytes available within the database [Sequential = LST Non-Sequential = SUM] [Switch = none] View Report: /report/db2/database/LogSpaceUsage.rpt
IndoubtTransactions	The number of outstanding indoubt transactions in the database [Sequential = LST Non-Sequential = SUM] [Switch = none]
MaxSecUsed	The maximum amount of secondary log space in megabytes used since the database was activated [Sequential = MAX Non-Sequential = SUM] [Switch = none] View Report: /report/db2/database/LogSpaceUsage.rpt
MaxUsed	The maximum amount of log space in megabytes used since the database was activated [Sequential = MAX Non-Sequential = SUM] [Switch = none] View Report: /report/db2/database/LogSpaceUsage.rpt
Reads/s	The number of log page reads per second within the database [Sequential = AVG Non-Sequential = SUM] [Switch = none] View Report: /report/db2/database/LogSpaceRates.rpt
SecLogsAllocated	The current number of secondary log files that are being used for the database [Sequential = LST Non-Sequential = SUM] [Switch = none]
Used	The current amount of log space in megabytes used within the database [Sequential = LST Non-Sequential = SUM] [Switch = none] View Report: /report/db2/database/LogSpaceUsage.rpt
Writes/s	The number of log page writes per second within the database [Sequential = AVG Non-Sequential = SUM] [Switch = none] View Report: /report/db2/database/LogSpaceRates.rpt

Class:	DB2
Subclass:	Database.Package Cache
IT Resource Name:	/TeamQuest/System/*systemname*/DB2
TeamQuest Table Name:	DB2.Database.Package Cache
Open Table Name:	DB2DBPACKAGECACHE
Resource:	database1, database2, ...
Statistic Name:	
HitRatioPct*	The percentage of lookups satisfied from the package cache without incurring an insert [Switch = none] View Report: /report/db2/database/MemoryHitRatios.rpt
Inserts/s	The number of times per second a requested section was not available and had to be loaded into the package cache within the database [Sequential = AVG Non-Sequential = SUM] [Switch = none]
Lookups/s	The number of times per second an application looked for a section or package in the package cache within the database [Sequential = AVG Non-Sequential = SUM] [Switch = none]
MaxMemoryUsed	The maximum amount of memory in megabytes used by the package cache since the database was activated [Sequential = MAX Non-Sequential = SUM] [Switch = none] View Report: /report/db2/database/PackageCacheMaxMemory.rpt
Overflows/s	The number of times per second that the package cache overflowed the bounds of its allocated memory within the database [Sequential = AVG Non-Sequential = SUM] [Switch = none] View Report: /report/db2/database/CacheOverflows.rpt
SectionInserts/s	The number of inserts of SQL sections per second by an application from its SQL work area within the database [Sequential = AVG Non-Sequential = SUM] [Switch = none]
SectionLookups/s	The number of lookups of SQL sections per second by an application from its SQL work area within the database [Sequential = AVG Non-Sequential = SUM] [Switch = none]

Class:	DB2
Subclass:	Database.Sample
IT Resource Name:	/TeamQuest/System/*systemname*/DB2
TeamQuest Table Name:	DB2.Database.Sample
Open Table Name:	DB2DBSAMPLE
Resource:	database1, database2, ...
Statistic Name:	
Etime	The amount of time in seconds, elapsed between two samples for this DB2 database. This value may differ from the DB2.Sample..tqdb2p_interval statistic when a database is activated after data collection has begun for this instance of the DB2 UDB Agent. In this case, the value is the difference between the database activation timestamp and the current snapshot timestamp. [Sequential = SUM Non-Sequential = SUM] [Switch = none]

Class:	DB2
Subclass:	Database.Sort
IT Resource Name:	/TeamQuest/System/*systemname*/DB2
TeamQuest Table Name:	DB2.Database.Sort
Open Table Name:	DB2DBSORT
Resource:	database1, database2, ...
Statistic Name:	
AvgSortTime	The average amount of time in milliseconds per sort within the database [Sequential = AVG Non-Sequential = AVG] [Switch = sort] View Report: /report/db2/database/SortTime.rpt
CurrentSorts	The current number of sorts in the database that have sort heap allocated [Sequential = LST Non-Sequential = SUM] [Switch = none] View Report: /report/db2/database/SortCounts.rpt
MaxSharedMemoryUsed	The maximum amount of sort heap memory allocated in megabytes for sorts at one time since the database was activated [Sequential = MAX Non-Sequential = SUM] [Switch = none]

MemoryUsed	The current amount of sort heap memory allocated in megabytes for all sorts in the database [Sequential = LST Non-Sequential = SUM] [Switch = none] View Report: /report/db2/database/MemoryUsage.rpt
Overflows/s	The number of sorts per second that ran out of sort heap and may have required disk space for temporary storage within the database [Sequential = AVG Non-Sequential = SUM] [Switch = sort] View Report: /report/db2/database/SortRates.rpt
SharedMemoryUsed	The current amount of shared sort heap memory allocated in megabytes for all sorts in the database [Sequential = LST Non-Sequential = SUM] [Switch = none]
Sorts/s	The number of sorts per second that have been executed within the database [Sequential = AVG Non-Sequential = SUM] [Switch = sort] View Report: /report/db2/database/SortRates.rpt
SortTime	The amount of time in milliseconds spent sorting within the database [Sequential = SUM Non-Sequential = SUM] [Switch = sort]

Class:	DB2
Subclass:	Database.Statement Summary
IT Resource Name:	/TeamQuest/System/*systemname*/DB2
TeamQuest Table Name:	DB2.Database.Statement Summary
Open Table Name:	DB2DBSTMTSUM
Resource:	database1, database2, ...
Statistic Name:	
Binds/s	The number of binds and pre-compiles per second attempted within the database [Sequential = AVG Non-Sequential = SUM] [Switch = none]
CommitSQLs/s	The number of commit SQL statements per second attempted within the database [Sequential = AVG Non-Sequential = SUM] [Switch = none]

CompletedSQLs/s*	The number of dynamic and static SQL statements, minus the number of failed SQL statements, that occurred per second within the database [Switch = none] View Report: /report/db2/database/SQLRates.rpt
DDLSQLs/s	The number of data definition language (DDL) SQL statements per second executed within the database [Sequential = AVG Non-Sequential = SUM] [Switch = none]
DynamicSQLs/s	The number of dynamic SQL statements per second attempted within the database [Sequential = AVG Non-Sequential = SUM] [Switch = none]
ExecutionTime	The amount of time in milliseconds spent executing statements within the database [Sequential = LST Non-Sequential = SUM] [Switch = statement]
FailedSQLs/s	The number of failed SQL statements per second within the database [Sequential = AVG Non-Sequential = SUM] [Switch = none]
IntCommitSQLs/s	The number of commit SQL statements per second initiated internally by the database manager within the database [Sequential = AVG Non-Sequential = SUM] [Switch = none]
IntDLRollbackSQLs/s	The number of rollback SQL statements per second due to deadlocks initiated internally by the database manager within the database [Sequential = AVG Non-Sequential = SUM] [Switch = none]
IntRebinds/s	The number of rebinds per second initiated internally by the database manager within the database [Sequential = AVG Non-Sequential = SUM] [Switch = none]
IntRollbackSQLs/s	The number of rollback SQL statements per second initiated internally by the database manager within the database [Sequential = AVG Non-Sequential = SUM] [Switch = none]
RollbackSQLs/s	The number of rollback SQL statements per second attempted within the database [Sequential = AVG Non-Sequential = SUM] [Switch = none]
SelectSQLs/s	The number of select SQL statements per second executed within the database [Sequential = AVG Non-Sequential = SUM] [Switch = none]

StaticSQLs/s	The number of static SQL statements per second attempted within the database [Sequential = AVG Non-Sequential = SUM] [Switch = none]
TotalSQLs/s*	The number of dynamic and static SQL statements per second attempted within the database [Switch = none] View Report: /report/db2/database/SQLRates.rpt
UIDSQLs/s	The number of update, insert, or delete SQL statements per second executed within the database [Sequential = AVG Non-Sequential = SUM] [Switch = none]
UnitsOfWork/s*	The number of units of work per second (such as commits, rollbacks, internal commits, and internal rollbacks) generated within the database [Switch = none] View Report: /report/db2/database/SQLRates.rpt

Class:	DB2
Subclass:	Database.Table Summary
IT Resource Name:	/TeamQuest/System/*systemname*/DB2
TeamQuest Table Name:	DB2.Database.Table Summary
Open Table Name:	DB2DBTABSUM
Resource:	database1, database2, ...
Statistic Name:	
IntRowsDeleted/s	The number of row deletions per second initiated internally within the database [Sequential = AVG Non-Sequential = SUM] [Switch = none]
IntRowsInserted/s	The number of row inserts per second initiated internally within the database [Sequential = AVG Non-Sequential = SUM] [Switch = none]
IntRowsUID/s*	The number of rows updated, inserted, and deleted per second that were initiated internally within the database [Switch = none]
IntRowsUpdated/s	The number of row updates per second initiated internally within the database [Sequential = AVG Non-Sequential = SUM] [Switch = none]
RowsDeleted/s	The number of row deletions per second attempted within the database [Sequential = AVG Non-Sequential = SUM] [Switch = none]

RowsInserted/s	The number of row insertions per second attempted within the database [Sequential = AVG Non-Sequential = SUM] [Switch = none]
RowsRead/s	The number of row reads per second attempted within the database [Sequential = AVG Non-Sequential = SUM] [Switch = none] View Report: /report/db2/database/TableRates.rpt
RowsSelected/s	The number of row selects per second attempted within the database [Sequential = AVG Non-Sequential = SUM] [Switch = none]
RowsUID/s*	The number of rows updated, inserted, and deleted per second within the database [Switch = none] View Report: /report/db2/database/TableRates.rpt
RowsUpdated/s	The number of row updates per second attempted within the database [Sequential = AVG Non-Sequential = SUM] [Switch = none]

Class:	DB2
Subclass:	Database.Workspace
IT Resource Name:	/TeamQuest/System/*systemname*/DB2
TeamQuest Table Name:	DB2.Database.Workspace
Open Table Name:	DB2DBWORKSPACE
Resource:	database1, database2, ...
Statistic Name:	
MaxPrivateMemoryUsed	The maximum amount of memory in megabytes used at one time by private workspaces in the database. This statistic is not available for DB2 UDB 9.5 and later. The value is displayed as <N/A>. [Sequential = MAX Non-Sequential = SUM] [Switch = none]
MaxSharedMemoryUsed	The maximum amount of memory in megabytes used at one time by shared workspaces in the database. This statistic is not available for DB2 UDB 9.5 and later. The value is displayed as <N/A>. [Sequential = MAX Non-Sequential = SUM] [Switch = none]

PrivateInserts/s	The number of times per second an insert of SQL sections by applications in the database occurred in private workspaces. This statistic is not available for DB2 UDB 9.5 and later. The value is displayed as <N/A>. [Sequential = AVG Non-Sequential = SUM] [Switch = none]
PrivateLookups/s	The number of times per second a lookup of SQL sections by applications in the database occurred in private workspaces. This statistic is not available for DB2 UDB 9.5 and later. The value is displayed as <N/A>. [Sequential = AVG Non-Sequential = SUM] [Switch = none]
PrivateOverflows/s	The number of times per second private workspaces in the database overflowed the bounds of their allocated memory. This statistic is not available for DB2 UDB 9.5 and later. The value is displayed as <N/A>. [Sequential = AVG Non-Sequential = SUM] [Switch = none]
SharedInserts/s	The number of times per second an insert of SQL sections by applications in the database occurred in shared workspaces. This statistic is not available for DB2 UDB 9.5 and later. The value is displayed as <N/A>. [Sequential = AVG Non-Sequential = SUM] [Switch = none]
SharedLookups/s	The number of times per second a lookup of SQL sections by applications in the database occurred in shared workspaces. This statistic is not available for DB2 UDB 9.5 and later. The value is displayed as <N/A>. [Sequential = AVG Non-Sequential = SUM] [Switch = none]
SharedOverflows/s	The number of times per second shared workspaces in the database overflowed the bounds of their allocated memory. This statistic is not available for DB2 UDB 9.5 and later. The value is displayed as <N/A>. [Sequential = AVG Non-Sequential = SUM] [Switch = none]

3.5. Database Status Statistics

Detailed information about the status of DB2 databases is stored within the DB2.Database Status table in the TeamQuest performance database.

Table Field Hierarchy

Class:	DB2
Subclass:	Database Status
IT Resource Name:	/TeamQuest/System/*systemname*/DB2/*instancename*
TeamQuest Table Name:	DB2.Database Status
Open Table Name:	DB2DBSTATUS
Collection interval:	1 minute (default)
Default retention:	1 day
Table type:	Performance

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = ID Non-Sequential = ID] [Switch = none]
backup_pend	Indicates whether a full backup must be performed on the database before accessing it. This field will only have a value if the appropriate database alias has been specified in the Database List setting of the DB2 UDB Agent configuration entry for the instance. [Sequential = LST Non-Sequential = ID] [Switch = none]
cat_node	The node identifier where the database catalog tables are stored [Sequential = LST Non-Sequential = ID] [Switch = none]
cat_node_name	The network name of the catalog node [Sequential = LST Non-Sequential = ID] [Switch = none]
database	The name of the database [Sequential = ID Non-Sequential = ID] [Switch = none]
database_path	The full path of the location where the database is stored [Sequential = LST Non-Sequential = ID] [Switch = none]
db_alias	The alias used to refer to the database [Sequential = LST Non-Sequential = ID] [Switch = none]

db_consist
: Indicates whether the database is in a consistent state. This field will only have a value if the appropriate database alias has been specified in the Database List setting of the DB2 UDB Agent configuration entry for the instance.
[Sequential = LST Non-Sequential = ID]
[Switch = none]

db_loc
: The location of the database in relation to the DB2 UDB Agent, represented by one of the following one-character codes:

  L = Local
  R = Remote

  [Sequential = LST Non-Sequential = ID]
  [Switch = none]

Instance
: The name of the instance from which data is obtained. Up to 24 characters are displayed.
[Sequential = ID Non-Sequential = ID]
[Switch = none]

Interval
: The expected sampling interval in seconds
[Sequential = SUM Non-Sequential = ID]
[Switch = none]

last_backup
: The timestamp of when the last backup occurred for the database. A value of <N/A> will be stored if no backups have occurred.
[Sequential = LST Non-Sequential = ID]
[Switch = none]

log_head
: The name of the log file that is currently active. This field will only have a value if the appropriate database alias has been specified in the Database List setting of the DB2 UDB Agent configuration entry for the instance.
[Sequential = LST Non-Sequential = ID]
[Switch = none]

log_path
: The current path being used for logging purposes. This field will only have a value if the appropriate database alias has been specified in the Database List setting of the DB2 UDB Agent configuration entry for the instance.
[Sequential = LST Non-Sequential = ID]
[Switch = none]

restore_pend
: Indicates whether a restore pending status exists in the database. This field will only have a value if the appropriate database alias has been specified in the Database List setting of the DB2 UDB Agent configuration entry for the instance.
[Sequential = LST Non-Sequential = ID]
[Switch = none]

roll_pend	Indicates whether a database or tablespace rollforward is needed. Otherwise, it will indicate that no rollforward recovery is required. This field will only have a value if the appropriate database alias has been specified in the Database List setting of the DB2 UDB Agent configuration entry for the instance. [Sequential = LST Non-Sequential = ID] [Switch = none]
Sample_End_Time	The actual timestamp of when data collection for the sample completed [Sequential = LST Non-Sequential = ID] [Switch = none]
srvr_platform	The operating system on which the database server is running [Sequential = LST Non-Sequential = ID] [Switch = none]
start_time	The timestamp of when the database was activated [Sequential = LST Non-Sequential = ID] [Switch = none]
status	The current status of the database. A value is always present while the database is active. If the database is inactive and a valid database alias has been specified in the Database List setting of the DB2 UDB Agent configuration entry for the instance, a value of Inactive is stored. [Sequential = LST Non-Sequential = ID] [Switch = none]
System	The name of the system where the data is collected. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID] [Switch = none]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID] [Switch = none]

3.6. Instance Configuration Statistics

Detailed information about the configuration of the DB2 instance is stored within the DB2.Instance Config table in the TeamQuest performance database.

Table Field Hierarchy

Class:	DB2
Subclass:	Instance Config
IT Resource Name:	/TeamQuest/System/*systemname*/DB2/*instancename*
TeamQuest Table Name:	DB2.Instance Config
Open Table Name:	DB2INSTANCECONFIG
Collection interval:	N/A
Default retention:	1 year
Table type:	Event

Statistic Name	Description
Instance	The name of the instance from which data is obtained. Up to 24 characters are displayed. [Non-Sequential = ID] [Switch = none]
parameter	The name of the database manager configuration parameter [Non-Sequential = ID] [Switch = none]
Sample_End_Time	The actual timestamp of when data collection for the sample completed [Non-Sequential = ID] [Switch = none]
System	The name of the system where the data is collected. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Non-Sequential = ID] [Switch = none]
Time	The timestamp of the data sample [Non-Sequential = ID] [Switch = none]
value	The value of the database manager configuration parameter [Non-Sequential = ID] [Switch = none]

3.7. Instance Statistics

Data pertaining to the overall DB2 UDB instance is stored as parameters in the TeamQuest performance database. The statistics are classified by the hierarchy of key names. A statistic marked with an asterisk (*) is a derived statistic.

Parameter Hierarchy

Class:	DB2
Subclass:	Instance.Agent
IT Resource Name:	/TeamQuest/System/*systemname*/DB2/*instancename*
TeamQuest Table Name:	DB2.Instance.Agent
Open Table Name:	DB2INSTANCEAGENT
Resource:	instance1, instance2, ...
Statistic Name:	
Assigns/s	The number of agents assigned per second from the agent pool [Sequential = AVG Non-Sequential = SUM] [Switch = none] View Report: /report/db2/instance/AgentRates.rpt
Creates/s	The number of agents created per second because the agent pool was empty. This value includes the number of agents started when the instance began. [Sequential = AVG Non-Sequential = SUM] [Switch = none] View Report: /report/db2/instance/AgentRates.rpt
Idle	The current number of agents (coordinator agents and subagents) that are unassigned to an application [Sequential = LST Non-Sequential = SUM] [Switch = none] View Report: /report/db2/instance/AgentCounts.rpt
MaxCoordAgents	The maximum number of coordinating agents working at one time since the instance started [Sequential = MAX Non-Sequential = SUM] [Switch = none]
MaxRegistered	The maximum number of agents registered at one time since the instance started [Sequential = MAX Non-Sequential = SUM] [Switch = none]
MaxWaiting	The maximum number of agents waiting for a token at one time since the instance started. This statistic is not available for DB2 UDB 9.5 and later. The value is displayed as <N/A>. [Sequential = MAX Non-Sequential = SUM] [Switch = none]

Overflows/s	The number of times per second a request to create a new agent was received after the maxagents configuration parameter had already been reached. This statistic is not available for DB2 UDB 9.5 and later. The value is displayed as <N/A>. [Sequential = AVG Non-Sequential = SUM] [Switch = none] View Report: /report/db2/instance/AgentRates.rpt
Registered	The current number of agents (coordinator agents and subagents) registered for the instance [Sequential = LST Non-Sequential = SUM] [Switch = none] View Report: /report/db2/instance/AgentCounts.rpt
Steals/s	The number of times per second an agent was stolen from an application [Sequential = AVG Non-Sequential = SUM] [Switch = none] View Report: /report/db2/instance/AgentRates.rpt
Waiting	The current number of agents (coordinator agents and subagents) waiting for a token. This statistic is not available for DB2 UDB 9.5 and later. The value is displayed as <N/A>. [Sequential = LST Non-Sequential = SUM] [Switch = none] View Report: /report/db2/instance/AgentCounts.rpt

Class:	DB2
Subclass:	Instance.Connection
IT Resource Name:	/TeamQuest/System/*systemname*/DB2/*instancename*
TeamQuest Table Name:	DB2.Instance.Connection
Open Table Name:	DB2INSTANCECONN
Resource:	instance1, instance2, ...
Statistic Name:	
AvgConnections	The average number of connections to the instance from local and remote clients during the interval [Sequential = AVG Non-Sequential = SUM] [Switch = none]
Local	The current number of connections to the instance from local clients [Sequential = LST Non-Sequential = SUM] [Switch = none] View Report: /report/db2/instance/ConnectionCounts.rpt

LocalDBsWithCons	The current number of local databases with applications connected [Sequential = LST Non-Sequential = SUM] [Switch = none]
LocalExec	The current number of connections to the instance from local clients that are processing a unit of work [Sequential = LST Non-Sequential = SUM] [Switch = none] View Report: /report/db2/instance/ConnectionCounts.rpt
Remote	The current number of connections to the instance from remote clients [Sequential = LST Non-Sequential = SUM] [Switch = none] View Report: /report/db2/instance/ConnectionCounts.rpt
RemoteExec	The current number of connections to the instance from remote clients that are processing a unit of work [Sequential = LST Non-Sequential = SUM] [Switch = none] View Report: /report/db2/instance/ConnectionCounts.rpt

Class:	DB2
Subclass:	Instance.Gateway
IT Resource Name:	/TeamQuest/System/*systemname*/DB2/*instancename*
TeamQuest Table Name:	DB2.Instance.Gateway
Open Table Name:	DB2INSTANCEGATEWAY
Resource:	instance1, instance2, ...
Statistic Name:	
AgentSteals/s	The number of times per second that an agent from the agents pool was primed with a connection and was stolen for use with a different Distributed Relational Database Architecture (DRDA) database [Sequential = AVG Non-Sequential = SUM] [Switch = none] View Report: /report/db2/instance/GatewayRates.rpt
Connections/s	The number of connections per second attempted from the DB2 Connect gateway [Sequential = AVG Non-Sequential = SUM] [Switch = none] View Report: /report/db2/instance/GatewayRates.rpt

ConsWaitingOnClient	The current number of connections to host databases being handled by the DB2 Connect gateway that are waiting for the client to send a request [Sequential = LST Non-Sequential = SUM] [Switch = none] View Report: /report/db2/instance/GatewayCounts.rpt
ConsWaitingOnHost	The current number of connections to host databases being handled by the DB2 Connect gateway that are waiting for a reply from the host [Sequential = LST Non-Sequential = SUM] [Switch = none] View Report: /report/db2/instance/GatewayCounts.rpt
CurrentConnections	The current number of connections to host databases being handled by the DB2 Connect gateway [Sequential = LST Non-Sequential = SUM] [Switch = none] View Report: /report/db2/instance/GatewayCounts.rpt

Class:	DB2
Subclass:	Instance.Hash Join
IT Resource Name:	/TeamQuest/System/*systemname*/DB2/*instancename*
TeamQuest Table Name:	DB2.Instance.Hash Join
Open Table Name:	DB2INSTANCEHASHJOIN
Resource:	instance1, instance2, ...
Statistic Name:	
Overflows/s	The number of times per second a hash join heap request was limited due to concurrent use of the shared or private sort heap space [Sequential = AVG Non-Sequential = SUM] [Switch = none]

Class:	DB2
Subclass:	Instance.Memory
IT Resource Name:	/TeamQuest/System/*systemname*/DB2/*instancename*
TeamQuest Table Name:	DB2.Instance.Memory
Open Table Name:	DB2INSTANCEMEM
Resource:	instance1, instance2, ...
Statistic Name:	
PrivateMemCommitted	The current amount of private memory committed in megabytes [Sequential = LST Non-Sequential = SUM] [Switch = none]

Class:	DB2
Subclass:	Instance.Sort
IT Resource Name:	/TeamQuest/System/*systemname*/DB2/*instancename*
TeamQuest Table Name:	DB2.Instance.Sort
Open Table Name:	DB2INSTANCESORT
Resource:	instance1, instance2, ...
Statistic Name:	
MaxMemoryUsed	The maximum amount of sort heap memory allocated in megabytes for sorts at one time since the instance started [Sequential = MAX Non-Sequential = SUM] [Switch = none]
MemoryUsed	The current amount of sort heap memory allocated in megabytes for all sorts in the instance [Sequential = LST Non-Sequential = SUM] [Switch = none] View Report: /report/db2/instance/SortMemory.rpt
Overflows/s	The number of sorts per second that have requested heaps after the sort heap threshold has been reached [Sequential = AVG Non-Sequential = SUM] [Switch = sort] View Report: /report/db2/instance/SortRates.rpt
PipedAccepts/s	The number of piped sorts per second that have been accepted [Sequential = AVG Non-Sequential = SUM] [Switch = none] View Report: /report/db2/instance/SortRates.rpt
PipedRequests/s	The number of piped sorts per second that have been requested [Sequential = AVG Non-Sequential = SUM] [Switch = none] View Report: /report/db2/instance/SortRates.rpt

Class:	DB2
Subclass:	Sample
IT Resource Name:	/TeamQuest/System/*systemname*/DB2/*instancename*
TeamQuest Table Name:	DB2.Sample
Open Table Name:	DB2SAMPLE
Resource:	instance1, instance2, ...
Statistic Name:	
tqdb2p_end_time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = SUM] [Switch = none]
tqdb2p_interval	The amount of time in seconds elapsed between two samples of this instance of the DB2 UDB Agent [Sequential = SUM Non-Sequential = SUM] [Switch = none]

3.8. Instance Status Statistics

Detailed information about the status of the DB2 instance is stored within the DB2.Instance Status table in the TeamQuest performance database.

Table Field Hierarchy

Class:	DB2
Subclass:	Instance Status
IT Resource Name:	/TeamQuest/System/*systemname*/DB2/*instancename*
TeamQuest Table Name:	DB2.Instance Status
Open Table Name:	DB2INSTANCESTATUS
Collection interval:	1 minute (default)
Default retention:	1 day
Table type:	Performance

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = ID] [Switch = none]
Instance	The name of the instance from which data is obtained. Up to 24 characters are displayed. [Sequential = ID Non-Sequential = ID] [Switch = none]

Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = ID] [Switch = none]
node_num	The node number to which the DB2 UDB Agent is connected [Sequential = LST Non-Sequential = ID] [Switch = none]
product_name	The detailed version of the DB2 instance [Sequential = LST Non-Sequential = ID] [Switch = none]
Sample_End_Time	The actual timestamp of when data collection for the sample completed [Sequential = LST Non-Sequential = ID] [Switch = none]
service_level	The current corrective service level of the DB2 instance [Sequential = LST Non-Sequential = ID] [Switch = none]
srvr_instance	The name of the instance as reported by the database manager being monitored [Sequential = LST Non-Sequential = ID] [Switch = none]
srvr_node	The name of the system on which the database manager being monitored resides [Sequential = LST Non-Sequential = ID] [Switch = none]
srvr_prdid	The product and version of the database manager. The string is in the form SQL*VVRRM*, where *VV* is a 2-digit version number, *RR* is a 2-digit release number, and *M* is a 1-digit modification level. [Sequential = LST Non-Sequential = ID] [Switch = none]
srvr_type	The type of database manager [Sequential = LST Non-Sequential = ID] [Switch = none]
srvr_tz_disp	The number of seconds that the local time zone of the database manager is displaced from Greenwich mean time (GMT) [Sequential = LST, Non-Sequential = ID] [Switch = none]
srvr_version	The version of the database manager [Sequential = LST Non-Sequential = ID] [Switch = none]
start_time	The timestamp of when the database manager was started [Sequential = LST Non-Sequential = ID] [Switch = none]
status	The status of the database manager. A value of Inactive will be stored if the agent cannot attach to the instance. Otherwise, a value of Active will be stored. [Sequential = LST Non-Sequential = ID] [Switch = none]

System	The name of the system where the data is collected. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID] [Switch = none]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID] [Switch = none]

3.9. Table Statistics

Detailed information about the tables within each DB2 database is stored within the DB2.Table Detail table in the TeamQuest performance database. To obtain this information, the table DB2 monitor switch must be enabled within the DB2 Switches settings of the DB2 UDB Agent configuration entry for the instance. In addition, data for tables will only be collected for the databases listed in the Database List setting of the configuration entry. Records are only stored for those tables that were accessed within the interval.

Table Field Hierarchy

Class:	DB2
Subclass:	Table Detail
IT Resource Name:	/TeamQuest/System/*systemname*/DB2/*instancename*
TeamQuest Table Name:	DB2.Table Detail
Open Table Name:	DB2TABDETAIL
Collection interval:	N/A
Default retention:	1 month
Table type:	Event

Statistic Name	**Description**
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Non-Sequential = ID] [Switch = none]
database	The name of the database [Non-Sequential = ID] [Switch = table]
Instance	The name of the instance from which data is obtained. Up to 24 characters are displayed. [Non-Sequential = ID] [Switch = none]

Interval	The expected sampling interval in seconds [Non-Sequential = ID] [Switch = none]
overflows	The number of accesses (reads and writes) to overflowed rows of the table during the interval [Non-Sequential = SUM] [Switch = table]
reorgs	The number of page reorganizations executed for the table during the interval [Non-Sequential = SUM] [Switch = table]
rows_read	The number of rows read from the table during the interval. This value includes the number of accesses to overflowed rows. [Non-Sequential = SUM] [Switch = table]
rows_written	The number of rows written to the table during the interval [Non-Sequential = SUM] [Switch = table]
Sample_End_Time	The actual timestamp of when data collection for the sample completed [Non-Sequential = ID] [Switch = none]
schema	The schema of the table [Non-Sequential = ID] [Switch = table]
System	The name of the system where the data is collected. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Non-Sequential = ID] [Switch = none]
table_name	The name of the table [Non-Sequential = ID] [Switch = table]
table_type	The type of table, represented by one of the following one-character codes: C = Catalog D = Dropped R = Reorganization T = Temp [Non-Sequential = ID] [Switch = table]
Time	The timestamp of the data sample [Non-Sequential = ID] [Switch = none]

3.10. Tablespace Statistics

Detailed information about the tablespaces within each DB2 database is stored within the DB2.Tablespace Detail table in the TeamQuest performance database. To obtain this information, the bufferpool DB2 monitor switch must be enabled within the DB2 UDB Agent configuration entry for the instance. In addition, tablespace information will only be collected for the databases listed in the Database List setting of the configuration entry.

Table Field Hierarchy

Class:	DB2
Subclass:	Tablespace Detail
IT Resource Name:	/TeamQuest/System/*systemname*/DB2/*instancename*
TeamQuest Table Name:	DB2.Tablespace Detail
Open Table Name:	DB2TABSPACEDETAIL
Collection interval:	1 minute (default)
Default retention:	1 day
Table type:	Performance

Statistic Name	Description
a_data_rd_reqs	The number of asynchronous data read requests from the tablespace during the interval [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]
a_data_rds	The number of data pages read asynchronously from the tablespace during the interval. Not stored by default. [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]
a_data_wrts	The number of data pages written asynchronously to the tablespace during the interval. Not stored by default. [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]
a_idx_rd_reqs	The number of asynchronous index read requests from the tablespace during the interval [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]
a_idx_rds	The number of index pages read asynchronously from the tablespace during the interval. Not stored by default. [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]
a_idx_wrts	The number of index pages written asynchronously to the tablespace during the interval. Not stored by default. [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]

a_rds	The number of data and index pages read asynchronously from the tablespace during the interval [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]
a_rdtime	The amount of time in milliseconds spent reading pages asynchronously from the tablespace during the interval. Not stored by default. [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]
a_wrts	The number of data and index pages written asynchronously to the tablespace during the interval [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]
a_wrttime	The amount of time in milliseconds spent writing pages asynchronously to the tablespace during the interval. Not stored by default. [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = ID] [Switch = none]
avg_a_data_rds	The average number of data pages read per asynchronous data read request during the interval [Sequential = AVG Non-Sequential = AVG] [Switch = bufferpool]
avg_a_idx_rds	The average number of index pages read per asynchronous index read request during the interval [Sequential = AVG Non-Sequential = AVG] [Switch = bufferpool]
avg_a_rdtime	The average time in milliseconds spent reading a page asynchronously from the tablespace during the interval [Sequential = AVG Non-Sequential = AVG] [Switch = bufferpool]
avg_a_wrttime	The average time in milliseconds spent writing a page asynchronously to the tablespace during the interval [Sequential = AVG Non-Sequential = AVG] [Switch = bufferpool]
avg_d_rds	The average number of sectors that are read per direct read request during the interval [Sequential = AVG Non-Sequential = AVG] [Switch = bufferpool]

avg_d_rdtime
: The average time in milliseconds spent direct reading a sector from the tablespace during the interval
[Sequential = AVG Non-Sequential = AVG]
[Switch = bufferpool]

avg_d_wrts
: The average number of sectors that are written per direct write request during the interval
[Sequential = AVG Non-Sequential = AVG]
[Switch = bufferpool]

avg_d_wrttime
: The average time in milliseconds spent direct writing a sector to the tablespace during the interval
[Sequential = AVG Non-Sequential = AVG]
[Switch = bufferpool]

avg_rdtime
: The average time in milliseconds spent reading a page from the tablespace during the interval
[Sequential = AVG Non-Sequential = AVG]
[Switch = bufferpool]

avg_wrttime
: The average time in milliseconds spent writing a page to the tablespace during the interval
[Sequential = AVG Non-Sequential = AVG]
[Switch = bufferpool]

content
: The type of content in the tablespace, represented by one of the following one-character codes:

  A = Any
  L = Long
  S = System Temporary
  U = User Temporary

  [Sequential = ID Non-Sequential = ID]
  [Switch = none]

curr_pool_id
: The identifier for the bufferpool currently being used by the tablespace
[Sequential = LST Non-Sequential = ID]
[Switch = none]

d_rd_reqs
: The number of requests to perform direct read operations during the interval
[Sequential = SUM Non-Sequential = SUM]
[Switch = bufferpool]

d_rds
: The number of read operations that do not use a bufferpool during the interval
[Sequential = SUM Non-Sequential = SUM]
[Switch = bufferpool]

d_rdtime
: The amount of time in milliseconds spent direct reading a sector from the tablespace during the interval. Not stored by default.
[Sequential = SUM Non-Sequential = SUM]
[Switch = bufferpool]

d_wrt_reqs	The number of requests to perform direct write operations during the interval [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]
d_wrts	The number of write operations that do not use a bufferpool during the interval [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]
d_wrttime	The amount of time in milliseconds spent direct writing a sector to the tablespace during the interval. Not stored by default. [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]
data_wrts	The number of data pages written to the tablespace during the interval. Not stored by default. [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]
database	The name of the database [Sequential = ID Non-Sequential = ID] [Switch = none]
extent_size	The extent size in pages used by the tablespace [Sequential = ID Non-Sequential = ID] [Switch = none]
files_closed	The number of times a file had to be closed to remain under the maxfilop configuration parameter when opening a new file for use from the tablespace during the interval [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]
free_pgs	The number of pages currently free in the tablespace. This value is always <N/A> for system-managed space (SMS) tablespaces. [Sequential = LST Non-Sequential = SUM] [Switch = none]
hit_ratio	The percentage of logical reads that were satisfied for the tablespace without having to invoke a read from disk during the interval [Sequential = AVG Non-Sequential = AVG] [Switch = bufferpool]
idx_wrts	The number of index pages written to the tablespace during the interval. Not stored by default. [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]
Instance	The name of the instance from which data is obtained. Up to 24 characters are displayed. [Sequential = ID Non-Sequential = ID] [Switch = none]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = ID] [Switch = none]

l_data_rds	The number of logical read requests of data pages from the tablespace during the interval. Not stored by default. [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]
l_idx_rds	The number of logical read requests of index pages from the tablespace during the interval. Not stored by default. [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]
l_rds	The number of logical read requests of data and index pages from the tablespace during the interval [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]
min_recovery	The timestamp of the earliest point in time to which a tablespace can be rolled forward. This value is not stored by default. [Sequential = LST Non-Sequential = ID] [Switch = none]
next_pool_id	The identifier for the bufferpool that will be used at the next database startup [Sequential = LST Non-Sequential = ID] [Switch = none]
num_containers	The number of containers in the tablespace. This value is not stored by default. [Sequential = LST Non-Sequential = SUM] [Switch = none]
num_quiescers	The number of users quiescing the tablespace. This value is not stored by default. [Sequential = LST Non-Sequential = SUM] [Switch = none]
p_data_rds	The number of physical read requests of data pages from the tablespace during the interval. Not stored by default. [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]
p_idx_rds	The number of physical read requests of index pages from the tablespace during the interval. Not stored by default. [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]
p_rds	The number of physical read requests of data and index pages from the tablespace during the interval. This includes reads done asynchronously. [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]
p_wrts	The number of data and index pages written to the tablespace during the interval. This includes writes done asynchronously. [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]

page_hwm	The page in the tablespace that is holding the current high water mark. Essentially, this represents the page number of the first free extent following the last allocated extent of the tablespace. This value is always <N/A> for system-managed space (SMS) tablespaces. [Sequential = LST Non-Sequential = SUM] [Switch = none]
page_size	The page size in bytes used by the tablespace [Sequential = ID Non-Sequential = ID] [Switch = none]
pend_free_pgs	The number of pages in the tablespace that would become free if all pending transactions are committed or rolled back and new space is requested for an object. This value is always <N/A> for system-managed space (SMS) tablespaces. [Sequential = LST Non-Sequential = SUM] [Switch = none]
prefetch_size	The maximum number of pages the prefetcher retrieved from disk at a time for this tablespace [Sequential = LST Non-Sequential = ID] [Switch = none]
rdtime	The amount of time in milliseconds spent reading pages from the tablespace during the interval. This value is not stored by default. [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]
rebal_last_moved	The last extent moved by the rebalancer. This value is always <N/A> for system-managed space (SMS) tablespaces. This value is not stored by default. [Sequential = LST Non-Sequential = ID] [Switch = none]
rebal_mode	The current state of rebalancing for the tablespace, represented by one of the following one-character codes: N = No rebalancing F = Forward R = Reverse U = User Temporary This value is always <N/A> for system-managed space (SMS) tablespaces. [Sequential = LST Non-Sequential = ID] [Switch = none]
rebal_priority	The priority at which the rebalancer is running in the database. This value is always <N/A> for system-managed space (SMS) tablespaces. This value is not stored by default. [Sequential = LST Non-Sequential = ID] [Switch = none]

rebal_processed	The number of extents already moved by the rebalancer since it started or restarted. This value is always <N/A> for system-managed space (SMS) tablespaces. This value is not stored by default. [Sequential = LST Non-Sequential = SUM] [Switch = none]
rebal_remaining	The number of extents to be moved by the rebalancer. This value is always <N/A> for system-managed space (SMS) tablespaces. This value is not stored by default. [Sequential = LST Non-Sequential = SUM] [Switch = none]
rebal_restart	The timestamp of when a rebalancer was restarted after being paused or stopped. This value is always <N/A> for system-managed space (SMS) tablespaces. This value is not stored by default. [Sequential = LST Non-Sequential = ID] [Switch = none]
rebal_start	The timestamp of when a rebalancer was initially started. This value is always <N/A> for system-managed space (SMS) tablespaces. This value is not stored by default. [Sequential = LST Non-Sequential = ID] [Switch = none]
Sample_End_Time	The actual timestamp of when data collection for the sample completed [Sequential = LST Non-Sequential = ID] [Switch = none]
System	The name of the system where the data is collected. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID] [Switch = none]
tablespace_name	The name of the tablespace [Sequential = ID Non-Sequential = ID] [Switch = none]
tablespace_state	The current state of the tablespace [Sequential = LST Non-Sequential = ID] [Switch = none]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID] [Switch = none]
total_pgs	The total number of pages in the tablespace. The bufferpool switch is not needed to collect this information on DMS tablespaces. [Sequential = LST Non-Sequential = SUM] [Switch = bufferpool]
ts_id	The unique identifier for the tablespace within the database [Sequential = ID Non-Sequential = ID] [Switch = none]

ts_type	The type of tablespace, represented by one of the following one-character codes: S = System Managed D = Database Managed [Sequential = ID Non-Sequential = ID] [Switch = none]
unrd_pre_pgs	The number of prefetched pages that were unread during the interval [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]
usable_pgs	The total number of pages in the tablespace minus overhead pages. The bufferpool switch is not needed to collect this information on DMS tablespaces. [Sequential = LST Non-Sequential = SUM] [Switch = bufferpool]
used_pgs	The number of pages currently used in the tablespace. The bufferpool switch is not needed to collect this information on DMS tablespaces. [Sequential = LST Non-Sequential = SUM] [Switch = bufferpool]
wrttime	The amount of time in milliseconds spent writing pages to the tablespace during the interval. Not stored by default. [Sequential = SUM Non-Sequential = SUM] [Switch = bufferpool]

Section 4
Hewlett-Packard HP-UX Systems

Statistics for Hewlett-Packard HP-UX systems are collected by the TeamQuest collection agents.

This section contains a listing of the statistics collected for the system:

- System Activity Statistics (see 4.1)
- Disk Space Statistics (see 4.2)
- Network Statistics (see 4.3)
- Workload Statistics (see 4.4)
- Process Statistics (see 4.5)
- Hardware Inventory Statistics (see 4.6)
- System Log Statistics (see 4.7)
- General Log Statistics (see 4.8)
- TeamQuest Log Statistics (see 4.9)
- Derived Statistics (see 4.10)

Note: *At the end of each statistic description, you will see a notation in brackets indicating the method that is used for data consolidation (for example,* [Sequential = SUM Non-Sequential = SUM]). *Sequential means that the field is consolidated over time. Non-Sequential means that the field is consolidated within a specified time interval.*

The following notations are used:

AVG = Average
DIV =Weight
FST = First
ID = Identifier
LST = Last
MAX = Maximum
MIN = Minimum
NON = None or no method was used
SUM = Summation

If you are using TeamQuest View to view aggregation set data, the sequential method is used for data consolidation.

Because derived statistics are not stored in the performance database, the data consolidation method is not shown in the description of a derived statistic.

4.1. System Activity Statistics

The System Activity Agent is used to collect a wide variety of important system statistics. Major resources monitored by this agent include processors, memory, disks, network interfaces, and the operating system kernel.

Special Processing When Using Sequential Consolidation Method

Special processing occurs when certain records in the Block Device.by Device table are consolidated using the Sequential consolidation method. The following formulas are used to calculate the %busy, Actual_Interval, and record_count statistic values:

%busy

The %busy field uses a new consolidation method that uses the following formula to produce the consolidated %busy value:

$$\text{consolidated \%busy} = \text{\%busy} * \text{record_count} * \text{Actual_Interval}$$

At the end of the aggregation processing step after multiple records have been combined together to produce a single consolidated record, the %busy field contains the consolidated %busy value.

An additional processing step is performed using the following formula to produce a final %busy value that is stored into the consolidated record:

$$\text{\%busy} = \frac{\text{consolidated \%busy}}{\text{record_count} * \text{Interval}}$$

Note: The record_count field value used in the above formula must have already been generated using the record_count formula.

Block Device.by Device table records that have been stored by previous levels of TeamQuest collection agents do not contain the record_count field. For these records, a value of 1 is assumed for the record_count value.

Actual_Interval

For consolidated records (both reduced and not reduced), the Actual_Interval field should contain the Interval value at the end of the aggregation processing step.

record_count

The record_count field value is updated at the end of the aggregation processing step using the following formula:

$$\text{record_count} = \frac{(\Sigma(\text{record_count} * \text{Actual_Interval})) + (\text{Interval} - \Sigma\text{Actual_Interval})}{\text{Interval}}$$

The first part of the numerator is a summation of the record_count value multiplied by the Actual_Interval value across all of the consolidated records. This value should exist in the record_count field at the end of the aggregation processing step since the record_count field is weighted by Actual_Interval.

The Actual_Interval value used in the second part of the numerator is a summation of all the Actual_Interval values of the consolidated records. This value should exist in the Actual_Interval field at the end of the aggregation processing step since Actual_Interval is a summation.

The Interval value in the formula is the time range in seconds that the final consolidated record represents. For example, if 5-minute records are generated, the Interval value is calculated as 5 multiplied by 60.

Parameter Hierarchy

Class:	Block Device
Subclass:	by Device
IT Resource Name:	/TeamQuest/System/*systemname*/Disk
TeamQuest Table Name:	Block Device.by Device
Open Table Name:	BLKDEVBYDEVICE
Resource:	disk0, disk1, ...
Statistic Name:	
%busy	The percentage of time this device was servicing a transfer request [Sequential = AVG Non-Sequential = AVG] View Report: /report/hp-ux/sys-act/io/dsk-util.rpt
actq_avwait*	The average run queue wait time in milliseconds
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = ID]
avgresp*	The average response time of an I/O on a device. Calculated as avwait + avserv
avque	The average number of requests outstanding [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/sys-act/io/dsk-q.rpt
avserv	The average time in milliseconds to service each transfer request (includes seek, rotation latency, and data transfer times) for the device [Sequential = AVG Non-Sequential = AVG] View Report: /report/hp-ux/sys-act/io/dsk-time.rpt
avwait	The average time in milliseconds that transfer requests are idle in the queue while the queue is occupied [Sequential = AVG Non-Sequential = AVG] View Report: /report/hp-ux/sys-act/io/dsk-time.rpt

Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = ID]
IO_intensity*	The activity of an I/O device. This is the product of the I/O response time in milliseconds and the I/O transfer rate in I/Os per second. This is proportional to the average queue length (the number of I/O requests waiting or in progress at the I/O device).
Kbytes/s	The rate at which data is transferred in kilobytes per second [Sequential = AVG Non-Sequential = SUM] View Reports: /report/hp-ux/sys-act/io/dsk-xfer.rpt /report/hp-ux/sys-act/io/top-dsk.rpt
record_count	The number of collected records represented by the record written to the database. For nonreduced records, this value is 1. For reduced records, this value is the number of records that are combined into a single database record. [Sequential = AVG Non-Sequential = SUM]
reduction_name	The name of reduction rule [Sequential = ID Non-Sequential = ID]
reduction_source	The source of the reduction record. For reduction records with agent sources, this value is A. For reduction records with harvest sources, this value is H. [Sequential = ID Non-Sequential = ID]
transfers/s	The number of physical transfers to and from the disk per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/sys-act/io/dsk-xfer.rpt
waitq_avwait*	The average wait queue wait time in milliseconds

Class:	Block Device
Subclass:	Summary
IT Resource Name:	/TeamQuest/System/*systemname*/Disk
TeamQuest Table Name:	Block Device.Summary
Open Table Name:	BLKDEVSUM
Statistic Name:	
transfers/s	The number of physical transfers to and from the disk per second [Sequential = AVG Non-Sequential = SUM]

Class:	CPU
Subclass:	by Processor
IT Resource Name:	/TeamQuest/System/*systemname*/CPU
TeamQuest Table Name:	CPU.by Processor
Open Table Name:	CPUBYPROC
Resource:	cpu0, cpu1, ...
Statistic Name:	
%idle	The percentage of CPU time spent idle while no processes are waiting for I/O completion for this CPU [Sequential = AVG Non-Sequential = AVG] View Report: /report/hp-ux/sys-act/cpu/per-cpu.rpt
%nice	The percentage of CPU time spent running low priority user processes for this CPU [Sequential = AVG Non-Sequential = AVG] View Report: /report/hp-ux/sys-act/cpu/per-cpu.rpt
%sys	The percentage of CPU time spent running in system mode for this CPU [Sequential = AVG Non-Sequential = AVG] View Report: /report/hp-ux/sys-act/cpu/per-cpu.rpt
%usr	The percentage of CPU time spent running in user mode [Sequential = AVG Non-Sequential = AVG] View Report: /report/hp-ux/sys-act/cpu/per-cpu.rpt
%wio	The percentage of time spent idle while some processes are waiting for I/O completion [Sequential = AVG Non-Sequential = AVG] View Report: /report/hp-ux/sys-act/cpu/per-cpu.rpt
per_cpu_ticks	CPU clock ticks elapsed between two data samples [Sequential = SUM Non-Sequential = SUM]

Table Field Hierarchy

Class:	CPU
Subclass:	RelativePerformance
IT Resource Name:	/TeamQuest/System/*systemname*/CPU
TeamQuest Table Name:	CPU.RelativePerformance
Open Table Name:	CPURELPERF
Collection interval:	1 minute
Default retentions:	1 month
Table type:	Performance
Derived tables using fields from this table:	N/A

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = ID]
cpu_relative_performance	The relative performance of the CPU on a common scale [Sequential = AVG Non-Sequential = SUM]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = ID]
rel_unused	The amount of CPU resources not used based on a common, relative scale [Sequential = AVG Non-Sequential = SUM]
rel_used	The amount of CPU resources used based on a common, relative scale [Sequential = AVG Non-Sequential = SUM]
System	The name of the system where the data is collected. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]

Class:	CPU
Subclass:	Summary
IT Resource Name:	/TeamQuest/System/*systemname*/CPU
TeamQuest Table Name:	CPU.Summary
Open Table Name:	CPUSUM
Statistic Name:	
%busy	The percentage of time the CPU was not idle [Sequential = AVG Non-Sequential = AVG]
%idle	The percentage of total CPU time spent idle while no processes are waiting for I/O completion [Sequential = AVG Non-Sequential = AVG] View Report: /report/hp-ux/sys-act/cpu/cpu-util.rpt
%nice	The percentage of total CPU time spent running low priority user processes [Sequential = AVG Non-Sequential = AVG] View Report: /report/hp-ux/sys-act/cpu/cpu-util.rpt
%sys	The percentage of total CPU time spent running in system mode [Sequential = AVG Non-Sequential = AVG] View Report: /report/hp-ux/sys-act/cpu/cpu-util.rpt
%usr	The percentage of total CPU time spent running in user mode [Sequential = AVG Non-Sequential = AVG] View Report: /report/hp-ux/sys-act/cpu/cpu-util.rpt
%wio	The percentage of time spent idle while some processes are waiting for I/O completion [Sequential = AVG Non-Sequential = AVG] View Report: /report/hp-ux/sys-act/cpu/cpu-util.rpt
online_cpus	The number of CPUs that were online at the end of the sampling interval [Sequential = LST Non-Sequential = SUM]

Class:	Kernel
Subclass:	Buffers
IT Resource Name:	/TeamQuest/System/*systemname*/Kernel
TeamQuest Table Name:	Kernel.Buffers
Open Table Name:	KNLBUFFS
Statistic Name:	
%rcache	The percentage of logical reads satisfied from the buffer cache [Sequential = AVG Non-Sequential = AVG] View Report: /report/hp-ux/sys-act/kernel/bufc-hit.rpt
%wcache	The percentage of logical writes satisfied from the buffer cache [Sequential = AVG Non-Sequential = AVG] View Report: /report/hp-ux/sys-act/kernel/bufc-hit.rpt
bread/s	The number of reads per second from devices into the buffer cache [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/sys-act/kernel/bufc-xfr.rpt
bwrit/s	The number of writes per second from the buffer cache to devices [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/sys-act/kernel/bufc-xfr.rpt
lread KB/s	The number of kilobytes (KB) read by processes from the system [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/sys-act/kernel/bufc-kb.rpt
lread/s	The number of reads per second from the buffer cache to a process [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/sys-act/kernel/bufc-xfr.rpt
lwrit/s	The number of write accesses of system buffers (logical writes) per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/sys-act/kernel/bufc-xfr.rpt
lwrite KB/s	The number of kilobytes (KB) written to system buffers by processes per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/sys-act/kernel/bufc-kb.rpt
pread/s	The number of physical read requests per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/sys-act/kernel/phys-xfr.rpt

pwrit/s	The number of physical write requests per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/sys-act/kernel/phys-xfr.rpt
readahead hits/s	The number of look ahead read requests that are satisfied by system buffers per second [Sequential = AVG Non-Sequential = SUM]
readahead KB/s	The total kilobytes (KB) read on lookahead read requests per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/sys-act/kernel/bufc-kb.rpt
readahead/s	The number of reads from block devices to the kernel buffers per second, due to a lookahead request [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/sys-act/kernel/bufc-xfr.rpt

Class:	Kernel
Subclass:	File Access
IT Resource Name:	/TeamQuest/System/*systemname*/Kernel
TeamQuest Table Name:	Kernel.File Access
Open Table Name:	KNLFILEACCESS
Statistic Name:	
dirblk/s	The number of directory block reads issues per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/sys-act/kernel/f-access.rpt
igets/s	The number of files located by i-node entry per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/sys-act/kernel/f-access.rpt
namei/s	The number of file system path searches per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/sys-act/kernel/f-access.rpt

Class:	Kernel
Subclass:	Interrupts
IT Resource Name:	/TeamQuest/System/*systemname*/Kernel
TeamQuest Table Name:	Kernel.Interrupts
Open Table Name:	KNLITRPS
Statistic Name:	
device intr/s	The number of hardware interrupts per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/sys-act/kernel/sys-intr.rpt
trap/s	The number of traps per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/sys-act/kernel/sys-intr.rpt

Class:	Kernel
Subclass:	IPC (interprocess communication)
IT Resource Name:	/TeamQuest/System/*systemname*/Kernel
TeamQuest Table Name:	Kernel.IPC
Open Table Name:	KNLIPC
Statistic Name:	
msg/s	The number of message operations (sends and receives) per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/sys-act/kernel/msg-sema.rpt
sema/s	The number of semaphore operations per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/sys-act/kernel/msg-sema.rpt

Class:	Kernel
Subclass:	Paging
IT Resource Name:	/TeamQuest/System/*systemname*/Memory
TeamQuest Table Name:	Kernel.Paging
Open Table Name:	KNLPAGING
Statistic Name:	
atch/s	The number of page faults per second that are satisfied by reclaiming a page currently in memory (attaches per second) [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/sys-act/kernel/paging.rpt
deficit	An estimate of the pages needed by new swapped-in processes [Sequential = LST Non-Sequential = SUM] View Report: /report/hp-ux/sys-act/kernel/paging.rpt
exfod/s	The number of pages filled on demand from executables per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/sys-act/kernel/pgfaults.rpt
intransit_fault/s	The number of intransit blocking page faults per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/sys-act/kernel/pgfaults.rpt
KB paged in/s	The rate at which pages are paged in (expressed in kilobytes per second) [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/sys-act/kernel/page-amt.rpt
KB paged out/s	The rate at which pages are paged out (expressed in kilobytes per second) [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/sys-act/kernel/page-amt.rpt
numexfod/s	The number of times pages are filled on demand from executables per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/sys-act/kernel/pgfaults.rpt
numzfod/s	The number of times pages are zero-filled on demand per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/sys-act/kernel/pgfaults.rpt
pg_fault/s	The total number of page faults per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/sys-act/kernel/pgfaults.rpt

pg/fork	The average number of pages brought in as a result of each fork [Sequential = AVG Non-Sequential = AVG] View Report: /report/hp-ux/sys-act/syscall/fork-siz.rpt
pgdfree/s	The number of pages freed by the page daemon per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/sys-act/kernel/pgfree.rpt
pgfrec/s	The number of pages reclaimed from the free list per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/sys-act/kernel/pgreclms.rpt
pgfree/s	The total number of memory pages available on the free list per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/sys-act/kernel/pgfree.rpt
pgin/s	The number of page-in requests per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/sys-act/kernel/paging.rpt
pgout/s	The number of page-out requests per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/sys-act/kernel/paging.rpt
pgrec/s	The total number of page reclaims per second (including pageout) [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/sys-act/kernel/pgreclms.rpt
pgscan/s	The rate per second at which the page daemon scans pages to see if they can be freed [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/sys-act/kernel/pgfree.rpt
rev/s	The number of revolutions per second of the paging daemon [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/sys-act/kernel/pgfree.rpt
zfod/s	The number of pages zero-filled on demand per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/sys-act/kernel/pgfaults.rpt

Class:	Kernel
Subclass:	Processes
IT Resource Name:	/TeamQuest/System/*systemname*/Kernel
TeamQuest Table Name:	Kernel.Processes
Open Table Name:	KNLPROCES
Statistic Name:	
active	The count of active processes. This count is taken at the end of the sampling interval. [Sequential = LST Non-Sequential = SUM] View Report: /report/hp-ux/sys-act/kernel/process.rpt
runnable	The length of the run queue at the end of the sampling interval [Sequential = LST Non-Sequential = SUM] View Report: /report/hp-ux/sys-act/kernel/process.rpt
swapped	A count of the runnable processes that have been swapped out. This count is taken at the end of the sampling interval. [Sequential = LST Non-Sequential = SUM] View Report: /report/hp-ux/sys-act/kernel/process.rpt

Class:	Kernel
Subclass:	Queues
IT Resource Name:	/TeamQuest/System/*systemname*/Kernel
TeamQuest Table Name:	Kernel.Queues
Open Table Name:	KNLQS
Statistic Name:	
%runocc	The percentage of time the run queue is occupied [Sequential = AVG Non-Sequential = AVG] View Report: /report/hp-ux/sys-act/kernel/q-util.rpt
%swpocc	The percentage of time the swap queue is occupied [Sequential = AVG Non-Sequential = AVG] View Report: /report/hp-ux/sys-act/kernel/q-util.rpt
avg_cpuq_sz	The average length of the run queue per CPU (a queue of processes in memory and runnable) [Sequential = AVG Non-Sequential = AVG]
avg_runq_sz	The average length of the run queue (a queue of processes in memory and runnable) [Sequential = AVG Non-Sequential = AVG]
pswch/s	The number of process switches per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/sys-act/kernel/sys-act.rpt

runq_sz	The average length of the run queue (a queue of processes in memory and runnable) while the run queue is occupied [Sequential = AVG Non-Sequential = AVG] View Report: /report/hp-ux/sys-act/kernel/q-sizes.rpt
swpq_sz	The average length of the swap queue (a queue of processes swapped out and ready to run) while the swap queue is occupied [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/sys-act/kernel/q-sizes.rpt

Class:	Kernel
Subclass:	Swapping
IT Resource Name:	/TeamQuest/System/*systemname*/Memory
TeamQuest Table Name:	Kernel.Swapping
Open Table Name:	KNLSWAPPING
Statistic Name:	
freeswap	The average number of megabytes free for swapping from all configured swap areas. This includes swap space in the form of physical memory, but does not include any from file swap. [Sequential = AVG Non-Sequential = AVG] View Report: /report/hp-ux/sys-act/kernel/swapspc.rpt
KB swapped in/s	The rate at which pages are swapped in (expressed in kilobytes per second) [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/sys-act/kernel/swap-amt.rpt
KB swapped out/s	The rate at which pages are swapped out (expressed in kilobytes per second) [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/sys-act/kernel/swap-amt.rpt
swpin/s	The number of transfers to memory from swap per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/sys-act/kernel/swaprate.rpt
swpot/s	The number of transfers from memory to swap per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/sys-act/kernel/swaprate.rpt
totalswap	The total number of megabytes available for swapping from all configured swap areas. This includes swap space in the form of physical memory, but does not include any from file swap. [Sequential = AVG Non-Sequential = AVG] View Report: /report/hp-ux/sys-act/kernel/swapspc.rpt

Class:	Kernel
Subclass:	TTY
IT Resource Name:	/TeamQuest/System/*systemname*/Kernel
TeamQuest Table Name:	Kernel.TTY
Open Table Name:	KNLTTY
Statistic Name:	
canch/s	The number of input characters processed by canon (canonical queue) per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/sys-act/kernel/tty-xfer.rpt
inch/s	The rate at which characters are read from teletypewriter (TTY) devices per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/sys-act/kernel/tty-xfer.rpt
mdmin/s	The number of modem interrupts per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/sys-act/kernel/tty-intr.rpt
outch/s	The number of output characters transferred per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/sys-act/kernel/tty-xfer.rpt
rcvin/s	The number of receiver hardware interrupts per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/sys-act/kernel/tty-intr.rpt
xmtin/s	The number of transmitter hardware interrupts per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/sys-act/kernel/tty-intr.rpt

Class:	Load Average
Subclass:	by Processor
IT Resource Name:	/TeamQuest/System/*systemname*/CPU
TeamQuest Table Name:	Load Average.by Processor
Open Table Name:	LOADAVGBYPROC
Resource:	cpu0, cpu1, ...
Statistic Name:	
1 min	The number of processes in the run queue averaged over the last 1 minute. This count is taken at the end of the sampling interval. [Sequential = LST Non-Sequential = SUM] View Report: /report/hp-ux/sys-act/kernel/load-by.rpt
5 min	The number of processes in the run queue averaged over the last 5 minutes. This count is taken at the end of the sampling interval. [Sequential = LST Non-Sequential = SUM] View Report: /report/hp-ux/sys-act/kernel/load-by.rpt
15 min	The number of processes in the run queue averaged over the last 15 minutes. This count is taken at the end of the sampling interval. [Sequential = LST Non-Sequential = SUM] View Report: /report/hp-ux/sys-act/kernel/load-by.rpt

Class:	Load Average
Subclass:	Summary
IT Resource Name:	/TeamQuest/System/*systemname*/Kernel
TeamQuest Table Name:	Load Average.Summary
Open Table Name:	LOADAVGSUM
Statistic Name:	
1 min	The number of processes in the run queue averaged over the last 1 minute. This count is taken at the end of the sampling interval. [Sequential = LST Non-Sequential = SUM] View Report: /report/hp-ux/sys-act/kernel/load-avg.rpt
5 min	The number of processes in the run queue averaged over the last 5 minutes. This count is taken at the end of the sampling interval. [Sequential = LST Non-Sequential = SUM] View Report: /report/hp-ux/sys-act/kernel/load-avg.rpt
15 min	The number of processes in the run queue averaged over the last 15 minutes. This count is taken at the end of the sampling interval. [Sequential = LST Non-Sequential = SUM] View Report: /report/hp-ux/sys-act/kernel/load-avg.rpt

Class:	Memory
Subclass:	N/A
IT Resource Name:	/TeamQuest/System/*systemname*/Memory
TeamQuest Table Name:	Memory
Open Table Name:	MEM
Statistic Name:	
%realinuse	The actual usage of real memory as a percentage of total real memory in use [Sequential = LST Non-Sequential = AVG] View Report: /report/hp-ux/sys-act/memory/musage.rpt
%virtualinuse	The actual usage of virtual memory as a percentage of total virtual memory in use [Sequential = LST Non-Sequential = AVG] View Report: /report/hp-ux/sys-act/memory/musage.rpt
bufcache	The amount of memory being used by the buffer cache in kilobytes [Sequential = LST Non-Sequential = SUM] View Report: /report/hp-ux/sys-act/memory/bufcach.rpt
freemem	The amount of free memory in kilobytes [Sequential = AVG Non-Sequential = SUM] View Reports: /report/hp-ux/sys-act/memory/freemem.rpt /report/hp-ux/sys-act/memory/memory.rpt
physmem	The total amount of physical memory in kilobytes [Sequential = LST Non-Sequential = SUM] View Report: /report/hp-ux/sys-act/memory/memory.rpt
real	The total amount of real (or physical) memory in use in kilobytes [Sequential = LST Non-Sequential = SUM] View Report: /report/hp-ux/sys-act/memory/memory.rpt
virtual	The total amount of virtual memory in use in kilobytes [Sequential = LST Non-Sequential = SUM] View Report: /report/hp-ux/sys-act/memory/memory.rpt

Class:	System Call
Subclass:	Summary
IT Resource Name:	/TeamQuest/System/*systemname*/Kernel
TeamQuest Table Name:	System Call.Summary
Open Table Name:	SYSCALLSUM
Statistic Name:	
exec/s	The number of exec system calls per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/sys-act/syscall/imp-scal.rpt
fork/s	The number of fork system calls per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/sys-act/syscall/imp-scal.rpt
rchar/s	The number of characters transferred by read system calls in the interval in bytes per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/sys-act/syscall/scal-xfr.rpt
scall/s	The number of system calls made per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/sys-act/syscall/imp-scal.rpt
sread/s	The number of read system calls per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/sys-act/syscall/imp-scal.rpt
swrit/s	The number of write system calls per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/sys-act/syscall/imp-scal.rpt
wchar/s	The number of characters transferred by write system calls in the interval in bytes per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/sys-act/syscall/scal-xfer.rpt

Note: *The following statistics are only available for the TeamQuest database architecture. If the open database architecture is used, a record for each agent using these statistics is created in the TQ.Agent Interval table.*

Class:	TQ
Subclass:	N/A
IT Resource Name:	N/A
TeamQuest Table Name:	N/A
Open Table Name:	N/A
Statistic Name:	
bsp interval	The number of seconds elapsed between two data samples of the System Activity Agent [Sequential = SUM Non-Sequential = ID]
elapsed_ticks	The number of CPU clock ticks elapsed between two data samples [Sequential = SUM Non-Sequential = SUM]
tqbsp_end_time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
tqbsp_interval	The number of seconds elapsed between the end of data collection for the previous sample and the end of data collection for the current sample [Sequential = SUM Non-Sequential = ID]

Table Field Hierarchy

Class:	TQ
Subclass:	Agent Interval
IT Resource Name:	/TeamQuest/System/*systemname*
TeamQuest Table Name:	TQ.Agent Interval
Open Table Name:	AGENTINTERVAL
Collection interval:	Based on the collection period
Default retentions:	8 hours at collection period interval 8 days at 10-minute intervals 35 days at 1-hour intervals 400 days at 8-hour intervals
Table type:	Performance
Derived tables using fields from this table:	N/A

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = ID]
Agent	The name of the agent that is collecting data. This field is limited to 52 characters. Any agent name longer than 52 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Instance	The instance name of the agent that is collecting data. This field is limited to 52 characters. Any instance name longer than 52 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = ID]
PID	The process identifier of the agent instance that is collecting data [Sequential = ID Non-Sequential = ID]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
System	The name of the system where the data is collected. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]

4.2. Disk Space Statistics

The Disk Space Agent tracks the disk space usage of locally mounted file systems. However, any data about Network File System (NFS) mounted file systems are not collected by the agent because the loss of the network connection to the NFS may result in hung processes.

Note: *If the file system names are longer than 52 characters, problems may occur.*

Parameter Hierarchy

Class:	Disk Space
Subclass:	by File System
IT Resource Name:	/TeamQuest/System/*systemname*/Disk
TeamQuest Table Name:	Disk Space.by File System
Open Table Name:	DISKSPACEBYFILESYS
Resource:	file system1, file system2, ...
Statistic Name:	
%inodes free*	The percentage of i-nodes available (not in use) on the file system at the end of the interval View Report: /report/hp-ux/dskspace/total/pct-inod.rpt
%inodes used*	The percentage of i-nodes in use on the file system at the end of the interval View Report: /report/hp-ux/dskspace/total/pct-inod.rpt
%space free*	The percentage of total space available (not in use) on the file system at the end of the interval View Reports: /report/hp-ux/dskspace/total/low-ones.rpt /report/hp-ux/dskspace/total/pctspace.rpt
%space used*	The percentage of total space in use on the file system at the end of the interval View Reports: /report/hp-ux/dskspace/total/fullest.rpt /report/hp-ux/dskspace/total/pctspace.rpt
%user space free*	The percentage of total user space available (not in use) on the file system at the end of the interval View Reports: /report/hp-ux/dskspace/user/low-ones.rpt /report/hp-ux/dskspace/user/pctspace.rpt
%user space used*	The percentage of total user space in use on the file system at the end of the interval View Reports: /report/hp-ux/dskspace/user/fullest.rpt /report/hp-ux/dskspace/user/pctspace.rpt

capacity	The percentage of total space in use on the file system at the end of the interval [Sequential = LST Non-Sequential = AVG]
free (Mb)	The amount of space available (not in use) on the file system in megabytes at the end of the interval including the space held back from normal users [Sequential = LST Non-Sequential = SUM] View Reports: /report/hp-ux/dskspace/total/dskspace.rpt /report/hp-ux/dskspace/total/low-ones.rpt
free inodes	The number of available (not in use) i-nodes on the file system at the end of the interval [Sequential = LST Non-Sequential = SUM] View Report: /report/hp-ux/dskspace/total/i-nodes.rpt
total (Mb)	The total (used + available) amount of space on the file system in megabytes at the end of the interval including the space held back from normal users [Sequential = LST Non-Sequential = SUM] View Report: /report/hp-ux/dskspace/total/dskspace.rpt
total inodes	The total (used + available) number of i-nodes on the file system at the end of the interval [Sequential = LST Non-Sequential = SUM] View Report: /report/hp-ux/dskspace/total/i-nodes.rpt
user free (Mb)	The amount of space available (not in use) on the file system in megabytes (Mb) at the end of the interval not including the space held back from normal users [Sequential = LST Non-Sequential = SUM] View Reports: /report/hp-ux/dskspace/user/dskspace.rpt /report/hp-ux/dskspace/user/low-ones.rpt
user total (Mb)*	The total (used + available) amount of space on the file system in megabytes (Mb) at the end of the interval not including the space held back from normal users View Report: /report/hp-ux/dskspace/user/dskspace.rpt

Note: *The following statistics are only available for the TeamQuest database architecture. If the open database architecture is used, a record for each agent using these statistics is created in the TQ.Agent Interval table.*

Class:	TQ
Subclass:	N/A
IT Resource Name:	N/A
TeamQuest Table Name:	N/A
Open Table Name:	N/A
Statistic Name:	
dsp interval	The number of seconds elapsed between two data samples of the Disk Space Agent [Sequential = SUM Non-Sequential = ID]
tqdsp_end_time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
tqdsp_interval	The number of seconds elapsed between the end of data collection for the previous sample and the end of data collection for the current sample [Sequential = SUM Non-Sequential = ID]

Table Field Hierarchy

Class:	TQ
Subclass:	Agent Interval
IT Resource Name:	/TeamQuest/System/*systemname*
TeamQuest Table Name:	TQ.Agent Interval
Open Table Name:	AGENTINTERVAL
Collection interval:	Based on the collection period
Default retentions:	8 hours at collection period interval 8 days at 10-minute intervals 35 days at 1-hour intervals 400 days at 8-hour intervals
Table type:	Performance
Derived tables using fields from this table:	N/A

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = ID]
Agent	The name of the agent that is collecting data. This field is limited to 52 characters. Any agent name longer than 52 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Instance	The instance name of the agent that is collecting data. This field is limited to 52 characters. Any instance name longer than 52 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = ID]
PID	The process identifier of the agent instance that is collecting data [Sequential = ID Non-Sequential = ID]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
System	The name of the system where the data is collected. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]

4.3. Network Statistics

The Network Agent collects data about the interaction of the system with the network. The types of data collected by the agent include network interfaces, NFS and Remote Protocol Call (RPC), and Transmission Control Protocol (TCP).

In NFS environments, the term *server* refers to the system that owns a file system and allows other systems on the network to access the files on the file system. A *client* is a system that mounts a nonlocal file system such as NFS and accesses files from the NFS mounted file system. Any given system could be a server to some file systems and a client to other file systems. It is not uncommon to have systems that export several file systems for other systems to use and mount several other network file systems. All the NFS statistics collected by this agent show the activity of NFS clients and servers that exist on the system where the agent is run.

Parameter Hierarchy

Class:	Network
Subclass:	by Interface
IT Resource Name:	/TeamQuest/System/*systemname*/Network
TeamQuest Table Name:	Network.by Interface
Open Table Name:	NETBYINTERFACE
Resource:	interface0, interface1, ...
Statistic Name:	
collisions/s	The number of network collisions per second on Carrier Sense Multiple Access (CSMA) interfaces [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/network/net-errs.rpt
in errors/s	The number of network input errors per second. The value is always 0 on systems running HP-UX level 11.00. [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/network/net-errs.rpt
in packets/s	The number of network input packets per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/network/net-pkts.rpt
out errors/s	The number of network output errors per second. The value is always 0 on systems running HP-UX level 11.00. [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/network/net-errs.rpt
out packets/s	The number of network output packets per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/network/net-pkts.rpt

Class:	Network
Subclass:	Summary
IT Resource Name:	/TeamQuest/System/*systemname*/Network
TeamQuest Table Name:	Network.Summary
Open Table Name:	NETSUM
Statistic Name:	
errors/s	The total number of network errors per second for all network interfaces on the system. The value is always 0 on systems running HP-UX level 11.00. [Sequential = AVG Non-Sequential = SUM]
in packets/s	The total number of network input packets per second for all network interfaces on the system [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/network/net-sum.rpt
out packets/s	The total number of network output packets per second for all network interfaces on the system [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/network/net-sum.rpt
total packets/s	The total number of network packets per second for all network interfaces on the system [Sequential = AVG Non-Sequential = SUM]

Class:	NFS
Subclass:	Client
IT Resource Name:	/TeamQuest/System/*systemname*/Network
TeamQuest Table Name:	NFS.Client
Open Table Name:	NFSCLI
Statistic Name:	
badcalls/s	The total number of Network File System (NFS) calls per second rejected by the client [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/network/client.rpt
calls/s	The total number of NFS calls sent by the client per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/network/client.rpt
gets/s	The total number of times per second an NFS client handle was received [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/netowrk/client.rpt

Class:	NFS
Subclass:	Server
IT Resource Name:	/TeamQuest/System/*systemname*/Network
TeamQuest Table Name:	NFS.Server
Open Table Name:	NFSSERV
Statistic Name:	
badcalls/s	The total number of NFS calls per second rejected by the server [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/network/server.rpt
calls/s	The total number of NFS calls per second received by the server [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/network/server.rpt

Class:	NFSv2
Subclass:	Client
IT Resource Name:	/TeamQuest/System/*systemname*/Network
TeamQuest Table Name:	NFSv2.Client
Open Table Name:	NFSV2CLI
Statistic Name:	
calls/s*	The number of NFS version 2 calls per second sent by the client [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/network/clnt-v2.rpt

Class:	NFSv2
Subclass:	Client
IT Resource Name:	/TeamQuest/System/*systemname*/Network
TeamQuest Table Name:	NFSv2.Client
Open Table Name:	NFSV2CLI
Resource:	create, getattr, link, lookup, mkdir, null, read, readdir, readlink, remove, rename, rmdir, root, setattr, statfs, symlink, write, writecache
Statistic Name:	
reqs/s	The number of NFS version 2 requests per second sent by the client [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/network/clnt-v2.rpt

Class:	NFSv2
Subclass:	Server
IT Resource Name:	/TeamQuest/System/*systemname*/Network
TeamQuest Table Name:	NFSv2.Server
Open Table Name:	NFSV2SERV
Statistic Name:	
calls/s*	The number of NFS version 2 calls per second received by the server [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/network/srvr-v2.rpt

Class:	NFSv2
Subclass:	Server
IT Resource Name:	/TeamQuest/System/*systemname*/Network
TeamQuest Table Name:	NFSv2.Server
Open Table Name:	NFSV2SERV
Resource:	create, getattr, link, lookup, mkdir, null, read, readdir, readlink, remove, rename, rmdir, root, setattr, statfs, symlink, write, writecache
Statistic Name:	
reqs/s	The number of NFS version 2 requests per second received by the server [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/network/srvr-v2.rpt

Class:	NFSv3
Subclass:	Client
IT Resource Name:	/TeamQuest/System/*systemname*/Network
TeamQuest Table Name:	NFSv3.Client
Open Table Name:	NFSV3CLI
Statistic Name:	
calls/s*	The number of NFS version 3 calls per second sent by the client. NFS version 3 statistics are only available for systems running HP-UX level 11.0. [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/network/clnt-v3.rpt

Class:	NFSv3
Subclass:	Client
IT Resource Name:	/TeamQuest/System/*systemname*/Network
TeamQuest Table Name:	NFSv3.Client
Open Table Name:	NFSV3CLI
Resource:	access, commit, create, fsinfo, fsstat, getattr, link, lookup, mkdir, mknod, null, pathconf, read, readdir, readdir+, readlink, remove, rename, rmdir, setattr, symlink, write
Statistic Name:	
reqs/s	The number of NFS version 3 requests per second sent by the client. NFS version 3 statistics are only available for systems running HP-UX level 11.0. [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/network/clnt-v3.rpt

Class:	NFSv3
Subclass:	Server
IT Resource Name:	/TeamQuest/System/*systemname*/Network
TeamQuest Table Name:	NFSv3.Server
Open Table Name:	NFSV3SERV
Resource:	access, commit, create, fsinfo, fsstat, getattr, link, lookup, mkdir, mknod, null, pathconf, read, readdir, readdir+, readlink, remove, rename, rmdir, setattr, symlink, write
Statistic Name:	
reqs/s	The number of NFS version 3 requests per second received by the server. NFS version 3 statistics are only available for systems running HP-UX level 11.0. [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/network/srvr-v3.rpt

Class:	NFSv3
Subclass:	Server
IT Resource Name:	/TeamQuest/System/*systemname*/Network
TeamQuest Table Name:	NFSv3.Server
Open Table Name:	NFSV3SERV
Statistic Name:	
calls/s*	The number of NFS version 3 calls per second received by the server. NFS version 3 statistics are only available for systems running HP-UX level 11.0. [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/network/srvr-v3.rpt

Class:	RPC
Subclass:	Client.Connectionless
IT Resource Name:	/TeamQuest/System/*systemname*/Network
TeamQuest Table Name:	RPC.Client.Connectionless
Open Table Name:	RPCCLICONNLESS
Statistic Name:	
badcalls/s	The number of connectionless RPC calls per second rejected by the server [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/network/rpc/clnt-cl.rpt
badxid/s	The number of times per second a reply from a server was received that did not correspond to any outstanding connectionless RPC call [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/network/rpc/clnt-cl.rpt
calls/s	The total number of connectionless RPC calls per second sent by the client [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/network/rpc/clnt-cl.rpt
newcred/s	The number of times per second connectionless RPC authentication information had to be refreshed by the client [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/network/rpc/clnt-cl.rpt

retrans/s	The number of times per second a connectionless RPC call had to be retransmitted by the client due to a timeout while waiting for a reply from the server [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/network/rpc/clnt-cl.rpt
timeouts/s	The number of times per second a connectionless RPC call timed out while waiting for a reply from the server [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/network/rpc/clnt-cl.rpt

Class:	RPC
Subclass:	Server.Connectionless
IT Resource Name:	/TeamQuest/System/*systemname*/Network
TeamQuest Table Name:	RPC.Server.Connectionless
Open Table Name:	RPCSERVCONNLESS
Statistic Name:	
badcalls/s	The number of connectionless RPC calls per second rejected by the server. The sum of badlens/s and xdrcalls/s. [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/network/rpc/srvr-cl.rpt
badlens/s	The number of connectionless RPC calls per second received by the server with a length shorter than a minimum-sized RPC call [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/network/rpc/srvr-cl.rpt
calls/s	The number of connectionless RPC calls per second received by the server [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/network/rpc/srvr-cl.rpt
nullrecvs/s	The number of times per second a connectionless RPC call was not available when it was thought to be received by the server [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/network/rpc/srvr-cl.rpt
xdrcalls/s	The number of connectionless RPC calls per second by the server whose header could not be External Data Representation (XDR) decoded [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/network/rpc/srvr-cl.rpt

Class:	TCP
Subclass:	N/A
IT Resource Name:	/TeamQuest/System/*systemname*/Network
TeamQuest Table Name:	TCP
Open Table Name:	TCP
Statistic Name:	
ftp conn	The number of ftp connections at the end of the interval. Not available for systems running HP-UX level 11.0. [Sequential = AVG Non-Sequential = AVG] View Report: /report/hp-ux/network/tcp/connect.rpt
http conn	The number of HTTP connections at the end of the interval [Sequential = AVG Non-Sequential = AVG] View Report: /report/hp-ux/network/tcp/connect.rpt
other conn	The number of other connections at the end of the interval. Not available for systems running HP-UX level 11.0. [Sequential = AVG Non-Sequential = AVG] View Report: /report/hp-ux/network/tcp/connect.rpt
rlogin conn	The number of rlogin connections at the end of the interval. Not available for systems running HP-UX level 11.0. [Sequential = AVG Non-Sequential = AVG] View Report: /report/hp-ux/network/tcp/connect.rpt
telnet conn	The number of telnet connections at the end of the interval. Not available for systems running HP-UX level 11.0. [Sequential = AVG Non-Sequential = AVG] View Report: /report/hp-ux/network/tcp/connect.rpt
total conn	The total number of connections at the end of the interval. Not available for systems running HP-UX level 11.0. [Sequential = AVG Non-Sequential = AVG] View Report: /report/hp-ux/network/tcp/connect.rpt

Note: *The following statistics are only available for the TeamQuest database architecture. If the open database architecture is used, a record for each agent using these statistics is created in the TQ.Agent Interval table.*

Class:	TQ
Subclass:	N/A
IT Resource Name:	N/A
TeamQuest Table Name:	N/A
Open Table Name:	N/A
Statistic Name:	
net interval	The number of seconds elapsed between two data samples of the Network Agent [Sequential = SUM Non-Sequential = ID]
tqbnp_end_time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
tqbnp_interval	The number of seconds elapsed between the end of data collection for the previous sample and the end of data collection for the current sample [Sequential = SUM Non-Sequential = ID]

Table Field Hierarchy

Class:	TQ
Subclass:	Agent Interval
IT Resource Name:	/TeamQuest/System/*systemname*
TeamQuest Table Name:	TQ.Agent Interval
Open Table Name:	AGENTINTERVAL
Collection interval:	Based on the collection period
Default retentions:	8 hours at collection period interval 8 days at 10-minute intervals 35 days at 1-hour intervals 400 days at 8-hour intervals
Table type:	Performance
Derived tables using fields from this table:	N/A

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = ID]
Agent	The name of the agent that is collecting data. This field is limited to 52 characters. Any agent name longer than 52 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Instance	The instance name of the agent that is collecting data. This field is limited to 52 characters. Any instance name longer than 52 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = ID]
PID	The process identifier of the agent instance that is collecting data [Sequential = ID Non-Sequential = ID]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
System	The name of the system where the data is collected. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]

4.4. Workload Statistics

Workload statistics are maintained in the TeamQuest performance database by the Process-Workload Agent. The statistics are classified by the hierarchy of key names.

Note: *The following statistics are only available for the TeamQuest database architecture. If the open database architecture is used, a record for each agent using these statistics is created in the TQ.Agent Interval table.*

Class:	TQ
Subclass:	N/A
IT Resource Name:	N/A
TeamQuest Table Name:	N/A
Open Table Name:	N/A
Statistic Name:	
tqwarp_end_time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
tqwarp_interval	The number of seconds elapsed between the end of data collection for the previous sample and the end of data collection for the current sample [Sequential = SUM Non-Sequential = ID]
warp interval	The number of seconds elapsed between two data samples of the Process-Workload Agent [Sequential = SUM Non-Sequential = ID]

Table Field Hierarchy

Class:	TQ
Subclass:	Agent Interval
IT Resource Name:	/TeamQuest/System/*systemname*
TeamQuest Table Name:	TQ.Agent Interval
Open Table Name:	AGENTINTERVAL
Collection interval:	Based on the collection period
Default retentions:	8 hours at collection period interval 8 days at 10-minute intervals 35 days at 1-hour intervals 400 days at 8-hour intervals
Table type:	Performance
Derived tables using fields from this table:	N/A

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = ID]
Agent	The name of the agent that is collecting data. This field is limited to 52 characters. Any agent name longer than 52 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Instance	The instance name of the agent that is collecting data. This field is limited to 52 characters. Any instance name longer than 52 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = ID]
PID	The process identifier of the agent instance that is collecting data [Sequential = ID Non-Sequential = ID]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
System	The name of the system where the data is collected. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]

Parameter Hierarchy

Class:	Workload
Subclass:	by Workload
IT Resource Name:	/TeamQuest/System/*systemname/workload /workloadset / workload*
TeamQuest Table Name:	Workload.by Workload
Open Table Name:	WLBYWORKLOAD
Workload Set:	WLS1, WLS2, ...
Workload:	WL1, WL2, ...
Statistic Name:	
%cpu	The percentage of total CPU consumed by the workload. Total CPU time is the value of the sampling interval multiplied by the number of CPUs on the system. Thus, if the sum of %cpu for all workloads is less than 100%, some CPUs must have been idle for some time during the sampling interval. [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/workload/pct-cpu.rpt
avgmem	The cumulative swap process image size in kilobytes of all the running processes in the workload at the end of the sampling interval [Sequential = AVG Non-Sequential = SUM]
etime	The sum of the elapsed times in seconds of all the processes in the workload. Dividing this number by the number of processes in the workload (ponging + pcomplete) equals the average time a process in the workload existed during the sampling interval. [Sequential = SUM Non-Sequential = SUM]
lioch	The number of logical characters in kilobytes transferred by the workload during the sampling interval [Sequential = SUM Non-Sequential = SUM] View Report: /report/hp-ux/workload/lioch.rpt
majflt	The number of major page faults generated by the workload for processes that were active at the end of the sampling interval. A major page fault is a page fault that requires I/O. [Sequential = SUM Non-Sequential = SUM] View Report: /report/hp-ux/workload/maj-flt.rpt
pcomplete	The number of processes completed in the sampling interval. For process data, the same number is called cproc. [Sequential = SUM Non-Sequential = SUM] View Report: /report/hp-ux/workload/num-proc.rpt

pio	The number of physical I/O transfers done by the workload during the sampling interval. The number reported represents only the completed processes during the sampling interval. [Sequential = SUM Non-Sequential = SUM] View Report: /report/hp-ux/workload/pio.rpt
pongoing	The number of processes running at the end of the sampling interval. In process data, the same number is called oproc. The number of processes in a workload could be derived by adding pongoing and pcomplete. This sum is called nproc in process data. [Sequential = LST Non-Sequential = SUM] View Report: /report/hp-ux/workload/num-proc.rpt
prss	The resident set size in kilobytes of private memory occupied by all the running processes in the workload at the end of the sampling interval [Sequential = AVG Non-Sequential = SUM]
pstart	The number of processes started in the sampling interval. In process data, this number is called sproc. [Sequential = SUM Non-Sequential = SUM] View Report: /report/hp-ux/workload/num-proc.rpt
record_count	The number of collected records represented by the record written to the database. For nonreduced records, this value is 1. For reduced records, this value is the number of records that are combined into a single database record. [Sequential = AVG Non-Sequential = SUM]
reduction_name	The name of reduction rule [Sequential = ID Non-Sequential = ID]
reduction_source	The source of the reduction record. For reduction records with agent sources, this value is A. For reduction records with harvest sources, this value is H. [Sequential = ID Non-Sequential = ID]
rss	The resident set size (real memory) in kilobytes of all processes running at the end of the sampling interval. If a process ends within the sampling interval, the value is not available and is marked as <N/A>. [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/workload/rss.rpt
srss	The resident set size in kilobytes of shared memory occupied by all the running processes in the workload at the end of the sampling interval [Sequential = AVG Non-Sequential = SUM]

syscpu	The system CPU time in seconds used by the workload. System CPU time is the time spent running in kernel mode (for example, the time spent in executing system calls, paging, and so on). [Sequential = SUM Non-Sequential = SUM] View Report: /report/hp-ux/workload/sys-cpu.rpt
threads	The number of threads at the end of the sampling interval [Sequential = LST Non-Sequential = SUM] View Report: /report/hp-ux/workload/threads.rpt
totcpu	The total CPU time in seconds used by the workload. This value is the same as the sum of usrcpu and syscpu. [Sequential = SUM Non-Sequential = SUM] View Report: /report/hp-ux/workload/cpu-util.rpt
usrcpu	The user CPU time in seconds used by the workload. User CPU time is the time spent running in user mode. [Sequential = SUM Non-Sequential = SUM] View Report: /report/hp-ux/workload/user-cpu.rpt

4.5. Process Statistics

The Process-Workload Agent collects process data from the operating system and processes accounting files. The Process-Workload Agent calculates the usage of every process in a given interval, applies reduction definitions to each process, and stores the reduced process data. It also applies workload definitions to the reduced process data and stores system resource usage by workload.

Reduced Process Records

The Process-Workload Agent collects process data and reduces the data according to the user-defined reduction definitions. A reduction definition may cause multiple processes to be merged into a single record. Thus, a process record contains data about one or more processes. When you are looking at the resource usage numbers, it is important to know how many processes a process record actually represents. The nproc data item indicates exactly how many processes each process record is representing. When a process record is representing more than one process, the resource usage fields such as totcpu, rss, and pio_t are the sum of the resource usage of the individual processes. When all the processes do not have the same value for a field, the identifier fields such as command, login, and gid are set to <Multi>. When data for some fields is not available, the fields are set to <N/A>.

Disabling Reduction Definitions

If you want to look at the details of every individual process and do not wish to have merged process records, you must disable reduction processing by making all reduction sets inactive. However, with reduction processing disabled, more records have to be stored and more disk space is needed. For information on disabling reductions, see the *TeamQuest Performance Software Administration Guide*.

Process Data with Process Accounting Turned Off

If process accounting is turned off, the process data is incomplete as data about completed processes is not available. In this case, the process data only shows a portion of the activity in the sampling interval. To find out if process accounting is turned on or off, look at the cproc field of all the process records. If the cproc field indicates all zeros, it means that processes were not completed in that sampling interval or that the process accounting is turned off.

When process accounting is not turned on, the process record, <Other> includes the CPU time for processes that completed during the interval.

For more information on process accounting, see the *TeamQuest Performance Software Administration Guide*.

Retrieving Hardware Configuration Information

The Process-Workload Agent retrieves hardware configuration information. The information is stored upon start up and once-a-day in the HINV.Summary, HINV.Devices, and HINV.FileSystem table files of the TeamQuest performance database. The information is also stored if the agent detects a change in configuration.

Table Field Hierarchy

Class:	HPUX
Subclass:	Process
IT Resource Name:	/TeamQuest/System/*systemname*/Process
TeamQuest Table Name:	HPUX.Process
Open Table Name:	HPUXPROC
Collection interval:	Based on the primary aggregation set
Default retention:	1 day
Table type:	Performance

Note: *The collection interval is also dependent on the Processes Only setting in the configuration file for the Process-Workload Agent. For more information, see the section on configuring the Process-Workload Agent in the* TeamQuest Performance Software Administration Guide.

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = ID]
avgmem_t	The size of the swappable process image in kilobytes. If a process starts and ends within the same interval, the number is unavailable and is marked as <N/A>. [Sequential = AVG Non-Sequential = SUM]

btime	The start time of the process. For process records representing more than one process, this field shows the earliest of the start times. [Sequential = FST Non-Sequential = ID]
command	The command name of the process. If a process starts and ends within the same interval, only up to 8 characters of the command name can be displayed. Otherwise, up to 14 characters are displayed. Therefore, an “automountd” process may appear as “automoun” if it starts and ends within the same interval. In such cases, you may want to set up your workload, reduction, or filter definitions to catch both the command names as in the following: command = {“automoun” , “automountd”} [Sequential = ID Non-Sequential = ID]
cproc	The number of processes completed in the interval [Sequential = SUM Non-Sequential = SUM]
etime	The elapsed time in seconds for the current interval. This number tells how long a process existed in the current interval. [Sequential = SUM Non-Sequential = SUM]
etime_t	The total elapsed time in seconds. This number tells how long a process existed since it started. For a single process, this is the same as the value of the Time field minus the value of the btime field. [Sequential = LST Non-Sequential = SUM]
fullcmd	The full command string, including arguments, for the process. If a process begins and ends in the sampling interval, the field is unavailable and is marked as <N/A>. This is an important consideration when using a workload, reduction, or filter definition. The number of characters that are stored is determined by the Command Length setting of the Process-Workload Agent configuration file in TeamQuest Manager. You can also have either the first or the last *N* characters of the command displayed. The setting is specified by the Command Orientation setting of the Process-Workload Agent configuration file in TeamQuest Manager. The limit of characters available from the operating system data source is 1020. For a description of how this may affect collection when the LAST Command Orientation is configured for the Process-Workload Agent, see the *TeamQuest Performance Software Administration Guide.* [Sequential = ID Non-Sequential = ID]
gid	The real group identifier of the owner of the process [Sequential = ID Non-Sequential = ID]
group	The group name of the owner of the process. This field is derived from the gid. [Sequential = ID Non-Sequential = ID]
Interval	The expected data sampling interval [Sequential = SUM Non-Sequential = ID]
lioch	The number of logical characters in kilobytes transferred in the current interval [Sequential = SUM Non-Sequential = SUM]

lioch_t	The total number of logical characters in kilobytes transferred since the process started [Sequential = LST Non-Sequential = SUM]
login	The login name of the owner of the process. This field is derived from the uid. [Sequential = ID Non-Sequential = ID]
majflt	The number of major page faults generated in the current interval. A major page fault is a page fault that requires I/O. If a process ends in the sampling interval, the number is unavailable and is marked as <N/A>. [Sequential = SUM Non-Sequential = SUM]
majflt_t	The total number of major page faults generated since the process started. A major page fault is a page fault that requires I/O. If a process ends in the sampling interval, the number is unavailable and is marked as <N/A>. [Sequential = LST Non-Sequential = SUM]
nproc	The number of processes that this process record represents. If a process starts and ends within the same interval, the number is unavailable and is marked as <N/A>. In a reduced record, it is the number of processes that were merged together to form a single process record. When no time consolidation is applied to the process data, this number should equal the sum of cproc and oproc. When consolidating over time, the number represents the average number of processes in the process record for the consolidated period. An average is used because processes can move in and out and between reduced records from interval to interval. [Sequential = AVG Non-Sequential = SUM]
oproc	The number of ongoing processes at the end of the interval [Sequential = LST Non-Sequential = SUM]
pctcpu	The percentage of total available CPU time the process used in the current sampling interval [Sequential = AVG Non-Sequential = SUM]
pid	The process identifier number. If a process starts and ends within an interval, this number is unavailable and is marked as <N/A>. [Sequential = ID Non-Sequential = ID]
pio	The number of physical I/O requests for the current interval. The number reported represents only the completed processes during the sampling interval. [Sequential = SUM Non-Sequential = SUM]
pio_t	The total number of physical I/O requests since the process started. The number reported represents only the completed processes during the sampling interval. [Sequential = LST Non-Sequential = SUM]
ppid	The numerical identifier of the parent of a process. If a process starts and ends within an interval, the number is unavailable and is marked as <N/A>. [Sequential = ID Non-Sequential = ID]

pri	The priority of the process. Higher numbers mean lower priority. If a process ends within an interval, the number is unavailable and is marked as <N/A>. If the process record represents more than one process, the priority is an average of the constituent running processes' priority values. [Sequential = AVG Non-Sequential = AVG]
prmid	The Process Resource Manager (PRM) identifier for the process. This value is only available after the PRM has been installed and configured on your system. Otherwise the value is <N/A>. [Sequential = ID Non-Sequential = ID]
prss	The resident set size in kilobytes of private memory for the process at the end of the sampling interval. If a process ends within the interval, the value is unavailable and is marked as <N/A>. [Sequential = AVG Non-Sequential = SUM]
redname	The reduction name of the process record. If a process did not match any of the reduction definitions, then it would not be reduced and will not have a reduction name. [Sequential = ID Non-Sequential = ID]
rss	The resident set size (real memory size) of the process at the end of the interval. If a process ends within the interval, the value is unavailable and is marked as <N/A>. [Sequential = AVG Non-Sequential = SUM]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
sproc	The number of processes started in the interval [Sequential = SUM Non-Sequential = SUM]
srss	The resident set size in kilobytes of shared memory occupied by all the running processes at the end of the sampling interval. If a process ends within the interval, the value is unavailable and is marked as <N/A>. [Sequential = AVG Non-Sequential = SUM]
syscpu	The system CPU time in seconds for the current interval. System CPU time is the time spent running in kernel mode (for example, the time spent in executing system calls, paging, and so on). If an application is taking a lot of syscpu time, you may want to optimize the use of system calls (for example, use a larger block size for I/O). [Sequential = SUM Non-Sequential = SUM]
syscpu_t	The total system CPU time in seconds [Sequential = LST Non-Sequential = SUM]
System	The name of the system where the data is collected. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]

threads	The number of threads associated with the process at the end of the interval. This value represents the number of lightweight processes (LWPs) or kernel-supported user threads. A thread is a dynamic object that represents a control point in a process and executes a sequence of instructions. [Sequential = LST Non-Sequential = SUM]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
totcpu	The total CPU time in seconds used in the current interval. This number is the same as the sum of usrcpu and syscpu. [Sequential = SUM Non-Sequential = SUM]
totcpu_t	The total CPU time (user + system) in seconds used by the process since it started. This number is the same as the sum of usrcpu_t and syscpu_t. [Sequential = LST Non-Sequential = SUM]
tty	The controlling terminal identifier in dev_t format. For the processes without a controlling terminal, this field will contain a -1. [Sequential = ID Non-Sequential = ID]
ttyname	The controlling terminal for the process. It is a device name without the /dev/ prefix. This is derived from tty. For the processes without a controlling terminal, this field will contain a question mark (?). [Sequential = ID Non-Sequential = ID]
uid	The real user id of the process owner [Sequential = ID Non-Sequential = ID]
usrcpu	The user CPU time in seconds for the current interval. User CPU time is the time spent running in user mode. If an application is taking a lot of usrcpu time, you should try to optimize the code, if possible. [Sequential = SUM Non-Sequential = SUM]
usrcpu_t	The total user CPU time in seconds since the start of the process [Sequential = LST Non-Sequential = SUM]
Workload	The workload set and the workload associated with the process. When the Process-Workload Agent stores the process record, this field is blank. When process records are reported, the workload can be evaluated and is shown in the report. This field is available for reporting only when using TeamQuest Analyzer and TeamQuest tView. Workload evaluation takes place when data is retrieved from the database, based on workload sets defined in the database where the data is stored. Workload sets reported in the Workload field do not have to be active. For more information on workload evaluation, see the *TeamQuest Analyzer User Guide* or *TeamQuest Performance Software Command Line Interfaces Reference Manual*. [Sequential = ID Non-Sequential = ID]

workload:*wlsname*	There is one field for each *wlsname* (Workload Set Name). The value for this field shows the name of the workload to which the process belongs. If a process belongs to none of the workloads, it will display the workload name "OTHER." This field is available for reporting only when using TeamQuest View or TeamQuest cView. [Sequential = ID Non-Sequential = ID]

4.6. Hardware Inventory Statistics

The hardware inventory statistics listed in this section are stored in the TeamQuest performance database tables by the Process-Workload Agent.

The Process-Workload Agent retrieves hardware configuration information. The information is stored upon startup and once-a-day in the HINV.Summary, HINV.CPUModel, HINV.CPU Thread Speeds, HINV.Devices, and HINV.FileSystem table files of the TeamQuest performance database. The information is also stored if the agent detects a change in configuration.

Note: *The storage of hardware inventory records depends on the Hardware Inventory setting in the configuration file of the Process-Workload Agent. For more information, see the section on configuring the Process-Workload Agent in the* TeamQuest Performance Software Administration Guide.

Table Field Hierarchy

Class:	HINV
Subclass:	Summary
IT Resource Name:	/TeamQuest/System/*systemname*
TeamQuest Table Name:	HINV.Summary
Open Table Name:	HINVSUM
Collection interval:	N/A
Default retention:	1 year
Table type:	State

Statistic Name	Description
core_multi_thread	The status or ability of the processor to support multiple independent threads. The field will contain <N/A> if the information is not available. [Non-Sequential = ID]
cores_per_chip	The number of cores or processors on an individual chip. The value will be zero if the information is not available. [Non-Sequential = ID]
cpu_chips	The number of CPU chips or sockets. The value will be zero if the information is not available. [Non-Sequential = ID]

cpu_count	The number of configured processors [Non-Sequential = ID]
cpu_speed	The speed of the processor in MHz or GHz [Non-Sequential = ID]
cpu_type	The basic instruction set architecture of the current system [Non-Sequential = ID]
logical_cpu_count	The number of logical processors [Non-Sequential = ID]
mem_size	The size of configured random access memory in kilobytes, where 1 kilobyte = 1,024 bytes [Non-Sequential = ID]
memory	The size of configured random access memory in megabytes, where 1 megabyte = 1,048,576 bytes [Non-Sequential = ID]
memory_size	The size of configured random access memory in megabytes or gigabytes [Non-Sequential = ID]
model	The name of the hardware implementation or platform [Non-Sequential = ID]
os_release	The name and level of this implementation of the operating system [Non-Sequential = ID]
pagesize	The size of a page of memory [Non-Sequential = ID]
partition_type	The partition type of the system. The value indicates the system hypervisor type, guest type, logical partition type, zone type, or logical domain type. If the system does not have a partition type, this field will be blank. [Non-Sequential = ID]
serial	The hardware-specific serial number of the physical machine [Non-Sequential = ID]
System	The name by which the system is known to a communication network or node name. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Non-Sequential = ID]
system_identifier	The information used to identify the system [Non-Sequential = ID]
system_type	The name of the operating system [Non-Sequential = ID]
Time	The timestamp of the data sample [Non-Sequential = LST]
timezone	The time zone where the data was collected [Non-Sequential = ID]
TQLevel	The level of TeamQuest Manager [Non-Sequential = ID]

The HINV.CPUModel table stores best-match, relative performance data about the system configuration. This table is created by the Hardware Inventory Agent (**tqhinv**) to map physical hardware to a CPU model that describes performance in relative terms. This table is not created for any virtualized system. It is populated for physical systems only. It is not populated for VMware guests, Hyper-V guests, Solaris logical domains (LDOMs), Solaris guest LDOMs, KVM guests, and Linux on POWER systems.

Table Field Hierarchy

Class:	HINV
Subclass:	CPUModel
IT Resource Name:	/TeamQuest/System/*systemname*
TeamQuest Table Name:	HINV.CPUModel
Open Table Name:	HINVCPUM
Collection interval:	N/A
Default retention:	1 year
Table type:	State

Statistic Name	Description
cpu_chips	The number of CPU chips or sockets [Non-Sequential = ID]
cpu_confidence	The percentage of confidence in the correctness of the CPU match based on model, frequency, and configuration (chips, cores, threads) [Non-Sequential = SUM]
cpu_cores	The number of CPU cores or processors on an individual CPU chip [Non-Sequential = ID]
cpu_name	The name of the selected CPU [Non-Sequential = ID]
cpu_relative_performance	The relative performance of the CPU on a common scale [Non-Sequential = ID]
cpu_speed	The speed of the processor in megahertz (MHz) or gigahertz (GHz) [Non-Sequential = ID]
cpu_threads	The number of CPU threads on an individual CPU core or processor [Non-Sequential = ID]
System	The name by which the system is known to a communication network or node name. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Non-Sequential = ID]
system_type	The name of the operating system [Non-Sequential = ID]

Time	The timestamp of the data sample [Non-Sequential = LST]
user_override	The user override status of the default TeamQuest generated CPU match. This field is not currently used and should appear as 0. [Non-Sequential = ID]

Table Field Hierarchy

Class:	HINV
Subclass:	CPU Thread Speeds
IT Resource Name:	/TeamQuest/System/*systemname*
TeamQuest Table Name:	HINV.CPU Thread Speeds
Open Table Name:	HINVCPUTHREADSPEEDS
Collection interval:	N/A
Default retention:	1 year
Table type:	State

Statistic Name	Description
speed_up_factor	The performance improvement when there are multiple active threads per core, compared to when there is only one active thread per core [Non-Sequential = ID]
System	The name by which the system is known to a communication network or node name. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Non-Sequential = ID]
thread_number	The number of active threads [Non-Sequential = ID]
Time	The timestamp of the data sample [Non-Sequential = ID]

Table Field Hierarchy

Class:	HINV
Subclass:	Devices
IT Resource Name:	/TeamQuest/System/*systemname*
TeamQuest Table Name:	HINV.Devices
Open Table Name:	HINVDEVS
Collection interval:	N/A
Default retention:	1 year
Table type:	State

Statistic Name	Description
class	The device classification: controller, disk, or tape [Non-Sequential = ID]
controller	The device path indicator which defines a connection to another device [Non-Sequential = ID]
lun_id	The globally unique Logical Unit Number (LUN) identifier for Storage Area Network (SAN) based disk devices. This field is blank for non-SAN based disk devices, CD-ROM drives, tape drives, and so on. [Non-Sequential = ID]
name	The unique identifier for this device [Non-Sequential = ID]
name2	The alternate device name. This field may be blank. [Non-Sequential = ID]
product	The product identifier. This field may be blank. [Non-Sequential = ID]
revision	The revision level for this product. This field may be blank. [Non-Sequential = ID]
rpm	The speed at which the media spins. If an actual value cannot be obtained for the device, a default value of 7,200 is used. [Non-Sequential = ID]
swap	A true or false statement which indicates whether or not a swap file exists on the device [Non-Sequential = ID]
sequence	The sequence number of the device [Non-Sequential = ID]
System	The name by which the system is known to a communication network or node. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Non-Sequential = ID]

Time	The timestamp of the data sample [Non-Sequential = ID]
vendor	The name of the device vendor. This field may be blank. [Non-Sequential = ID]

Table Field Hierarchy

Class:	HINV
Subclass:	FileSystem
IT Resource Name:	/TeamQuest/System/*systemname*
TeamQuest Table Name:	HINV.FileSystem
Open Table Name:	HINVFILESYS
Collection interval:	N/A
Default retention:	1 year
Table type:	State

Statistic Name	Description
BlkSize	The size of a block on the file system [Non-Sequential = ID]
Device	The path for the device on which the file system is mounted [Non-Sequential = ID]
Name	The unique identifier for the file system [Non-Sequential = ID]
Source	The source physical disk or logical volume of the file system. This field is always blank for this platform. [Non-Sequential = ID]
System	The name by which the system is known to a communication network or node name. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Non-Sequential = ID]
Time	The timestamp of the data sample [Non-Sequential = LST]
TotBlks	The total number of blocks on the file system [Non-Sequential = ID]
TotFiles	The maximum total number of files, as represented by inodes, possible on the file system. Some inodes may be used for entities other than visible files. [Non-Sequential = ID]
TotSize	The total amount of space on the file system in megabytes [Non-Sequential = ID]
Type	The type of the file system [Non-Sequential = ID]

4.7. System Log Statistics

The System Log Agent is used to collect system log messages generated by the system log daemon (syslogd). The System Log Agent stores these messages in the TeamQuest performance database for analysis and alarm reporting. The log messages are separated into four fields; the time that the message was posted, the host system from where the message was initiated, the program or user that posted the message, and the text of the message.

Table Field Hierarchy

Class:	System
Subclass:	System Log
IT Resource Name:	/TeamQuest/System/*systemname*/System Log
TeamQuest Table Name:	System.System Log
Open Table Name:	SYSSYSTEMLOG
Collection interval:	N/A
Default retention:	4 days
Table type:	Event

Statistic Name	Description
Event_Time	The time that the message was logged to the system log [Non-Sequential = ID]
Loghost	The name of the system that logged the message [Non-Sequential = ID]
Message	The message text [Non-Sequential = ID]
Reporter	The name of the user or process that logged the message [Non-Sequential = ID]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Non-Sequential = ID]
Sequence	The sequence number of the message in the sampling interval [Non-Sequential = ID]
System	The name of the system where the log message originated. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Non-Sequential = ID]
Time	The timestamp of the data sample [Non-Sequential = ID]

4.8. General Log Statistics

The General Log Agent is used to collect log messages generated by application programs. The General Log Agent stores these messages in the TeamQuest performance database for analysis. Examples include backup, security, database, and Web server applications.

Table Field Hierarchy

Class:	System
Subclass:	General Log
IT Resource Name:	/TeamQuest/System/*systemname*/General Log
TeamQuest Table Name:	System.General Log
Open Table Name:	SYSGENERALLOG
Collection interval:	N/A
Default retention:	4 days
Table type:	Event

Statistic Name	Description
Message	The message text [Non-Sequential = ID]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Non-Sequential = ID]
Sequence	The sequence number of the message in the sampling interval [Non-Sequential = ID]
System	The name of the system. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Non-Sequential = ID]
Time	The timestamp of the data sample [Non-Sequential = ID]
Type	The message type [Non-Sequential = ID]

4.9. TeamQuest Log Statistics

The following statistics are stored in the performance database tables by the TeamQuest Log Agent. The collection interval and retention periods can be modified. For more information on modifying the collection interval and retention periods, see the *TeamQuest Performance Software Administration Guide*.

Table Field Hierarchy

Class:	Service
Subclass:	TeamQuest Log
IT Resource Name:	/TeamQuest/System/*systemname*/TeamQuest Log
TeamQuest Table Name:	Service.TeamQuestLog
Open Table Name:	SVCTQLOG
Collection interval:	N/A
Default retention:	1 day
Table type:	Event

Statistic Name	Description
Filename	The name of the TeamQuest log file that was the source of the message text [Non-Sequential = ID]
Message	The message text [Non-Sequential = ID]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Non-Sequential = ID]
Sequence	The sequence number of the message in the sampling interval [Non-Sequential = ID]
System	The name of the system. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Non-Sequential = ID]
Time	The timestamp of the data sample [Non-Sequential = ID]
Type	The log message type. This is always set to **tqlog**. [Non-Sequential = ID]

4.10. Derived Statistics

Some products within TeamQuest Performance Software use derived statistics to display common statistics across different platforms. The derived statistics are inserted into the performance database when databases are created. In this section, a derived statistic is marked with an asterisk (*).

You can find information on the following derived statistics:

- Workload Performance Derived Statistics
- TeamQuest On the Web Derived Statistics
- TeamQuest Alert Derived Statistics

4.10.1. Workload Performance Derived Statistics

TeamQuest Manager maintains the following derived statistics that use data from the System Activity Agent and Process-Workload Agent. A derived statistic is marked with an asterisk (*). The workload performance reports reference these statistics. For information on workload performance reports, see the *TeamQuest View Reports Reference Manual*.

Parameter Hierarchy

Class:	Derived
Subclass:	Workload Performance.by Workload
Workload Set:	WLS1, WLS2, ...
Workload:	ALL
Statistic Name:	
%cpu*	The total percentage of CPU utilization. Collected by the Process-Workload Agent.
Kbytes resident memory/process*	The average amount of resident memory used per process. Collected by the Process-Workload Agent.
Kbytes virtual memory/process*	The average amount of virtual memory used per process. Collected by the Process-Workload Agent.
PIOs/sec*	The number of physical I/Os per second. Collected by the Process-Workload Agent.
Population (etime/interval)*	The average number of concurrent processes. Collected by the Process-Workload Agent.
Response (etime/process)*	The elapsed time per process. Collected by the Process-Workload Agent.
Throughput (processes/sec)*	The processes completed per second. Collected by the Process-Workload Agent.
Total Kbytes resident memory*	The average amount of resident memory used. Collected by the Process-Workload Agent.
Total Kbytes virtual memory*	The average amount of virtual memory used. Collected by the Process-Workload Agent.

Class:	Derived
Subclass:	Workload Performance.Summary
Workload Set:	WLS1, WLS2, ...
Statistic Name:	
%cpu*	The total percentage of CPU utilization. Collected by the Process-Workload Agent. View Reports: /report/hp-ux/wkldperf/overall.rpt /report/hp-ux/wkldperf/workload.rpt
block IO avresp*	The average disk I/O response time in milliseconds. Collected by the System Activity Agent. View Report: /report/hp-ux/wkldperf/overall.rpt
block IO r+w/s*	The number of disk I/O response time in milliseconds. Collected by the System Activity Agent. View Report: /report/hp-ux/wkldperf/overall.rpt
Kbytes resident memory/process*	The average amount of resident memory used per process. Collected by the Process-Workload Agent. View Reports: /report/hp-ux/wkldperf/overall.rpt /report/hp-ux/wkldperf/workload.rpt
Kbytes virtual memory/process*	The average amount of virtual memory used per process. Collected by the Process-Workload Agent. View Reports: /report/hp-ux/wkldperf/overall.rpt /report/hp-ux/wkldperf/workload.rpt
PIOs/sec*	The number of physical I/Os per second. Collected by the Process-Workload Agent. View Reports: /report/hp-ux/wkldperf/overall.rpt /report/hp-ux/wkldperf/workload.rpt
Population (etime/interval)*	The average number of concurrent processes. Collected by the Process-Workload Agent. View Reports: /report/hp-ux/wkldperf/overall.rpt /report/hp-ux/wkldperf/workload.rpt
Response (etime/process)*	The elapsed time per process. Collected by the Process-Workload Agent. View Reports: /report/hp-ux/wkldperf/overall.rpt /report/hp-ux/wkldperf/workload.rpt

Throughput (processes/sec)*	The number of processes completed per second. Collected by the Process-Workload Agent. View Reports: /report/hp-ux/wkldperf/overall.rpt /report/hp-ux/wkldperf/workload.rpt
Total Kbytes resident memory*	The average amount of resident memory used for the workload. Collected by the Process-Workload Agent. View Reports: /report/hp-ux/wkldperf/overall.rpt /report/hp-ux/wkldperf/workload.rpt
Total Kbytes virtual memory*	The average amount of virtual memory used for the workload. Collected by the Process-Workload Agent. View Reports: /report/hp-ux/wkldperf/overall.rpt /report/hp-ux/wkldperf/workload.rpt

4.10.2. TeamQuest On the Web Derived Statistics

The derived statistics used by TeamQuest On the Web® include the following:

Parameter Hierarchy

Class:	Derived
Subclass:	TQWeb.Summary
Statistic Name:	
avg_disk_queue_length*	The average number of requests outstanding for all devices
avg_service_time*	The average amount of time to service each transfer request to all devices in milliseconds
buffer_pct_read_cache*	The percentage of logical reads satisfied from the buffer cache
buffer_pct_write_cache*	The percentage of logical writes satisfied from the buffer cache
disk_xfers_per_sec*	The total number of read and write transfers per second for all devices per second
free_disk_space*	The amount of space available (not in use) on all file systems in megabytes. This measurement is taken at the end of the sampling interval and includes the space held back from normal users.
free_real_mem*	The amount of free memory available in megabytes. This measurement is taken at the end of the sampling interval.
free_swap_space*	The amount of free swap space in megabytes
nfs_calls_per_sec*	The total number of NFS calls sent by the client per second
page_ins_per_sec*	The number of page-in requests per second
page_outs_per_sec*	The number of page-out requests per second

page_scans_per_sec*	The rate per second at which the page daemon scans pages to see if they can be freed
pct_cpu_busy*	The percentage of total CPU time the CPU was busy (not idle). This value includes the time running in system mode and user mode.
pct_disk_busy*	The percentage of time a disk was busy servicing a transfer request
pct_sys_cpu*	The percentage of total CPU time spent running in system mode
pct_usr_cpu*	The percentage of total CPU time spent running in user mode
pkt_errors_per_sec*	The total number (in + out) of network errors per second for all network interfaces
pkts_in_per_sec*	The total number of network input packets per second for all network interfaces
pkts_out_per_sec*	The total number of network output packets per second for all network interfaces
pkts_per_sec*	The total number (in + out) of network packets per second for all network interfaces
total_disk_space*	The total (used + available) amount of space on all file systems in megabytes. This measurement is taken at the end of the sampling interval and includes the space held back from normal users.
total_processes*	The number of entries currently being used in the process table. This measurement is taken at the end of the sampling interval.
total_real_mem*	The total amount of real (physical) memory in megabytes. This measurement is taken at the end of the sampling interval.
total_swap_space*	The total number of megabytes available for swapping

4.10.3. TeamQuest Alert Derived Statistics

The derived statistics used by TeamQuest Alert include the following:

Parameter Hierarchy

Class:	Derived
Subclass:	TQAlert.Summary
Statistic Name:	
free_real_mem*	The average amount of memory available to user processes in megabytes
net_errors*	The number of network errors for all network interfaces
page_scans*	The rate per second at which the page daemon scans pages to see if they can be freed
pct_swap_free*	The percentage of unused swap space in megabytes at the end of the interval
pct_wio*	The percentage of time spent idle while processes are waiting for I/O completion
run_queue*	The average length of the run queue (a queue of processes in memory and runnable) while the run queue is occupied
total_processes*	The total number of processes active on the system

Section 5
Hyper-V Statistics

The Hyper-V Agent collects performance data on Microsoft Windows Server systems configured in the Hyper-V role. The Hyper-V Agent can collect and store performance information on all Microsoft provided Hyper-V statistics. These statistics include hypervisor, host, and virtual machine related statistics.

This section contains a listing of the statistics collected by the agent:

- Hypervisor Statistics (see 5.1)
- Virtual Machine Statistics (see 5.2)
- Host Statistics (see 5.3)
- I/O Statistics (see 5.4)
- Network Statistics (see 5.5)

Note: *At the end of each statistic description, you will see a notation in brackets indicating the method that is used for data consolidation (for example,* [Sequential = SUM Non-Sequential = SUM]). *Sequential means that the field is consolidated over time. Non-Sequential means that the field is consolidated within a specified time interval.*

The following notations are used:

AVG = Average
DIV = Weight
FST = First
ID = Identifier
LST = Last
MAX = Maximum
MIN = Minimum
NON = None or no method was used
SUM = Summation

5.1. Hypervisor Statistics

The Hyper-V Agent stores hypervisor statistics in the performance database tables.

Table Field Hierarchy

Class:	Hyper-V
Subclass:	Hypervisor
IT Resource Name:	/TeamQuest/System/Hyper-V/Hosts/*hostname*
TeamQuest Table Name:	Hyper-V.Hypervisor
Open Table Name:	HVHYP
Collection interval:	300 seconds (default)
Default retentions:	3 days at collection period interval 8 days at 10-minute intervals 4 months at 1-hour intervals 9 months at 24-hour intervals
Table type:	Performance

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
Logical_Processors	The number of logical processors that are present in the system [Sequential = LST Non-Sequential = SUM]
Monitored_Notifications	The number of monitored notifications that are registered with the hypervisor [Sequential = LST Non-Sequential = SUM]
Partitions	The number of partitions (virtual machines) that are present in the system [Sequential = LST Non-Sequential = SUM]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
System	The name of the Hyper-V system [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]

Total_Pages	The number of bootstrap and deposited pages in the hypervisor [Sequential = LST Non-Sequential = SUM]
Virtual_Processors	The number of virtual processors that are present in the system [Sequential = LST Non-Sequential = SUM]

Table Field Hierarchy

Class:	Hyper-V
Subclass:	Hypervisor Logical Processor
IT Resource Name:	/TeamQuest/System/Hyper-V/Hosts/*hostname*
TeamQuest Table Name:	Hyper-V.Hypervisor Logical Processor
Open Table Name:	HVHYPLOGPROC
Collection interval:	300 seconds (default)
Default retentions:	3 days at collection period interval 8 days at 10-minute intervals 4 months at 1-hour intervals 9 months at 24-hour intervals
Table type:	Performance

Statistic Name	Description
%_C1_Time	The percentage of time the logical processor spent in the C1 low-power idle state. This statistic is a subset of the total processor idle time. [Sequential = DIV Non-Sequential = AVG]
%_C2_Time	The percentage of time the logical processor spent in the C2 low-power idle state. This statistic is a subset of the total processor idle time. [Sequential = DIV Non-Sequential = AVG]
%_C3_Time	The percentage of time the logical processor spent in the C3 low-power idle state. This statistic is a subset of the total processor idle time. [Sequential = DIV Non-Sequential = AVG]
%_Guest_Run_Time	The percentage of time guest code is running on a logical processor (LP) [Sequential = DIV Non-Sequential = AVG]
%_Hypervisor_Run_Time	The percentage of time the hypervisor is running on a logical processor (LP) [Sequential = DIV Non-Sequential = AVG]
%_Idle_Time	The percentage of time the logical processor (LP) is waiting for work [Sequential = DIV Non-Sequential = AVG]
%_of_Max_Frequency	The percentage of the current processor's maximum frequency. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = DIV Non-Sequential = AVG]

%_Total_Run_Time	The percentage of time spent by the logical processor (LP) in guest and hypervisor code. Calculated as % Guest Run Time + % Hypervisor Run Time [Sequential = DIV Non-Sequential = AVG]
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
C1_Transitions/sec	The number of times per second the CPU enters the C1 low-power idle state [Sequential = DIV Non-Sequential = SUM]
C2_Transitions/sec	The number of times per second the CPU enters the C2 low-power idle state [Sequential = DIV Non-Sequential = SUM]
C3_Transitions/sec	The number of times per second the CPU enters the C3 low-power idle state [Sequential = DIV Non-Sequential = SUM]
Context_Switches/sec	The number of times per second a new virtual processor (VP) has been scheduled to a logical processor (LP) [Sequential = DIV Non-Sequential = SUM]
Frequency	The frequency of the current processor in megahertz [Sequential = DIV Non-Sequential = AVG]
Hardware_Interrupts/sec	The number of hardware interrupts on the processor (excluding hypervisor interrupts) per second [Sequential = DIV Non-Sequential = SUM]
Inter-Processor_Interrupts_Sent/sec	The number of interrupts sent per second from one processor to another in order to get the processor to do memory coherency [Sequential = DIV Non-Sequential = SUM]
Inter-Processor_Interrupts/sec	The number of inter-processor interrupts (IPI) received per second of a given logical processor (LP) [Sequential = DIV Non-Sequential = SUM]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
Logical_Processor	The logical processor index number. For example, LP 0. [Sequential = ID Non-Sequential = ID]
Monitor_Transition_Cost	The cost to enter the hypervisor through an intercept on a logical processor (LP) [Sequential = DIV Non-Sequential = AVG]
Parking_Status	The parking status of the current processor. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = DIV Non-Sequential = AVG]

Processor_State_Flags	The state flags of the current processor. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = DIV Non-Sequential = AVG]
Root_VP_Index	The index of the root virtual processor that is affinity bound to the logical processor. A value greater than the maximum possible root virtual processor (VP) index indicates no binding. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = DIV Non-Sequential = AVG]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
Scheduler_Interrupts/sec	The number of interrupts sent per second by the hypervisor scheduler from one logical processor (LP) to another [Sequential = DIV Non-Sequential = SUM]
System	The name of the Hyper-V system [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
Timer_Interrupts/sec	The number of hypervisor timer interrupts per second on the logical processor (LP) [Sequential = DIV Non-Sequential = SUM]
Total_Interrupts/sec	The number of hardware and hypervisor interrupts per second [Sequential = DIV Non-Sequential = SUM]

Table Field Hierarchy

Class:	Hyper-V
Subclass:	Hypervisor Partition
IT Resource Name:	/TeamQuest/System/Hyper-V/Virtual Machines/*virtualmachinename*
TeamQuest Table Name:	Hyper-V.Hypervisor Partition
Open Table Name:	HVHYPPART
Collection interval:	300 seconds (default)
Default retentions:	3 days at collection period interval 8 days at 10-minute intervals 4 months at 1-hour intervals 9 months at 24-hour intervals
Table type:	Performance

Statistic Name	Description
1_G_device_pages	The number of 1 GB pages present in the device space of the partition. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
1G_GPA_pages	The number of 1 GB pages present in the guest physical address (GPA) space of the partition [Sequential = LST Non-Sequential = SUM]
2_M_device_pages	The number of 2 MB pages present in the device space of the partition. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
2M_GPA_pages	The number of 2 MB pages present in the guest physical address (GPA) space of the partition [Sequential = LST Non-Sequential = SUM]
4_K_device_pages	The number of 4 KB pages present in the device space of the partition. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
4K_GPA_pages	The number of 4 KB pages present in the guest physical address (GPA) space of the partition [Sequential = LST Non-Sequential = SUM]
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
Address_Spaces	The number of address spaces in the virtual translation lookaside buffer (TLB) of the partition [Sequential = LST Non-Sequential = SUM]

Attached_Devices	The number of devices attached to the partition. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
Deposited_Pages	The number of pages that are deposited into the partition. This value shows how much memory the hypervisor is using for managing the partition. [Sequential = LST Non-Sequential = SUM]
Device_DMA_Errors	The number of illegal direct memory access requests generated by all devices assigned to the partition. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
Device_Interrupt_Errors	The number of illegal interrupt requests generated by all devices assigned to the partition. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
Device_Interrupt_ Mappings	The number of device interrupt mappings used by the partition. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
Device_Interrupt_ Throttle_Events	The number of times an interrupt from a device assigned to the partition was temporarily throttled because the device was generating too many interrupts. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
GPA_Pages	The number of pages that are present in the guest physical address (GPA) space of the partition. This value is 0 for the host. [Sequential = LST Non-Sequential = SUM]
GPA_Space_ Modifications/sec	The number of modifications to the guest physical address (GPA) space of the partition per second [Sequential = DIV Non-Sequential = SUM]
I/O_TLB_Flush_Cost	The average amount of time in nanoseconds spent processing an I/O translation lookaside buffer (TLB) flush. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = DIV Non-Sequential = SUM]
I/O_TLB_Flushes/sec	The number of flushes of I/O translation lookaside buffers (TLB) of the partition per second. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = DIV Non-Sequential = SUM]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
Recommended_Virtual_ TLB_Size	The recommended number of pages to be deposited for the virtual translation lookaside buffer (TLB) [Sequential = LST Non-Sequential = SUM]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]

Skipped_Timer_Ticks	The number of timer interrupts skipped for the partition. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
System	The name of the Hyper-V system [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
Virtual_Machine	The name of the Hyper-V virtual machine [Sequential = ID Non-Sequential = ID]
Virtual_Processors	The number of virtual processors that are present in the partition [Sequential = LST Non-Sequential = SUM]
Virtual_TLB_Flush_ Entires/sec	The number of flushes per second on the virtual translation lookaside buffer (TLB) [Sequential = AVG Non-Sequential = SUM]
Virtual_TLB_Pages	The number of pages used by the virtual translation lookaside buffer (TLB) [Sequential = LST Non-Sequential = SUM]

Table Field Hierarchy

Class:	Hyper-V
Subclass:	Hypervisor Root Partition
IT Resource Name:	/TeamQuest/System/Hyper-V/Hosts/*hostname*
TeamQuest Table Name:	Hyper-V.Hypervisor Root Partition
Open Table Name:	HVHYPROOTPART
Collection interval:	300 seconds (default)
Default retentions:	3 days at collection period interval 8 days at 10-minute intervals 4 months at 1-hour intervals 9 months at 24-hour intervals
Table type:	Performance

Statistic Name	Type	Description
1_G_device_pages	Double	The number of 1 GB pages present in the device space of the partition. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
1G_GPA_pages	Double	The number of 1 GB pages present in the guest physical address (GPA) space of the partition [Sequential = LST Non-Sequential = SUM]

2_M_device_pages	Double	The number of 2 MG pages present in the device space of the partition. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
2M_GPA_pages	Double	The number of 2 MB pages present in the guest physical address (GPA) space of the partition [Sequential = LST Non-Sequential = SUM]
4_K_device_pages	Double	The number of 4 KB pages present in the device space of the partition. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
4K_GPA_pages	Double	The number of 4 KB pages present in the guest physical address (GPA) space of the partition [Sequential = LST Non-Sequential = SUM]
Actual_Interval	Long	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
Address_Spaces	Double	The number of address spaces in the virtual translation lookaside buffer (TLB) of the partition [Sequential = LST Non-Sequential = SUM]
Attached_Devices	Double	The number of devices attached to the partition. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
Deposited_Pages	Double	The number of pages that are deposited into the partition. This value shows how much memory the hypervisor is using for managing the partition. [Sequential = LST Non-Sequential = SUM]
Device_DMA_Errors	Double	The number of illegal direct memory access requests generated by all devices assigned to the partition. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
Device_Interrupt_Errors	Double	The number of illegal interrupt requests generated by all devices assigned to the partition [Sequential = LST Non-Sequential = SUM]

Device_Interrupt_Mappings	Double	The number of device interrupt mappings used by the partition. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
Device_Interrupt_Throttle_Events	Double	The number of times an interrupt from a device assigned to the partition was temporarily throttled because the device was generating too many interrupts. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
GPA_Pages	Double	The number of pages that are present in the guest physical address (GPA) space of the partition. This value is 0 for the host. [Sequential = LST Non-Sequential = SUM]
GPA_Space_Modifications/sec	Double	The number of modifications to the guest physical address (GPA) space of the partition per second [Sequential = DIV Non-Sequential = SUM]
I/O_TLB_Flush_Cost	Double	The average amount of time in nanoseconds spent processing an I/O translation lookaside buffer (TLB) flush [Sequential = AVG Non-Sequential = SUM]
I/O_TLB_Flushes/sec	Double	The number of flushes of I/O translation lookaside buffers (TLB) of the partition per second [Sequential = AVG Non-Sequential = SUM]
Interval	Long	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
Partition	String	The name of the Hyper-V host [Sequential = ID Non-Sequential = ID]
Recommended_Virtual_TLB_Size	Double	The recommended number of pages to be deposited for the virtual translation lookaside buffer (TLB) [Sequential = LST Non-Sequential = SUM]
Sample_End_Time	Double	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
Skipped_Timer_Ticks	Double	The number of timer interrupts skipped for the partition. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
System	String	The name of the Hyper-V system [Sequential = ID Non-Sequential = ID]

Time	Long	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
Virtual_Processors	Double	The number of virtual processors that are present in the partition [Sequential = LST Non-Sequential = SUM]
Virtual_TLB_Flush_Entires/sec	Double	The number of flushes on the virtual translation lookaside buffer (TLB) per second [Sequential = DIV Non-Sequential = SUM]
Virtual_TLB_Pages	Double	The number of pages used by the virtual translation lookaside buffer (TLB) [Sequential = LST Non-Sequential = SUM]

Table Field Hierarchy

Class:	Hyper-V
Subclass:	Hypervisor Root Virtual Processor
IT Resource Name:	/TeamQuest/System/Hyper-V/Hosts/*hostname*
TeamQuest Table Name:	Hyper-V.Hypervisor Root Virtual Processor
Open Table Name:	HVHYPROOTVPROC
Collection interval:	300 seconds (default)
Default retentions:	3 days at collection period interval 8 days at 10-minute intervals 4 months at 1-hour intervals 9 months at 24-hour intervals
Table type:	Performance

Statistic Name	Description
%_Guest_Run_Time	The percentage of time the root virtual processor (VP) is running in non-hypervisor code on a logical processor (LP) [Sequential = DIV Non-Sequential = AVG]
%_Hypervisor_Run_Time	The percentage of time the root virtual processor (VP) is running in hypervisor code on a logical processor (LP) [Sequential = DIV Non-Sequential = AVG]
%_Remote_Run_Time	The percentage of time spent by the virtual processor in hypervisor code. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = DIV Non-Sequential = AVG]
%_Total_Run_Time	The percentage of time spent by the virtual processor in guest and hypervisor code per virtual processor. Calculated as % Guest Run Time + % Hypervisor Run Time [Sequential = DIV Non-Sequential = AVG]

Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
Address_Domain_Flushes/sec	The number of explicit flushes of the virtual translation lookaside buffer (TLB) by guest code on the virtual processor per second [Sequential = DIV Non-Sequential = SUM]
Address_Space_Evictions/sec	The number of address space evictions in the virtual translation lookaside buffer (TLB) per second [Sequential = DIV Non-Sequential = SUM]
Address_Space_Flushes/sec	The number of explicit flushes of one address space by guest code on the virtual processor per second [Sequential = DIV Non-Sequential = SUM]
Address_Space_Switches/sec	The number of address space switches by guest code on the virtual processor per second [Sequential = DIV Non-Sequential = SUM]
APIC_EOI_Accesses/sec	The number of Advanced Programmable Interrupt Controller (APIC) end of interrupt (EOI) register writes by guest code on the virtual processor per second [Sequential = DIV Non-Sequential = SUM]
APIC_IPIs_Sent/sec	The number of Advanced Programmable Interrupt Controller (APIC) inter-processor interrupts (IPI) (including to self) sent to the virtual processor per second [Sequential = DIV Non-Sequential = SUM]
APIC_MMIO_Accesses/sec	The number of Advanced Programmable Interrupt Controller (APIC) Memory-mapped I/O (MMIO) register accesses by guest code on the virtual processor per second [Sequential = DIV Non-Sequential = SUM]
APIC_Self_IPIs_Sent/sec	The number of Advanced Programmable Interrupt Controller (APIC) inter-processor interrupts (IPI) sent by the virtual processor to itself per second [Sequential = DIV Non-Sequential = SUM]
APIC_TPR_Accesses/sec	The number of Advanced Programmable Interrupt Controller (APIC) task priority (TPR) accesses by guest code on the virtual processor per second [Sequential = DIV Non-Sequential = SUM]
Control_Register_Accesses/sec	The number of control register accesses by guest code on the virtual processor per second [Sequential = DIV Non-Sequential = SUM]
Control_Register_Accesses_Cost	The average amount of time in nanoseconds spent processing a control register access per second [Sequential = DIV Non-Sequential = AVG]

CPU_Wait_Time_Per_Dispatch	The average amount of time in nanoseconds spent waiting for a virtual processor to be dispatched onto a logical processor. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = DIV Non-Sequential = AVG]
CPUID_Instructions_Cost	The relative measure of the cost of the CPUID instruction. The CPUID instruction is used to retrieve information on the local CPU capabilities. [Sequential = DIV Non-Sequential = AVG]
CPUID_Instructions/sec	The number of CPUID instruction calls per second [Sequential = DIV Non-Sequential = SUM]
Debug_Register_Accesses_Cost	The average amount of time in nanoseconds spent handling a debug register access [Sequential = DIV Non-Sequential = AVG]
Debug_Register_Accesses/sec	The number of debug register accesses by guest code on the virtual processor per second [Sequential = DIV Non-Sequential = SUM]
Emulated_Instructions_Cost	The relative measure of the cost of emulation [Sequential = DIV Non-Sequential = AVG]
Emulated_Instructions/sec	The number of emulated instructions completed per second [Sequential = DIV Non-Sequential = SUM]
External_Interrupts_Cost	The average amount of time in nanoseconds spent processing an external interrupt [Sequential = DIV Non-Sequential = AVG]
External_Interrupts/sec	The number of external interrupts received by the hypervisor while executing guest code on the virtual processor per second [Sequential = DIV Non-Sequential = SUM]
Global_GVA_Range_Flushes/sec	The number of explicit flushes of a guest virtual address (GVA) range in all address spaces by guest code on the virtual processor per second [Sequential = DIV Non-Sequential = SUM]
GPA_Space_Hypercalls/sec	The number of guest physical address (GPA) space hypercalls made by guest code on the virtual processor per second [Sequential = DIV Non-Sequential = SUM]
Guest_Page_Table_Maps/sec	The number of map operations for guest page table pages per second [Sequential = DIV Non-Sequential = SUM]
Hardware_Interrupts/sec	The number of hardware interrupts from attached devices on the virtual processor. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = DIV Non-Sequential = SUM]
HLT_Instructions_Cost	The average amount of time in nanoseconds spent processing a halt (HLT) instruction [Sequential = DIV Non-Sequential = AVG]

HLT_Instructions/sec	The number of CPU halts per second on the virtual processor (VP) [Sequential = DIV Non-Sequential = SUM]
Hypercalls_Cost	The average amount of time in nanoseconds spent processing a hypercall [Sequential = DIV Non-Sequential = AVG]
Hypercalls/sec	The number of hypercalls made by the guest code on the virtual processor (VP) per second [Sequential = DIV Non-Sequential = SUM]
Interval	The expected sampling interval in seconds [Sequential = DIV Non-Sequential = AVG]
IO_Instructions_Cost	The average amount of time in nanoseconds spent processing an I/O instruction [Sequential = DIV Non-Sequential = AVG]
IO_Instructions/sec	The number of I/O instructions executed by guest code on a virtual processor (VP) per second [Sequential = DIV Non-Sequential = SUM]
IO_Intercept_Messages/sec	The number of I/O intercept messages sent to the parent partition per second [Sequential = DIV Non-Sequential = SUM]
Large_Page_TLB_Fills/sec	The number of large page translation lookaside buffer (TLB) fills per second [Sequential = DIV Non-Sequential = SUM]
Local_Flushed_GVA_Ranges/sec	The number of explicit flushes of a guest virtual address (GVA) range in one address space by guest code on the virtual processor (VP) per second [Sequential = DIV Non-Sequential = SUM]
Logical_Processor_Dispatches/sec	The number of dispatches of this virtual processor onto logical processors. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = DIV Non-Sequential = SUM]
Logical_Processor_Hypercalls/sec	The number of logical processor hypercalls made by guest code on the virtual processor (VP) per second [Sequential = DIV Non-Sequential = SUM]
Logical_Processor_Migrations/sec	The number of migrations by the virtual processor to a logical processor per second [Sequential = DIV Non-Sequential = SUM]
Long_Spin_Wait_Hypercalls/sec	The number of long spin wait hypercalls made by guest code on the virtual processor (VP) per second [Sequential = DIV Non-Sequential = SUM]
Memory_Intercept_Messages/sec	The number of memory intercept messages sent to the parent partition per second [Sequential = DIV Non-Sequential = SUM]
MSR_Accesses_Cost	The relative measure of the cost of the machine-specific register (MSR) instruction [Sequential = DIV Non-Sequential = AVG]

MSR_Accesses/sec	The number of machine-specific register (MSR) instruction calls per second [Sequential = DIV Non-Sequential = SUM]
MWAIT_Instructions_Cost	The relative measure of the cost of the MONITOR WAIT (MWAIT) instructions [Sequential = DIV Non-Sequential = AVG]
MWAIT_Instructions/sec	The number of MONITOR WAIT (MWAIT) instructions per second [Sequential = DIV Non-Sequential = SUM]
Nested_Page_Fault_Intercepts_Cost	The average amount of time in nanoseconds spent processing a nested page fault intercept. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = DIV Non-Sequential = AVG]
Nested_Page_Fault_Intercepts/sec	The number of nested page fault exceptions intercepted by the hypervisor while executing the guest virtual processor. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = DIV Non-Sequential = AVG]
Other_Hypercalls/sec	The number of other hypercalls made by guest code on the virtual processor per second [Sequential = DIV Non-Sequential = SUM]
Other_Intercepts_Cost	The average amount of time in nanoseconds spent processing other intercepts [Sequential = DIV Non-Sequential = AVG]
Other_Intercepts/sec	The number of other intercepts triggered by guest code on a virtual processor per second [Sequential = DIV Non-Sequential = SUM]
Other_Messages/sec	The number of other intercept messages sent to the parent partition per second [Sequential = DIV Non-Sequential = SUM]
Page_Fault_Intercepts_Cost	The relative measure of the cost of a page fault intercept [Sequential = DIV Non-Sequential = AVG]
Page_Fault_Intercepts/sec	The number of page fault intercepts per second. Whenever guest code accesses a page not in the CPU translation lookaside buffer (TLB), a page fault occurs. [Sequential = DIV Non-Sequential = SUM]
Page_Invalidations_Cost	The average amount of time in nanoseconds spent processing an invalid page (INVLPG) instruction [Sequential = DIV Non-Sequential = AVG]
Page_Invalidations/sec	The number of invalid page (INVLPG) instructions executed by guest code on the virtual processor per second [Sequential = DIV Non-Sequential = SUM]
Page_Table_Allocations/sec	The number of page table allocations in the virtual translation lookaside buffer (TLB) per second [Sequential = DIV Non-Sequential = SUM]

Page_Table_Evictions/sec	The number of page table evictions in the virtual translation lookaside buffer (TLB) per second [Sequential = DIV Non-Sequential = SUM]
Page_Table_Reclamations/sec	The number of reclamations of unreferenced page tables in the virtual translation lookaside buffer (TLB) per second [Sequential = DIV Non-Sequential = SUM]
Page_Table_Resets/sec	The number of page table resets in the virtual translation lookaside buffer (TLB) per second [Sequential = DIV Non-Sequential = SUM]
Page_Table_Validations/sec	The number of page table validations to remove state entries in the virtual translation lookaside buffer (TLB) per second [Sequential = DIV Non-Sequential = SUM]
Page_Table_Write_Intercepts/sec	The number of write intercepts on guest page tables by guest code on the virtual processor per second [Sequential = DIV Non-Sequential = SUM]
Pending_Interrupts_Cost	The average amount of time in nanoseconds spent processing a pending interrupt intercept [Sequential = DIV Non-Sequential = AVG]
Pending_Interrupts/sec	The number of interrupts per second due to a task priority (TPR) reduction by guest code on the virtual processor [Sequential = DIV Non-Sequential = SUM]
Reflected_Guest_Page_Faults/sec	The number of page fault exceptions delivered to the guest per second [Sequential = DIV Non-Sequential = SUM]
Root_Virtual_Processor	The root virtual processor index number. For example, VP 0. [Sequential = ID Non-Sequential = ID]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
Small_Page_TLB_Fills/sec	The number of virtual translation lookaside buffer (TLB) misses on 4K pages per second [Sequential = DIV Non-Sequential = SUM]
Synthetic_Interrupt_Hypercalls/sec	The number of synthetic interrupt hypercalls made by guest code on the virtual processor per second [Sequential = DIV Non-Sequential = SUM]
Synthetic_Interrupts/sec	The number of synthetic interrupts delivered to the virtual processor per second [Sequential = DIV Non-Sequential = SUM]
System	The name of the Hyper-V system [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]

Total_Intercepts_Cost	The relative measure of the cost of intercepts [Sequential = DIV Non-Sequential = AVG]
Total_Intercepts/sec	The number of intercepts per second. An intercept occurs whenever a guest virtual processor (VP) needs to exit its current mode of running for servicing in the hypervisor. [Sequential = DIV Non-Sequential = SUM]
Total_Messages/sec	The number of messages sent to the parent partition per second [Sequential = DIV Non-Sequential = SUM]
Virtual_Interrupt_Hypercalls/sec	The number of virtual interrupt hypercalls made by guest code on the virtual processor per second [Sequential = DIV Non-Sequential = SUM]
Virtual_Interrupts/sec	The number of interrupts (including synthetic interrupts) delivered to the virtual processor per second [Sequential = DIV Non-Sequential = SUM]
Virtual_MMU_Hypercalls/sec	The number of virtual memory management unit (MMU) hypercalls made by the guest code on the virtual processor per second [Sequential = DIV Non-Sequential = SUM]
Virtual_Processor_Hypercalls/sec	The number of virtual processor hypercalls made by guest code on the virtual processor per second [Sequential = DIV Non-Sequential = SUM]

Table Field Hierarchy

Class:	Hyper-V
Subclass:	Hypervisor Virtual Processor
IT Resource Name:	/TeamQuest/System/Hyper-V/Virtual Machines/*virtualmachinename*
TeamQuest Table Name:	Hyper-V.Hypervisor Virtual Processor
Open Table Name:	HVHYPVPROC
Collection interval:	300 seconds (default)
Default retentions:	3 days at collection period interval 8 days at 10-minute intervals 4 months at 1-hour intervals 9 months at 24-hour intervals
Table type:	Performance

Statistic Name	**Description**
%_Guest_Run_Time	The percentage of time the guest virtual processor (VP) is running in non-hypervisor code on a logical processor (LP) [Sequential = DIV Non-Sequential = AVG]
%_Hypervisor_Run_Time	The percentage of time the guest virtual processor (VP) is running in hypervisor code on a logical processor (LP) [Sequential = DIV Non-Sequential = AVG]

%_Remote_Run_Time	The percentage of time spent by the virtual processor in hypervisor code. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = DIV Non-Sequential = AVG]
%_Total_Run_Time	The percentage of time spent by the virtual processor in guest and hypervisor code per virtual processor. Calculated as % Guest Run Time + % Hypervisor Run Time [Sequential = DIV Non-Sequential = AVG]
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
Address_Domain_ Flushes/sec	The number of explicit flushes of the virtual translation lookaside buffer (TLB) by guest code on the virtual processor per second [Sequential = DIV Non-Sequential = SUM]
Address_Space_ Evictions/sec	The number of address space evictions in the virtual translation lookaside buffer (TLB) per second [Sequential = DIV Non-Sequential = SUM]
Address_Space_ Flushes/sec	The number of explicit flushes of one address space by guest code on the virtual processor per second [Sequential = DIV Non-Sequential = SUM]
Address_Space_ Switches/sec	The number of address space switches by guest code on the virtual processor per second [Sequential = DIV Non-Sequential = SUM]
APIC_EOI_Accesses/sec	The number of Advanced Programmable Interrupt Controller (APIC) end of interrupt (EOI) register writes by guest code on the virtual processor per second [Sequential = DIV Non-Sequential = SUM]
APIC_IPIs_Sent/sec	The number of Advanced Programmable Interrupt Controller (APIC) inter-processor interrupts (IPI) (including to self) sent to the virtual processor per second [Sequential = DIV Non-Sequential = SUM]
APIC_MMIO_ Accesses/sec	The number of Advanced Programmable Interrupt Controller (APIC) Memory-mapped I/O (MMIO) register accesses by guest code on the virtual processor per second [Sequential = DIV Non-Sequential = SUM]
APIC_Self_IPIs_Sent/sec	The number of Advanced Programmable Interrupt Controller (APIC) inter-processor interrupts (IPI) sent by the virtual processor to itself per second [Sequential = DIV Non-Sequential = SUM]
APIC_TPR_Accesses/sec	The number of Advanced Programmable Interrupt Controller (APIC) task priority (TPR) accesses by guest code on the virtual processor per second [Sequential = DIV Non-Sequential = SUM]

Control_Register_ Accesses/sec	The number of control register accesses by guest code on the virtual processor per second [Sequential = DIV Non-Sequential = SUM]
Control_Register_ Accesses_Cost	The average amount of time in nanoseconds spent processing a control register access per second [Sequential = DIV Non-Sequential = AVG]
CPU Wait Time Per Dispatch	The average amount of time in nanoseconds spent waiting for a virtual processor to be dispatched onto a logical processor. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = DIV Non-Sequential = AVG]
CPUID_Instructions_ Cost	The relative measure of the cost of the CPUID instruction. CPUID instruction is used to retrieve information on the local CPU capabilities. [Sequential = DIV Non-Sequential = AVG]
CPUID_Instructions/sec	The number of CPUID instruction calls per second [Sequential = DIV Non-Sequential = SUM]
Debug_Register_ Accesses_Cost	The average amount of time in nanoseconds spent handling a debug register access [Sequential = DIV Non-Sequential = AVG]
Debug_Register_ Accesses/sec	The number of debug register accesses by guest code on the virtual processor per second [Sequential = DIV Non-Sequential = SUM]
Emulated_Instructions_ Cost	The relative measure of the cost of instruction emulation [Sequential = DIV Non-Sequential = AVG]
Emulated_ Instructions/sec	The number of emulated instructions completed per second [Sequential = DIV Non-Sequential = SUM]
External_Interrupts_ Cost	The average amount of time in nanoseconds spent processing an external interrupt [Sequential = DIV Non-Sequential = AVG]
External_Interrupts/sec	The number of external interrupts received by the hypervisor while executing guest code on the virtual processor per second [Sequential = DIV Non-Sequential = SUM]
Global_GVA_Range_ Flushes/sec	The number of explicit flushes of a guest virtual address (GVA) range in all address spaces by guest code on the virtual processor per second [Sequential = DIV Non-Sequential = SUM]
GPA_Space_ Hypercalls/sec	The number of guest physical address (GPA) space hypercalls made by guest code on the virtual processor per second [Sequential = DIV Non-Sequential = SUM]
Guest_Page_Table_ Maps/sec	The number of map operations for guest page table pages per second [Sequential = DIV Non-Sequential = SUM]
Hardware_ Interrupts/sec	The number of hardware interrupts from attached devices on the virtual processor. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = DIV Non-Sequential = AVG]

HLT_Instructions_Cost	The average amount of time in nanoseconds spent processing a halt (HLT) instruction [Sequential = DIV Non-Sequential = AVG]
HLT_Instructions/sec	The number of CPU halts per second on the virtual processor (VP) [Sequential = DIV Non-Sequential = SUM]
Hypercalls_Cost	The average amount of time in nanoseconds spent processing a hypercall [Sequential = DIV Non-Sequential = AVG]
Hypercalls/sec	The number of hypercalls made by the guest code on the virtual processor (VP) per second [Sequential = DIV Non-Sequential = SUM]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
IO_Instructions_Cost	The average amount of time in nanoseconds spent processing an I/O instruction [Sequential = DIV Non-Sequential = AVG]
IO_Instructions/sec	The number of I/O instructions executed by guest code on a virtual processor (VP) per second [Sequential = DIV Non-Sequential = SUM]
IO_Intercept_ Messages/sec	The number of I/O intercept messages sent to the parent partition per second [Sequential = DIV Non-Sequential = SUM]
Large_Page_TLB_ Fills/sec	The number of large page translation lookaside buffer (TLB) fills per second [Sequential = DIV Non-Sequential = SUM]
Local_Flushed_GVA_ Ranges/sec	The number of explicit flushes of a guest virtual address (GVA) range in one address space by guest code on the virtual processor (VP) per second [Sequential = DIV Non-Sequential = SUM]
Logical_Processor_ Dispatches/sec	The number of dispatches of the virtual processor onto logical processors. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = DIV Non-Sequential = AVG]
Logical_Processor_ Hypercalls/sec	The number of logical processor hypercalls made by guest code on the virtual processor (VP) per second [Sequential = DIV Non-Sequential = SUM]
Logical_Processor_ Migrations/sec	The number of migrations by the virtual processor to a logical processor per second [Sequential = DIV Non-Sequential = SUM]
Long_Spin_Wait_ Hypercalls/sec	The number of long spin wait hypercalls made by guest code on the virtual processor (VP) per second [Sequential = DIV Non-Sequential = SUM]
Memory_Intercept_ Messages/sec	The number of memory intercept messages sent to the parent partition per second [Sequential = DIV Non-Sequential = SUM]

MSR_Accesses_Cost	The relative measure of the cost of the machine-specific register (MSR) instruction [Sequential = DIV Non-Sequential = AVG]
MSR_Accesses/sec	The number of machine-specific register (MSR) instruction calls per second [Sequential = DIV Non-Sequential = SUM]
MWAIT_Instructions_ Cost	The relative measure of the cost of the MONITOR WAIT (MWAIT) instructions [Sequential = DIV Non-Sequential = AVG]
MWAIT_Instructions/sec	The number of MONITOR WAIT (MWAIT) instructions per second [Sequential = DIV Non-Sequential = SUM]
Nested_Page_Fault_ Intercepts_Cost	The average amount of time in nanoseconds spent processing a nested page fault intercept. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = DIV Non-Sequential = AVG]
Nested_Page_Fault_ Intercepts/sec	The number of nested page fault exceptions intercepted by the hypervisor while executing the guest virtual processor. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = DIV Non-Sequential = AVG]
Other_Hypercalls/sec	The number of other hypercalls made by guest code on the virtual processor per second [Sequential = DIV Non-Sequential = SUM]
Other_Intercepts_Cost	The average amount of time in nanoseconds spent processing other intercepts [Sequential = DIV Non-Sequential = AVG]
Other_Intercepts/sec	The number of other intercepts triggered by guest code on a virtual processor per second [Sequential = DIV Non-Sequential = SUM]
Other_Messages/sec	The number of other intercept messages sent to the parent partition per second [Sequential = DIV Non-Sequential = SUM]
Page_Fault_Intercepts_ Cost	The relative measure of the cost of a page fault intercept [Sequential = DIV Non-Sequential = AVG]
Page_Fault_ Intercepts/sec	The number of page fault intercepts per second. Whenever guest code accesses a page not in the CPU translation lookaside buffer (TLB), a page fault occurs. [Sequential = DIV Non-Sequential = SUM]
Page_Invalidations_Cost	The average amount of time in nanoseconds spent processing an invalid page (INVLPG) instruction [Sequential = DIV Non-Sequential = AVG]
Page_Invalidations/sec	The number of invalid page (INVLPG) instructions executed by guest code on the virtual processor per second [Sequential = DIV Non-Sequential = SUM]
Page_Table_ Allocations/sec	The number of page table allocations in the virtual translation lookaside buffer (TLB) per second [Sequential = DIV Non-Sequential = SUM]

Page_Table_ Evictions/sec	The number of page table evictions in the virtual translation lookaside buffer (TLB) per second [Sequential = DIV Non-Sequential = SUM]
Page_Table_ Reclamations/sec	The number of reclamations of unreferenced page tables in the virtual translation lookaside buffer (TLB) per second [Sequential = DIV Non-Sequential = SUM]
Page_Table_Resets/sec	The number of page table resets in the virtual translation lookaside buffer (TLB) per second [Sequential = DIV Non-Sequential = SUM]
Page_Table_ Validations/sec	The number of page table validations to remove state entries in the virtual translation lookaside buffer (TLB) per second [Sequential = DIV Non-Sequential = SUM]
Page_Table_Write_ Intercepts/sec	The number of write intercepts on guest page tables by guest code on the virtual processor per second [Sequential = DIV Non-Sequential = SUM]
Pending_Interrupts_ Cost	The average amount of time in nanoseconds spent processing a pending interrupt intercept [Sequential = DIV Non-Sequential = AVG]
Pending_Interrupts/sec	The number of interrupts per second due to a task priority (TPR) reduction by guest code on the virtual processor [Sequential = DIV Non-Sequential = SUM]
Reflected_Guest_Page_ Faults/sec	The number of page fault exceptions delivered to the guest per second [Sequential = DIV Non-Sequential = SUM]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
Small_Page_TLB_ Fills/sec	The number of virtual translation lookaside buffer (TLB) misses on 4K pages per second [Sequential = DIV Non-Sequential = SUM]
Synthetic_Interrupt_ Hypercalls/sec	The number of synthetic interrupt hypercalls made by guest code on the virtual processor per second [Sequential = DIV Non-Sequential = SUM]
Synthetic_Interrupts/sec	The number of synthetic interrupts delivered to the virtual processor per second [Sequential = DIV Non-Sequential = SUM]
System	The name of the Hyper-V system [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
Total_Intercepts_Cost	The relative measure of the cost of intercepts [Sequential = DIV Non-Sequential = AVG]
Total_Intercepts/sec	The number of intercepts per second. An intercept occurs whenever a guest virtual processor (VP) needs to exit its current mode of running for servicing in the hypervisor. [Sequential = DIV Non-Sequential = SUM]

Total_Messages/sec	The number of messages sent to the parent partition per second [Sequential = DIV Non-Sequential = SUM]
Virtual_Interrupt_ Hypercalls/sec	The number of virtual interrupt hypercalls made by guest code on the virtual processor per second [Sequential = DIV Non-Sequential = SUM]
Virtual_Interrupts/sec	The number of interrupts (including synthetic interrupts) delivered to the virtual processor per second [Sequential = DIV Non-Sequential = SUM]
Virtual_Machine	The name of the Hyper-V virtual machine [Sequential = ID Non-Sequential = ID]
Virtual_MMU_ Hypercalls/sec	The number of virtual memory management unit (MMU) hypercalls made by the guest code on the virtual processor per second [Sequential = DIV Non-Sequential = SUM]
Virtual_Processor_ Hypercalls/sec	The number of virtual processor hypercalls made by guest code on the virtual processor per second [Sequential = DIV Non-Sequential = SUM]
Virtual_Processor	The virtual processor index number. For example, VP 0 [Sequential = ID Non-Sequential = ID]

5.2. Virtual Machine Statistics

The Hyper-V Agent stores virtual machine statistics in the performance database tables.

Table Field Hierarchy

Class:	Hyper-V
Subclass:	Dynamic Memory VM
IT Resource Name:	/TeamQuest/System/Hyper-V/Virtual Machines/*virtualmachinename*
TeamQuest Table Name:	Hyper-V. Dynamic Memory VM
Open Table Name:	HVDYNMEMVM
Collection interval:	300 seconds (default)
Default retentions:	3 days at collection period interval 8 days at 10-minute intervals 4 months at 1-hour intervals 9 months at 24-hour intervals
Table type:	Performance

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
Added_Memory	The amount of memory added to the virtual machine (VM). This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = SUM Non-Sequential = SUM]
Average_Pressure	The average pressure in the virtual machine (VM) [Sequential = LST Non-Sequential = AVG]
Current_Pressure	The current pressure in the virtual machine (VM) [Sequential = LST Non-Sequential = SUM]
Guest_Visible_Physical_ Memory	The amount of memory visible in the virtual machine (VM) [Sequential = LST Non-Sequential = SUM]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
Maximum_Pressure	The maximum pressure band in the virtual machine (VM) [Sequential = LST Non-Sequential = MAX]
Memory_Add_Operations	The number of add operations for the virtual machine (VM). This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = SUM Non-Sequential = SUM]
Memory_Remove_ Operations	The number of remove operations for the virtual machine (VM). This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = SUM Non-Sequential = SUM]

Minimum_Pressure	The minimum pressure band in the virtual machine (VM) [Sequential = LST Non-Sequential = MIN]
Physical_Memory	The current amount of memory in the virtual machine (VM) [Sequential = LST Non-Sequential = SUM]
Removed_Memory	The amount of memory removed from the virtual machine (VM). This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = SUM Non-Sequential = SUM]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
Smart_Paging_Working_Set_Size	The size of the memory in megabytes backed by smart paging. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
System	The name of the Hyper-V system [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
Virtual_Machine	The name of the Hyper-V virtual machine [Sequential = ID Non-Sequential = ID]

Table Field Hierarchy

Class:	Hyper-V
Subclass:	Replica VM
IT Resource Name:	/TeamQuest/System/Hyper-V/Virtual Machines/*virtualmachinename*
TeamQuest Table Name:	Hyper-V.Replica VM
Open Table Name:	HVREPLICAVM
Collection interval:	300 seconds (default)
Default retentions:	3 days at collection period interval 8 days at 10-minute intervals 4 months at 1-hour intervals 9 months at 24-hour intervals
Table type:	Performance

Statistic Name	Description
Average Replication Latency	The average replication latency in seconds [Sequential = AVG Non-Sequential = AVG]
Average Replication Size	The average replication size in bytes [Sequential = AVG Non-Sequential = AVG]
Compression Efficiency	The compression efficiency for the files that have been transferred over the network [Sequential = AVG Non-Sequential = AVG]
Last Replication Size	The last replication size in bytes [Sequential = LST Non-Sequential = SUM]
Network Bytes Recv	The total bytes received over the network for the virtual machines since the virtual machine management service was started [Sequential = AVG Non-Sequential = AVG]
Network Bytes Sent	The total bytes sent over the network for the virtual machines since the virtual machine management service was started [Sequential = AVG Non-Sequential = AVG]
Replication Count	The replication count since the virtual machine management service was started [Sequential = SUM Non-Sequential = SUM]
Replication Latency	The last replication latency in seconds. This value represents the time taken for the delta to be applied on the recovery since it was snapped. [Sequential = LST Non-Sequential = SUM]
Resynchronized Bytes	The total bytes sent and received over the network for the virtual machine during the resynchronize operation since the virtual machine management service was started [Sequential = SUM Non-Sequential = SUM]

Table Field Hierarchy

Class:	Hyper-V
Subclass:	Virtual Machines
IT Resource Name:	/TeamQuest/System/Hyper-V/Hosts/*hostname*
TeamQuest Table Name:	Hyper-V.Virtual Machines
Open Table Name:	HVVMS
Collection interval:	N/A
Default retentions:	1 year
Table type:	State

Statistic Name	Description
EnabledState	The enabled status of the virtual machine. The enabled state can be any of the following: Disabled = the virtual machine is turned off Enabled = the virtual machine is running Paused = the virtual machine is not running Pausing = the virtual machine is transitioning from Enabled to Paused Resuming = the virtual machine is transitioning from Paused to Enabled and is resuming from a paused state Saving = the virtual machine is transitioning from Enabled to Suspended and is saving its state Snapshotting = the virtual machine is performing a snapshot operation Starting = the virtual machine is transitioning from Disabled or Suspended to Enabled Stopping = the virtual machine is transitioning from Enabled to Disabled and is turning off Suspended = the virtual machine is in a saved state Unknown = the virtual machine state cannot be determined [Non-Sequential = ID]
GuestOperatingSystem	The name of the guest operating system or an empty string if none exists [Non-Sequential = ID]

HealthState	The health status of the virtual machine. The health status can be any of the following: Critical Failure = the process for the virtual machine (vmwp.exe) is not responding Degraded/Warning = the virtual machine is not operating at optimal performance or is reporting recoverable errors Major Failure = the virtual hard disks are low on disk space and the virtual machine has been paused Minor Failure = all functionality of the virtual machine is available but some functionality might be degraded Non-Recoverable Error = the virtual machine completely failed and recovery is not possible OK = the virtual machine is functional and operating normally Unknown = the virtual machine health state cannot be determined [Non-Sequential = ID]
Heartbeat	The heartbeat status of the virtual machine. The heartbeat status can be any of the following: Degraded = the virtual machine service negotiated a compatible communications protocol version Lost Communication = the virtual machine service is not responding No Contact = the virtual machine service cannot be contacted Non-Recoverable Error = the service does not support a compatible protocol version Unavailable = the host does not expect a heartbeat from the virtual machine Unknown = the virtual machine heartbeat cannot be determined [Non-Sequential = ID]
Limit	The percentage of the limit of the host processor for the virtual machine. The Limit status controls the maximum amount of processing the virtual machine can receive. This field comes from Hyper-V Manager > Virtual Machines > Settings > Processor > Resource Control > Virtual machine limit (percentage) field. [Non-Sequential = AVG]
MemoryType	The type of memory the virtual machine is using (static or dynamic) [Non-Sequential = ID]
MemoryUsage	The current memory usage of the virtual machine in megabytes (MB) [Non-Sequential = AVG]
Notes	The notes associated with the virtual machine [Non-Sequential = ID]
NumberOfProcessors	The number of processors allocated to the virtual machine [Non-Sequential = AVG]

ProcessID	The unique identifier of the instance of Virtual Machine Work Process (vmwp.exe) instance running on the Hyper-V host that represents the virtual machine (static or dynamic) [Non-Sequential = ID]
Reservation	The percentage of the reservation for the host processor for the virtual machine. The Reservation status controls the amount of processing reserved for the virtual machine. This field comes from Hyper-V Manager > Virtual Machines > Settings... > Processor > Resource Control > Virtual machine reserve (percentage) field. [Non-Sequential = AVG]
Status	The operational status of the virtual machine. On Microsoft Windows systems, this field is OperationalStatus. The status can be any of the following: Applying Snapshot = the virtual machine is applying a snapshot Creating Snapshot = the virtual machine is creating a snapshot Degraded = the virtual machine storage containing the configuration is not accessible Deleting Snapshot = the virtual machine is deleting a snapshot Dormant = the virtual machine is suspended or paused Exporting Virtual Machine = the virtual machine is being exported In Service = the virtual machine is processing a request Merging Disks = the virtual hard disks from deleted snapshots are being merged Migrating Virtual Machine = the virtual machine is migrating from one physical system to another OK = the virtual machine is functional and operating normally Predictive Failure = the virtual hard disks are low on free space Stopped = the virtual machine is no longer running Waiting to Start = the virtual machine will start after the AutomaticStartupActionDelay has elapsed [Non-Sequential = ID]
System	The name of the Hyper-V system [Non-Sequential = ID]
Time	The timestamp of the data sample [Non-Sequential = ID]
TimeOfLast ConfigurationChange	The date and time of the last modification of the virtual machine configuration file. On Microsoft Windows systems, this field is TimeOfLastConfigurationChange. [Non-Sequential = LST]
TimeOfLastStateChange	The date and time of the last virtual machine state change. On Microsoft Windows systems, this field is TimeOfLastStateChange. [Non-Sequential = LST]

UpTime	The amount of time since the virtual machine was last booted [Non-Sequential = LST]
VirtualMachine	The name of the virtual machine. On Microsoft Windows systems, this field is ElementName. [Non-Sequential = ID]
Weight	The host processor weight for the virtual machine. The Weight status controls the amount of processing the virtual machine receives compared to the other virtual machines. If the value is higher than other virtual machine weight, this virtual machine should receive more processor time. This field comes from the Hyper-V Manager > Virtual Machines > Settings... > Processor > Resource Control > Relative weight field. [Non-Sequential = AVG]

Table Field Hierarchy

Class:	Hyper-V
Subclass:	VM Virtual Network Adapter
IT Resource Name:	/TeamQuest/System/Hyper-V/Virtual Machines/*virtualmachinename*
TeamQuest Table Name:	Hyper-V.VM Virtual Network Adapter
Open Table Name:	HVVMVIRTNETADAPTER
Collection interval:	300 seconds (default)
Default retentions:	3 days at collection period interval 8 days at 10-minute intervals 4 months at 1-hour intervals 9 months at 24-hour intervals
Table type:	Performance

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
Broadcast_Packets_ Received/sec	The number of broadcast packets received by the network adapter per second [Sequential = DIV Non-Sequential = SUM]
Broadcast_Packets_ Sent/sec	The number of broadcast packets sent by the network adapter per second [Sequential = DIV Non-Sequential = SUM]
Bytes_Received/sec	The number of bytes received by the network adapter per second [Sequential = DIV Non-Sequential = SUM]
Bytes_Sent/sec	The number of bytes sent by the network adapter per second [Sequential = DIV Non-Sequential = SUM]

Bytes/sec	The number of bytes sent or received by the network adapter per second [Sequential = DIV Non-Sequential = SUM]
Directed_Packets_ Received/sec	The number of directed packets received by the network adapter per second [Sequential = DIV Non-Sequential = SUM]
Directed_Packets_ Sent/sec	The number of directed packets sent by the network adapter per second [Sequential = DIV Non-Sequential = SUM]
Dropped_Packets_ Incoming/sec	The total number of incoming packets dropped per second by the network adapter. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = DIV Non-Sequential = SUM]
Dropped_Packets_ Outgoing/sec	The total number of outgoing packets dropped per second by the network adapter. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = DIV Non-Sequential = SUM]
Extensions_Dropped_ Packets_Incoming/sec	The total number of incoming packets dropped per second by switch extensions of the network adapter. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = DIV Non-Sequential = SUM]
Extensions_Dropped_ Packets_Outgoing/sec	The total number of outgoing packets dropped per second by switch extensions of the network adapter. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = DIV Non-Sequential = SUM]
GUID	The globally unique identifier (GUID) of the virtual machine virtual network adapter [Sequential = ID Non-Sequential = ID]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
IPsec_offload_Bytes_ Receive/sec	The total number of Psec offload bytes received per second by the network adapter. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = DIV Non-Sequential = SUM]
IPsec_offload_Bytes_ Sent/sec	The total number of Psec offload bytes sent per second by the network adapter. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = DIV Non-Sequential = SUM]
Multicast_Packets_ Received/sec	The number of multicast packets received by the network adapter per second [Sequential = DIV Non-Sequential = SUM]
Multicast_Packets_ Sent/sec	The number of multicast packets sent by the network adapter per second [Sequential = DIV Non-Sequential = SUM]
Packets_Received/sec	The number of packets received by the network adapter per second [Sequential = DIV Non-Sequential = SUM]

Packets_Sent/sec	The number of packets sent by the network adapter per second [Sequential = DIV Non-Sequential = SUM]
Packets/sec	The number of packets sent or received by the network adapter per second [Sequential = DIV Non-Sequential = SUM]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
System	The name of the Hyper-V system [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
Virtual_Machine	The name of the Hyper-V virtual machine [Sequential = ID Non-Sequential = ID]

Table Field Hierarchy

Class:	Hyper-V
Subclass:	VM Save, Snapshot, and Restore
IT Resource Name:	/TeamQuest/System/Hyper-V/Virtual Machines/*virtualmachinename*
TeamQuest Table Name:	Hyper-V.VM Save, Snapshot, and Restore
Open Table Name:	HVVMSAVESNAPSHOT
Collection interval:	300 seconds (default)
Default retentions:	3 days at collection period interval 8 days at 10-minute intervals 4 months at 1-hour intervals 9 months at 24-hour intervals
Table type:	Performance

Statistic Name	Description
Buffers_Compressed_on_I/O_Thread	The number of RAM buffers compressed on the disk I/O thread [Sequential = LAST Non-Sequential = SUM]
Buffers_Saved	The total number of RAM buffers processed during a save or snapshot operation [Sequential = LAST Non-Sequential = SUM]
Operation_Time	The amount of time taken to complete a Global Memory Optimizer (GMO) operation in milliseconds. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = DIV Non-Sequential = SUM]
Requests_Active	The total number of requests currently being processed. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = DIV Non-Sequential = SUM]

Requests_Dispatched	The total number of requests that have been dispatched. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = DIV Non-Sequential = SUM]
Requests_High_Priority	The total number of high priority requests. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = DIV Non-Sequential = SUM]
Requests_Processed	The total number of requests that have been processed. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = DIV Non-Sequential = SUM]
Save_Time	The amount of time it takes to complete a save operation in milliseconds [Sequential = LAST Non-Sequential = SUM]
Snapshot_Buffer_Copy_on_Intercepts	The number of RAM buffers copied as a result of guest access during an ongoing snapshot [Sequential = LAST Non-Sequential = SUM]
Snapshot_Time	The amount of time it takes to complete a snapshot operation in milliseconds [Sequential = LAST Non-Sequential = SUM]
Threads_Spawned	The total number of threads currently spawned. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = DIV Non-Sequential = SUM]

Table Field Hierarchy

Class:	Hyper-V
Subclass:	VM Remoting
IT Resource Name:	/TeamQuest/System/Hyper-V/Virtual Machines/*virtualmachinename*
TeamQuest Table Name:	Hyper-V.VM Remoting
Open Table Name:	HVVMREMOTING
Collection interval:	300 seconds (default)
Default retentions:	3 days at collection period interval 8 days at 10-minute intervals 4 months at 1-hour intervals 9 months at 24-hour intervals
Table type:	Performance

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
Connected_Clients	The number of connected clients to the virtual machine (VM) [Sequential = LST Non-Sequential = SUM]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
System	The name of the Hyper-V system [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
Updated_Pixels/sec	The number of pixels that are updated per second for the virtual machine (VM) [Sequential = AVG Non-Sequential = AVG]
Virtual_Machine	The name of the Hyper-V virtual machine [Sequential = ID Non-Sequential = ID]

Table Field Hierarchy

Class:	Hyper-V
Subclass:	VM Vid Partition
IT Resource Name:	/TeamQuest/System/Hyper-V/Virtual Machines/*virtualmachinename*
TeamQuest Table Name:	Hyper-V.VM Vid Partition
Open Table Name:	HVVMVIDPART
Collection interval:	300 seconds (default)
Default retentions:	3 days at collection period interval 8 days at 10-minute intervals 4 months at 1-hour intervals 9 months at 24-hour intervals
Table type:	Performance

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
Physical_Pages_ Allocated	The number of physical pages allocated [Sequential = LST Non-Sequential = SUM]
Preferred_NUMA_Node	The preferred Non-Uniform Memory Access (NUMA) node associated with the partition [Sequential = ID Non-Sequential = ID]
Remote_Physical_Pages	The number of physical pages not allocated from the preferred Non-Uniform Memory Access (NUMA) node [Sequential = LST Non-Sequential = SUM]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
System	The name of the Hyper-V system [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
Virtual_Machine	The name of the Hyper-V virtual machine [Sequential = ID Non-Sequential = ID]

5.3. Host Statistics

The Hyper-V Agent stores host statistics in the performance database tables.

Table Field Hierarchy

Class:	Hyper-V
Subclass:	Dynamic Memory Integration Service
IT Resource Name:	/TeamQuest/System/Hyper-V/Hosts/*hostname*
TeamQuest Table Name:	Hyper-V.Dynamic Memory Integration Service
Open Table Name:	HVDYNMEMINT
Collection interval:	300 seconds (default)
Default retentions:	3 days at collection period interval 8 days at 10-minute intervals 4 months at 1-hour intervals 9 months at 24-hour intervals
Table type:	Performance

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
Maximum Memory, Mbytes	The maximum amount of memory in megabytes available to the Dynamic Memory Balancer [Sequential = DIV Non-Sequential = SUM]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]

Table Field Hierarchy

Class:	Hyper-V
Subclass:	Dynamic Memory Balancer
IT Resource Name:	/TeamQuest/System/Hyper-V/Hosts/*hostname*
TeamQuest Table Name:	Hyper-V.Dynamic Memory Balancer
Open Table Name:	HVDYNMEMBALANCER
Collection interval:	300 seconds (default)
Default retentions:	3 days at collection period interval 8 days at 10-minute intervals 4 months at 1-hour intervals 9 months at 24-hour intervals
Table type:	Performance

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
Added_Memory	The amount of memory added to virtual machines (VM). This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = SUM Non-Sequential = SUM]
Available_Memory	The amount of memory left on the node [Sequential = LST Non-Sequential = SUM]
Average_Pressure	The average pressure on the balancer node [Sequential = LST Non-Sequential = AVG]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
Memory_Add_Operations	The number of add operations. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = SUM Non-Sequential = SUM]
Memory_Remove_Operations	The number of remove operations. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = SUM Non-Sequential = SUM]
Name	The name of the dynamic memory balancer instance [Sequential = ID Non-Sequential = ID]
Removed_Memory	The amount of memory removed from virtual machines (VM). This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = SUM Non-Sequential = SUM]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]

System	The name of the Hyper-V system [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]

Table Field Hierarchy

Class:	Hyper-V
Subclass:	Task Manager Detail
IT Resource Name:	/TeamQuest/System/Hyper-V/Hosts/*hostname*
TeamQuest Table Name:	Hyper-V.Task Manager Detail
Open Table Name:	HVTASKMGRDETAIL
Collection interval:	300 seconds (default)
Default retentions:	3 days at collection period interval 8 days at 10-minute intervals 4 months at 1-hour intervals 9 months at 24-hour intervals
Table type:	Performance

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = SUM Non-Sequential = AVG]
Add_Resources_Virtual_Machine_Tasks_Completed	The number of tasks completed. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = SUM Non-Sequential = SUM]
Add_Resources_Virtual_Machine_Tasks_in_Progress	The number of tasks that are in progress. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
Add_Resources_Virtual_Machine_Tasks_Recent_Time	The time spent to execute the last operation of this type in 100 nanosecond units. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
Apply_Snapshot_Virtual_Machine_Tasks_Completed	The number of tasks completed. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = SUM Non-Sequential = SUM]
Apply_Snapshot_Virtual_Machine_Tasks_in_Progress	The number of tasks that are in progress. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]

Apply_Snapshot_Virtual_Machine_Tasks_Recent_Time	The time spent to execute the last operation of this type in 100 nanosecond units. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
Clone_Virtual_Machine_Tasks_Completed	The number of tasks completed. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = SUM Non-Sequential = SUM]
Clone_Virtual_Machine_Tasks_in_Progress	The number of tasks that are in progress. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
Clone_Virtual_Machine_Tasks_Recent_Time	The time spent to execute the last operation of this type in 100 nanosecond units. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
Create_VSS_Snapshot_Set_Tasks_Completed	The number of tasks completed. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = SUM Non-Sequential = SUM]
Create_VSS_Snapshot_Set_Tasks_in_Progress	The number of tasks that are in progress. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
Create_VSS_Snapshot_Set_Tasks_Recent_Time	The time spent to execute the last operation of this type in 100 nanosecond units. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
Define_Virtual_Machine_Tasks_Completed	The number of tasks completed. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = SUM Non-Sequential = SUM]
Define_Virtual_Machine_Tasks_in_Progress	The number of tasks that are in progress. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
Define_Virtual_Machine_Tasks_Recent_Time	The time spent to execute the last operation of this type in 100 nanosecond units. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
Destroy_Snapshot_Virtual_Machine_Tasks_Completed	The number of tasks completed. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = SUM Non-Sequential = SUM]
Destroy_Snapshot_Virtual_Machine_Tasks_in_Progress	The number of tasks that are in progress. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]

Destroy_Snapshot_Virtual_Machine_Tasks_Recent_Time	The time spent to execute the last operation of this type in 100 nanosecond units. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
Destroy_Virtual_Machine_Tasks_Completed	The number of tasks completed. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = SUM Non-Sequential = SUM]
Destroy_Virtual_Machine_Tasks_in_Progress	The number of tasks that are in progress. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
Destroy_Virtual_Machine_Tasks_Recent_Time	The time spent to execute the last operation of this type in 100 nanosecond units. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
Export_Virtual_Machine_Tasks_Completed	The number of tasks completed. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = SUM Non-Sequential = SUM]
Export_Virtual_Machine_Tasks_in_Progress	The number of tasks that are in progress. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
Export_Virtual_Machine_Tasks_Recent_Time	The time spent to execute the last operation of this type in 100 nanosecond units. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
Import_Virtual_Machine_Tasks_Completed	The number of tasks completed. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = SUM Non-Sequential = SUM]
Import_Virtual_Machine_Tasks_in_Progress	The number of tasks that are in progress. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
Import_Virtual_Machine_Tasks_Recent_Time	The time spent to execute the last operation of this type in 100 nanosecond units. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
Interval	The expected sampling interval in seconds. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = SUM Non-Sequential = AVG]
Merge_Disk_Tasks_Completed	The number of tasks completed. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = SUM Non-Sequential = SUM]

Merge_Disk_Tasks_ in_ Progress	The number of tasks that are in progress. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
Merge_Disk_Tasks_ Recent_Time	The time spent to execute the last operation of this type in 100 nanosecond units. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
Migrate_Virtual_Machine_ Tasks_Completed	The number of tasks completed. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = SUM Non-Sequential = SUM]
Migrate_Virtual_Machine_ Tasks_in_Progress	The number of tasks that are in progress. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
Migrate_Virtual_Machine_ Tasks_Recent_Time	The time spent to execute the last operation of this type in 100 nanosecond units. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
Modify_Resources_Virtual_ Machine_Tasks_Completed	The number of tasks completed. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = SUM Non-Sequential = SUM]
Modify_Resources_Virtual_ Machine_Tasks_in_Progress	The number of tasks that are in progress. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
Modify_Resources_Virtual_ Machine_Tasks_Recent_ Time	The time spent to execute the last operation of this type in 100 nanosecond units. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
Modify_Service_Settings_ Tasks_Completed	The number of tasks completed. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = SUM Non-Sequential = SUM]
Modify_Service_Settings_ Tasks_in_Progress	The number of tasks that are in progress. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
Modify_Service_Settings_ Tasks_Recent_Time	The time spent to execute the last operation of this type in 100 nanosecond units. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
Modify_Virtual_Machine_ Tasks_Completed	The number of tasks completed. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = SUM Non-Sequential = SUM]

Modify_Virtual_Machine_ Tasks_in_Progress	The number of tasks that are in progress. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
Modify_Virtual_Machine_ Tasks_Recent_Time	The time spent to execute the last operation of this type in 100 nanosecond units. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
Pause_Virtual_Machine_ Tasks_Completed	The number of tasks completed. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = SUM Non-Sequential = SUM]
Pause_Virtual_Machine_ Tasks_in_Progress	The number of tasks that are in progress. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
Pause_Virtual_Machine_ Tasks_Recent_Time	The time spent to execute the last operation of this type in 100 nanosecond units. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
Remove_Resources_Virtual_ Machine_Tasks_Completed	The number of tasks completed. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = SUM Non-Sequential = SUM]
Remove_Resources_Virtual_ Machine_Tasks_in_Progress	The number of tasks that are in progress. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
Remove_Resources_Virtual_ Machine_Tasks_Recent_ Time	The time spent to execute the last operation of this type in 100 nanosecond units. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
Reset_Virtual_Machine_ Tasks_Completed	The number of tasks completed. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = SUM Non-Sequential = SUM]
Reset_Virtual_Machine_ Tasks_in_Progress	The number of tasks that are in progress. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
Reset_Virtual_Machine_ Tasks_ Recent_Time	The time spent to execute the last operation of this type in 100 nanosecond units. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
Restore_Virtual_Machine_ Tasks_Completed	The number of tasks completed. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = SUM Non-Sequential = SUM]

Restore_Virtual_Machine_ Tasks_in_Progress	The number of tasks that are in progress. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
Restore_Virtual_Machine_ Tasks_Recent_Time	The time spent to execute the last operation of this type in 100 nanosecond units. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
Resume_Virtual_Machine_ Tasks_Completed	The number of tasks completed. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = SUM Non-Sequential = SUM]
Resume_Virtual_Machine_ Tasks_in_Progress	The number of tasks that are in progress. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
Resume_Virtual_Machine_ Tasks_Recent_Time	The time spent to execute the last operation of this type in 100 nanosecond units. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = ID]
Save_Virtual_Machine_ Tasks_Completed	The number of tasks completed. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = SUM Non-Sequential = SUM]
Save_Virtual_Machine_ Tasks_in_Progress	The number of tasks that are in progress. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
Save_Virtual_ Machine_ Tasks_Recent_Time	The time spent to execute the last operation of this type in 100 nanosecond units. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
Shutdown_Virtual_Machine_ Tasks_Completed	The number of tasks completed. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = SUM Non-Sequential = SUM]
Shutdown_Virtual_Machine_ Tasks_in_Progress	The number of tasks that are in progress. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
Shutdown_Virtual_Machine_ Tasks_Recent_Time	The time spent to execute the last operation of this type in 100 nanosecond units. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]

Snapshot_Virtual_Machine_ Tasks_Completed	The number of tasks completed. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = SUM Non-Sequential = SUM]
Snapshot_Virtual_Machine_ Tasks_in_Progress	The number of tasks that are in progress. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
Snapshot_Virtual_Machine_ Tasks_Recent_Time	The time spent to execute the last operation of this type in 100 nanosecond units. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
Start _Virtual_Machine_ Tasks_Completed	The number of tasks completed. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = SUM Non-Sequential = SUM]
Start_Virtual_Machine_ Tasks_in_Progress	The number of tasks that are in progress. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
Start_Virtual_Machine_ Tasks_Recent_Time	The time spent to execute the last operation of this type in 100 nanosecond units. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
System	The name of the Hyper-V system. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = ID]
Waiting_to_ Start_Virtual_ Machine_Tasks_Completed	The number of tasks completed. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = SUM Non-Sequential = SUM]
Waiting_to_Start_Virtual_ Machine_Tasks_in_Progress	The number of tasks that are in progress. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
Waiting_to_Start_Virtual_ Machine_Tasks_Recent_ Time	The time spent to execute the last operation of this type in 100 nanosecond units. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]

Table Field Hierarchy

Class:	Hyper-V
Subclass:	Virtual Machine Bus
IT Resource Name:	/TeamQuest/System/Hyper-V/Hosts/*hostname*
TeamQuest Table Name:	Hyper-V.Virtual Machine Bus
Open Table Name:	HVVMBUS
Collection interval:	300 seconds (default)
Default retentions:	3 days at collection period interval 8 days at 10-minute intervals 4 months at 1-hour intervals 9 months at 24-hour intervals
Table type:	Performance

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
Interrupts_Received	The number of interrupts received. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = SUM Non-Sequential = SUM]
Interrupts_Received/sec	The number of interrupts received per second [Sequential = DIV Non-Sequential = SUM]
Interrupts_Sent	The number of interrupts sent. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = SUM Non-Sequential = SUM]
Interrupts_Sent/sec	The number of interrupts sent per second [Sequential = DIV Non-Sequential = SUM]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
System	The name of the Hyper-V system [Sequential = ID Non-Sequential = ID]
Throttle_Events	The number of times that any partition has been throttled. A partition is throttled when its interrupts are disabled. [Sequential = SUM Non-Sequential = SUM]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]

Table Field Hierarchy

Class:	Hyper-V
Subclass:	Virtual Machine Health Summary
IT Resource Name:	/TeamQuest/System/Hyper-V/Hosts/*hostname*
TeamQuest Table Name:	Hyper-V.Virtual Machine Health Summary
Open Table Name:	HVVMHEALTHSUM
Collection interval:	300 seconds (default)
Default retentions:	3 days at collection period interval 8 days at 10-minute intervals 4 months at 1-hour intervals 9 months at 24-hour intervals
Table type:	Performance

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
Health_Critical	The number of virtual machines with critical health [Sequential = LST Non-Sequential = SUM]
Health_Ok	The number of virtual machines with OK health [Sequential = LST Non-Sequential = SUM]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
System	The name of the Hyper-V system [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]

Table Field Hierarchy

Class:	Hyper-V
Subclass:	Virtual Machine Summary
IT Resource Name:	/TeamQuest/System/Hyper-V/Hosts/*hostname*
TeamQuest Table Name:	Hyper-V.Virtual Machine Summary
Open Table Name:	HVVMSUM
Collection interval:	300 seconds (default)
Default retentions:	3 days at collection period interval 8 days at 10-minute intervals 4 months at 1-hour intervals 9 months at 24-hour intervals
Table type:	Performance

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = SUM Non-Sequential = AVG]
Applying_Snapshot	The number of virtual machines that are applying snapshots. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
Deleting	The number of virtual machines that are deleting virtual machine information. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
Deleting_Saved_State	The number of virtual machines that are deleting saved states. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
Deleting_Snapshot	The number of virtual machines that are deleting snapshots. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
Exporting	The number of virtual machines that are exporting virtual machine information. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
Interval	The expected sampling interval in seconds. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = SUM Non-Sequential = AVG]

Merging_Disks	The number of virtual machines that are merging disks. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
Paused	The number of virtual machines that are paused. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
Pausing	The number of virtual machines that are pausing. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
Resetting	The number of virtual machines that are resetting. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
Resuming	The number of virtual machines that are resuming. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
Running	The number of virtual machines that are running. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = ID]
Saved	The number of virtual machines that are saved. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
Saving	The number of virtual machines that are saving. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
Starting	The number of virtual machines that are starting. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
Stopping	The number of virtual machines that are stopping. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
System	The name of the Hyper-V system. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = ID Non-Sequential = ID]

Taking_Snapshot	The number of virtual machines that are taking snapshots. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
Time	The timestamp of the data sample. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = ID]
Total_VMs	The total number of virtual machines. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
Turned_Off	The number of virtual machines that are turned off. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]
Waiting_to_Start	The number of virtual machines that are waiting to start. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = LST Non-Sequential = SUM]

Table Field Hierarchy

Class:	Hyper-V
Subclass:	Virtual Network Adapter
IT Resource Name:	/TeamQuest/System/Hyper-V/Hosts/*hostname*
TeamQuest Table Name:	Hyper-V.Virtual Network Adapter
Open Table Name:	HVVIRTNETADAPTER
Collection interval:	300 seconds (default)
Default retentions:	3 days at collection period interval 8 days at 10-minute intervals 4 months at 1-hour intervals 9 months at 24-hour intervals
Table type:	Performance

Statistic Name	**Description**
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
Broadcast_Packets_ Received/sec	The number of broadcast packets received by the network adapter per second [Sequential = DIV Non-Sequential = SUM]

Broadcast_Packets_Sent/sec	The number of broadcast packets sent by the network adapter per second [Sequential = DIV Non-Sequential = SUM]
Bytes_Received/sec	The number of bytes received by the network adapter per second [Sequential = DIV Non-Sequential = SUM]
Bytes_Sent/sec	The number of bytes sent by the network adapter per second [Sequential = DIV Non-Sequential = SUM]
Bytes/sec	The number of bytes sent or received by the network adapter per second [Sequential = DIV Non-Sequential = SUM]
Directed_Packets_ Received/sec	The number of directed packets received by the network adapter per second [Sequential = DIV Non-Sequential = SUM]
Directed_Packets_Sent/sec	The number of directed packets sent by the network adapter per second [Sequential = DIV Non-Sequential = SUM]
Dropped_Packets_ Incoming/sec	The total number of incoming packets dropped per second by the network adapter. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = DIV Non-Sequential = SUM]
Dropped_Packets_ Outgoing/sec	The total number of outgoing packets dropped per second by the network adapter. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = DIV Non-Sequential = SUM]
Extensions_Dropped_ Packets_Incoming/sec	The total number of incoming packets dropped per second by switch extensions of the network adapter. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = DIV Non-Sequential = SUM]
Extensions_Dropped_ Packets_ Outgoing/sec	The total number of outgoing packets dropped per second by switch extensions of the network adapter. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = DIV Non-Sequential = SUM]
GUID	The globally unique identifier (GUID) of the Virtual Network Adapter [Sequential = ID Non-Sequential = ID]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
IPsec_offload_Bytes_ Receive/sec	The total number of Psec offload bytes received per second by the network adapter. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = DIV Non-Sequential = SUM]
IPsec_offload_Bytes_Sent/sec	The total number of Psec offload bytes sent per second by the network adapter. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = DIV Non-Sequential = SUM]

Multicast_Packets_ Received/sec	The number of multicast packets received by the network adapter per second [Sequential = DIV Non-Sequential = SUM]
Multicast_Packets_Sent/sec	The number of multicast packets sent by the network adapter per second [Sequential = DIV Non-Sequential = SUM]
Name	The name of the virtual network adapter instance [Sequential = ID Non-Sequential = ID]
Packets_Received/sec	The number of packets received by the network adapter per second [Sequential = DIV Non-Sequential = SUM]
Packets_Sent/sec	The number of packets sent by the network adapter per second [Sequential = DIV Non-Sequential = SUM]
Packets/sec	The number of packets sent or received by the network adapter per second [Sequential = DIV Non-Sequential = SUM]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
System	The name of the Hyper-V system [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]

Table Field Hierarchy

Class:	Hyper-V
Subclass:	VM Vid Numa Node
IT Resource Name:	/TeamQuest/System/Hyper-V/Hosts/*hostname*
TeamQuest Table Name:	Hyper-V.VM Vid Numa Node
Open Table Name:	HVVMVIDNUMANODE
Collection interval:	300 seconds (default)
Default retentions:	3 days at collection period interval 8 days at 10-minute intervals 4 months at 1-hour intervals 9 months at 24-hour intervals
Table type:	Performance

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
PageCount	The number of physical pages detected on the Non-Uniform Memory Access (NUMA) node [Sequential = LST Non-Sequential = SUM]
Preferred_NUMA_Node	The preferred Non-Uniform Memory Access (NUMA) node index associated with the partition [Sequential = ID Non-Sequential = ID]
ProcessorCount	The number of logical processors detected on the Non-Uniform Memory Access (NUMA) node [Sequential = LST Non-Sequential = SUM]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
System	The name of the Hyper-V system [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]

5.4. I/O Statistics

The Hyper-V Agent stores I/O statistics in the performance database tables.

Table Field Hierarchy

Class:	Hyper-V
Subclass:	Virtual IDE Controller
IT Resource Name:	/TeamQuest/System/Hyper-V/Virtual Machines/*virtualmachinename*
TeamQuest Table Name:	Hyper-V.Virtual IDE Controller
Open Table Name:	HVVIRTIDECONTROLLER
Collection interval:	300 seconds (default)
Default retentions:	3 days at collection period interval 8 days at 10-minute intervals 4 months at 1-hour intervals 9 months at 24-hour intervals
Table type:	Performance

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
Read_Bytes/sec	The number of bytes read per second from the disks attached to the Integrated Drive Electronics (IDE) controller [Sequential = DIV Non-Sequential = SUM]
Read_Sectors/sec	The number of sectors read per second from the disks attached to the Integrated Drive Electronics (IDE) controller [Sequential = DIV Non-Sequential = SUM]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
System	The name of the Hyper-V system [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
Virtual_Machine	The name of the Hyper-V virtual machine [Sequential = ID Non-Sequential = ID]

Write_Bytes/sec	The number of bytes written per second to the disks attached to the Integrated Drive Electronics (IDE) controller [Sequential = DIV Non-Sequential = SUM]
Write_Sectors/sec	The number of sectors written per second to the disks attached to the Integrated Drive Electronics (IDE) controller [Sequential = DIV Non-Sequential = SUM]

Table Field Hierarchy

Class:	Hyper-V
Subclass:	Virtual IDE Controller (Emulated)
IT Resource Name:	/TeamQuest/System/Hyper-V/Virtual Machines/*virtualmachinename*
TeamQuest Table Name:	Hyper-V.Virtual IDE Controller (Emulated)
Open Table Name:	HVVIRTIDECONTROLLER
Collection interval:	300 seconds (default)
Default retentions:	3 days at collection period interval 8 days at 10-minute intervals 4 months at 1-hour intervals 9 months at 24-hour intervals
Table type:	Performance

Statistic Name	**Description**
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
Read_Bytes/sec	The number of bytes read per second from the disks attached to the Integrated Drive Electronics (IDE) controller [Sequential = DIV Non-Sequential = SUM]
Read_Sectors/sec	The number of sectors read per second from the disks attached to the Integrated Drive Electronics (IDE) controller [Sequential = DIV Non-Sequential = SUM]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
System	The name of the Hyper-V system [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
Virtual_Machine	The name of the Hyper-V virtual machine [Sequential = ID Non-Sequential = ID]

Write_Bytes/sec	The number of bytes written per second to the disks attached to the Integrated Drive Electronics (IDE) controller [Sequential = DIV Non-Sequential = SUM]
Write_Sectors/sec	The number of sectors written per second to the disks attached to the Integrated Drive Electronics (IDE) controller [Sequential = DIV Non-Sequential = SUM]

Table Field Hierarchy

Class:	Hyper-V
Subclass:	Virtual Storage Device
IT Resource Name:	/TeamQuest/System/Hyper-V/Hosts/*hostname*
TeamQuest Table Name:	Hyper-V.Virtual Storage Device
Open Table Name:	HVVIRTSTORDEV
Collection interval:	300 seconds (default)
Default retentions:	3 days at collection period interval 8 days at 10-minute intervals 4 months at 1-hour intervals 9 months at 24-hour intervals
Table type:	Performance

Statistic Name	**Description**
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
Error_Count	The number of errors that have occurred on the virtual device [Sequential = SUM Non-Sequential = SUM]
Flush_Count	The number of flush operations that have occurred on the virtual device [Sequential = SUM Non-Sequential = SUM]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
Name	The name of the virtual storage device instance [Sequential = ID Non-Sequential = ID]
Read_Bytes/sec	The number of bytes that have been read per second from the virtual device [Sequential = DIV Non-Sequential = SUM]
Read_Count	The number of read operations that have occurred on the virtual device [Sequential = SUM Non-Sequential = SUM]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]

System	The name of the Hyper-V system [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
Write_Bytes/sec	The number of bytes written per second to the virtual device [Sequential = DIV Non-Sequential = SUM]
Write_Count	The number of write operations that have occurred to the virtual device [Sequential = SUM Non-Sequential = SUM]

5.5. Network Statistics

The Hyper-V Agent stores network statistics in the performance database tables.

Table Field Hierarchy

Class:	Hyper-V
Subclass:	Legacy Network Adapter
IT Resource Name:	/TeamQuest/System/Hyper-V/Virtual Machines/*virtualmachinename*
TeamQuest Table Name:	Hyper-V.Legacy Network Adapter
Open Table Name:	HVLEGACYNETADAPTER
Collection interval:	300 seconds (default)
Default retentions:	3 days at collection period interval 8 days at 10-minute intervals 4 months at 1-hour intervals 9 months at 24-hour intervals
Table type:	Performance

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
Bytes_Dropped	The number of bytes dropped by the network adapter [Sequential = SUM Non-Sequential = SUM]
Bytes_Received/sec	The number of bytes received per second on the network adapter [Sequential = DIV Non-Sequential = SUM]
Bytes_Sent/sec	The number of bytes sent per second over the network adapter [Sequential = DIV Non-Sequential = SUM]
Frames_Dropped	The number of frames dropped by the network adapter [Sequential = SUM Non-Sequential = SUM]
Frames_Received/sec	The number of frames received per second on the network adapter [Sequential = DIV Non-Sequential = SUM]

Frames_Sent/sec	The number of frames sent per second over the network adapter [Sequential = DIV Non-Sequential = SUM]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
Name	The name of the legacy network adapter instance [Sequential = ID Non-Sequential = ID]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
System	The name of the Hyper-V system [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
Virtual_Machine	The name of the Hyper-V virtual machine [Sequential = ID Non-Sequential = ID]

Table Field Hierarchy

Class:	Hyper-V
Subclass:	Virtual Switch
IT Resource Name:	/TeamQuest/System/Hyper-V/Hosts/*hostname*
TeamQuest Table Name:	Hyper-V.Virtual Switch
Open Table Name:	HVVIRTSWTCH
Collection interval:	300 seconds (default)
Default retentions:	3 days at collection period interval 8 days at 10-minute intervals 4 months at 1-hour intervals 9 months at 24-hour intervals
Table type:	Performance

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
Broadcast_Packets_ Received/sec	The number of broadcast packets received by the virtual switch per second [Sequential = DIV Non-Sequential = SUM]
Broadcast_Packets_ Sent/sec	The number of broadcast packets sent by the virtual switch per second [Sequential = DIV Non-Sequential = SUM]
Bytes_Received/sec	The number of bytes received by the virtual switch per second [Sequential = DIV Non-Sequential = SUM]
Bytes_Sent/sec	The number of bytes sent by the virtual switch per second [Sequential = DIV Non-Sequential = SUM]

Bytes/sec	The number of bytes sent or received by the virtual switch per second [Sequential = DIV Non-Sequential = SUM]
Directed_Packets_ Received/sec	The number of directed packets received by the virtual switch per second [Sequential = DIV Non-Sequential = SUM]
Directed_Packets_ Sent/sec	The number of directed packets sent by the virtual switch per second [Sequential = DIV Non-Sequential = SUM]
Dropped_Packets_ Incoming/sec	The total number of incoming packets dropped per second by the virtual switch. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = DIV Non-Sequential = SUM]
Dropped_Packets_ Outgoing/sec	The total number of outgoing packets dropped per second by the virtual switch. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = DIV Non-Sequential = SUM]
Extensions_Dropped_ Packets_Incoming/sec	The total number of incoming packets dropped per second by the virtual switch extensions. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = DIV Non-Sequential = SUM]
Extensions_Dropped_ Packets_Outgoing/sec	The total number of outgoing packets dropped per second by the virtual switch extensions. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = DIV Non-Sequential = SUM]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
Learned_Mac_Addresses	The number of learned Media Access Control (MAC) addresses of the virtual switch [Sequential = DIV Non-Sequential = SUM]
Learned_Mac_ Addresses/sec	The number of Media Access Control (MAC) addresses learned per second by the virtual switch [Sequential = DIV Non-Sequential = SUM]
Multicast_Packets_ Received/sec	The number of multicast packets received by the virtual switch per second [Sequential = DIV Non-Sequential = SUM]
Multicast_Packets_ Sent/sec	The number of multicast packets sent by the virtual switch per second [Sequential = DIV Non-Sequential = SUM]
Name	The name of the virtual switch instance [Sequential = ID Non-Sequential = ID]
Number_of_Send_ Channel_Moves/sec	The total number of send channel moves per second on the virtual switch. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = DIV Non-Sequential = SUM]
Number_of_VMQ_ Moves/sec	The total number of virtual machine queue (VMQ) moves per second on the virtual switch. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = DIV Non-Sequential = SUM]

Packets_Flooded	The number of packets flooded by the virtual switch [Sequential = DIV Non-Sequential = SUM]
Packets_Flooded/sec	The number of packets flooded per second by the virtual switch [Sequential = DIV Non-Sequential = SUM]
Packets_Received/sec	The number of packets received by the virtual switch per second [Sequential = DIV Non-Sequential = SUM]
Packets_Sent/sec	The number of packets sent by the virtual switch per second [Sequential = DIV Non-Sequential = SUM]
Packets/sec	The number of packets sent or received by the virtual switch per second [Sequential = DIV Non-Sequential = SUM]
Purged_Mac_Addresses	The number of purged Media Access Control (MAC) addresses of the virtual switch [Sequential = LST Non-Sequential = SUM]
Purged_Mac_ Addresses/sec	The number of Media Access Control (MAC) addresses purged per second by the virtual switch [Sequential = DIV Non-Sequential = SUM]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
System	The name of the Hyper-V system [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]

Table Field Hierarchy

Class:	Hyper-V
Subclass:	Virtual Switch Port
IT Resource Name:	/TeamQuest/System/Hyper-V/Hosts/*hostname*
TeamQuest Table Name:	Hyper-V.Virtual Switch Port
Open Table Name:	HVVIRTSWTCHPORT
Collection interval:	300 seconds (default)
Default retentions:	3 days at collection period interval 8 days at 10-minute intervals 4 months at 1-hour intervals 9 months at 24-hour intervals
Table type:	Performance

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
Broadcast_Packets_Received/sec	The number of broadcast packets received by the virtual switch port per second [Sequential = DIV Non-Sequential = SUM]
Broadcast_Packets_Sent/sec	The number of broadcast packets sent by the virtual switch port per second [Sequential = DIV Non-Sequential = SUM]
Bytes_Received/sec	The number of bytes received by the virtual switch port per second [Sequential = DIV Non-Sequential = SUM]
Bytes_Sent/sec	The number of bytes sent by the virtual switch port per second [Sequential = DIV Non-Sequential = SUM]
Bytes/sec	The number of bytes sent or received by the virtual switch port per second [Sequential = DIV Non-Sequential = SUM]
Directed_Packets_Received/sec	The number of directed packets received by the virtual switch port per second [Sequential = DIV Non-Sequential = SUM]
Directed_Packets_Sent/sec	The number of directed packets sent by the virtual switch port per second [Sequential = DIV Non-Sequential = SUM]
Dropped_Packets_Incoming/sec	The total number of incoming packets dropped per second by the virtual switch port. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = DIV Non-Sequential = SUM]

Dropped_Packets_Outgoing/sec	The total number of outgoing packets dropped per second by the virtual switch port. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = AVG Non-Sequential = SUM]
Extensions_Dropped_Packets_Incoming/sec	The total number of incoming packets dropped per second by the virtual switch extensions by the virtual switch port. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = AVG Non-Sequential = SUM]
Extensions_Dropped_Packets_Outgoing/sec	The total number of outgoing packets dropped per second by the virtual switch extensions by the virtual switch port. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = AVG Non-Sequential = SUM]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
IPsec_offload_Bytes_Receive/sec	The total number of IPsec offload bytes received per second by the virtual switch port. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = AVG Non-Sequential = SUM]
IPsec_offload_Bytes_Sent/sec	The total number of IPsec offload bytes sent per second by the virtual switch port. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = AVG Non-Sequential = SUM]
IPsec_SAs_Offloaded	The total number of IPsec Security Associations currently offloaded by the virtual switch port. This statistic is not available for Microsoft Windows 2008 or Microsoft Windows 2008 R2. [Sequential = SUM Non-Sequential = SUM]
Multicast_Packets_Received/sec	The number of multicast packets received by the virtual switch port per second [Sequential = AVG Non-Sequential = SUM]
Multicast_Packets_Sent/sec	The number of multicast packets sent by the virtual switch port per second [Sequential = AVG Non-Sequential = SUM]
Name	The name of the virtual switch port instance [Sequential = ID Non-Sequential = ID]
Packets_Received/sec	The number of packets received by the virtual switch port per second [Sequential = AVG Non-Sequential = SUM]
Packets_Sent/sec	The number of packets sent by the virtual switch port per second [Sequential = AVG Non-Sequential = SUM]
Packets/sec	The number of packets sent or received by the virtual switch port per second [Sequential = AVG Non-Sequential = SUM]

Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
System	The name of the Hyper-V system [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
Virtual Switch	The name of the associated virtual switch [Sequential = ID Non-Sequential = ID]

Section 6
IBM AIX Systems

Statistics for IBM AIX systems are collected by the TeamQuest collection agents.

This section contains a listing of the statistics collected for the system:

- System Activity Statistics (see 6.1)
- Disk Space Statistics (see 6.2)
- Network Statistics (see 6.3)
- Workload Manager Statistics (see 6.4)
- Workload Statistics (see 6.5)
- LPAR Configuration Statistics (see 6.6)
- Process Statistics (see 6.7)
- Hardware Inventory Statistics (see 6.8)
- System Log Statistics (see 6.9)
- General Log Statistics (see 6.10)
- TeamQuest Log Statistics (see 6.11)
- Derived Statistics (see 6.12)

Note: *At the end of each statistic description, you will see a notation in brackets indicating the method that is used for data consolidation (for example,* [Sequential = SUM Non-Sequential = SUM]). *Sequential means that the field is consolidated over time. Non-Sequential means that the field is consolidated within a specified time interval.*

The following notations are used:

AVG = Average
DIV =Weight
FST = First
ID = Identifier
LST = Last
MAX = Maximum
MIN = Minimum
NON = None or no method was used
SUM = Summation

If you are using TeamQuest View to view aggregation set data, the sequential method is used for data consolidation.

Because derived statistics are not stored in the performance database, the data consolidation method is not shown in the description of a derived statistic.

6.1. System Activity Statistics

The System Activity Agent is used to collect a wide variety of important system statistics. Major resources monitored by this agent include processors, memory, disks, and the operating system kernel.

Note: *The collection of disk input and output (i/o) statistics is disabled by default in current releases of IBM AIX. If the system is not collecting disk i/o history statistics, Block Device statistics are not collected. This includes Block Device.by Device and Block Device.Summary statistics. To enable the collection of these statistics, run the following command:*

```
chdev -l sys0 -a iostat=true
```

Special Processing When Using Sequential Consolidation Method

Special processing occurs when certain records in the Block Device.by Device table are consolidated using the Sequential consolidation method. The following formulas are used to calculate the %busy, Actual_Interval, and record_count statistic values:

%busy

The %busy field uses a new consolidation method that uses the following formula to produce the consolidated %busy value:

$$\text{consolidated \%busy} = \text{\%busy} * \text{record_count} * \text{Actual_Interval}$$

At the end of the aggregation processing step after multiple records have been combined together to produce a single consolidated record, the %busy field contains the consolidated %busy value.

An additional processing step is performed using the following formula to produce a final %busy value that is stored into the consolidated record:

$$\text{\%busy} = \frac{\text{consolidated \%busy}}{\text{record_count} * \text{Interval}}$$

Note: The record_count field value used in the above formula must have already been generated using the record_count formula.

Block Device.by Device table records that have been stored by previous levels of TeamQuest collection agents do not contain the record_count field. For these records, a value of 1 is assumed for the record_count value.

Actual_Interval

For consolidated records (both reduced and not reduced), the Actual_Interval field should contain the Interval value at the end of the aggregation processing step.

record_count

The record_count field value is updated at the end of the aggregation processing step using the following formula:

$$\text{record_count} = \frac{(\Sigma(\text{record_count} * \text{Actual_Interval})) + (\text{Interval} - \Sigma\text{Actual_Interval})}{\text{Interval}}$$

The first part of the numerator is a summation of the record_count value multiplied by the Actual_Interval value across all of the consolidated records. This value should exist in the record_count field at the end of the aggregation processing step since the record_count field is weighted by Actual_Interval.

The Actual_Interval value used in the second part of the numerator is a summation of all the Actual_Interval values of the consolidated records. This value should exist in the Actual_Interval field at the end of the aggregation processing step since Actual_Interval is a summation.

The Interval value in the formula is the time range in seconds that the final consolidated record represents. For example, if 5-minute records are generated, the Interval value is calculated as 5 multiplied by 60.

Parameter Hierarchy

Class:	Block Device
Subclass:	by Device
IT Resource Name:	/TeamQuest/System/*systemname*/Disk
TeamQuest Table Name:	Block Device.by Device
Open Table Name:	BLKDEVBYDEVICE
Resource:	disk0, disk1, ...
Statistic Name:	
%busy	The percentage of time this device was servicing a transfer request [Sequential = AVG Non-Sequential = AVG] View Report: /report/hp-ux/sys-act/io/dsk-util.rpt
actq_avwait*	The average run queue wait time in milliseconds
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = ID]
avgresp*	The average response time of an I/O on a device. Calculated as avwait + avserv
avque	The average number of requests outstanding [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/sys-act/io/dsk-q.rpt

avserv	The average time in milliseconds to service each transfer request (includes seek, rotation latency, and data transfer times) for the device [Sequential = AVG Non-Sequential = AVG] View Report: /report/hp-ux/sys-act/io/dsk-time.rpt
avwait	The average time in milliseconds that transfer requests are idle in the queue while the queue is occupied [Sequential = AVG Non-Sequential = AVG] View Report: /report/hp-ux/sys-act/io/dsk-time.rpt
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = ID]
IO_intensity*	The activity of an I/O device. This is the product of the I/O response time in milliseconds and the I/O transfer rate in I/Os per second. This is proportional to the average queue length (the number of I/O requests waiting or in progress at the I/O device).
Kbytes/s	The rate at which data is transferred in kilobytes per second [Sequential = AVG Non-Sequential = SUM] View Reports: /report/hp-ux/sys-act/io/dsk-xfer.rpt /report/hp-ux/sys-act/io/top-dsk.rpt
record_count	The number of collected records represented by the record written to the database. For nonreduced records, this value is 1. For reduced records, this value is the number of records that are combined into a single database record. [Sequential = AVG Non-Sequential = SUM]
reduction_name	The name of reduction rule [Sequential = ID Non-Sequential = ID]
reduction_source	The source of the reduction record. For reduction records with agent sources, this value is A. For reduction records with harvest sources, this value is H. [Sequential = ID Non-Sequential = ID]
transfers/s	The number of physical transfers to and from the disk per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/sys-act/io/dsk-xfer.rpt
waitq_avwait*	The average wait queue wait time in milliseconds

Class:	Block Device
Subclass:	Summary
IT Resource Name:	/TeamQuest/System/*systemname*/Disk
TeamQuest Table Name:	Block Device.Summary
Open Table Name:	BLKDEVSUM
Statistic Name:	
transfers/s	The number of physical transfers to and from all devices per second [Sequential = AVG Non-Sequential = SUM]

Class:	CPU
Subclass:	by Processor
IT Resource Name:	/TeamQuest/System/*systemname*/CPU
TeamQuest Table Name:	CPU.by Processor
Open Table Name:	CPUBYPROC
Resource:	cpu0, cpu1, ...
Statistic Name:	
%idle	The percentage of CPU time spent idle for this CPU [Sequential = AVG Non-Sequential = AVG] View Report: /report/aix/sys-act/cpu/per-cpu.rpt
%sys	The percentage of CPU time spent running in system mode [Sequential = AVG Non-Sequential = AVG] View Report: /report/aix/sys-act/cpu/per-cpu.rpt
%usr	The percentage of CPU time spent running in user mode [Sequential = AVG Non-Sequential = AVG] View Report: /report/aix/sys-act/cpu/per-cpu.rpt
%wio	The percentage of CPU time spent idle while some process is waiting for I/O completion [Sequential = AVG Non-Sequential = AVG] View Report: /report/aix/sys-act/cpu/per-cpu.rpt
pct_fardisp	The percentage of thread dispatches to this processor that were far dispatches. This statistic is not available on systems before POWER7 architectures. [Sequential = AVG Non-Sequential = AVG] ***Note:*** *The hardware meanings for local, near, and far vary with different architectures.*

pct_localdisp — The percentage of thread dispatches to this processor that were local dispatches. This statistic is not available on systems before POWER7 architectures.
[Sequential = AVG Non-Sequential = AVG]
Note: *The hardware meanings for local, near, and far vary with different architectures.*

pct_neardisp — Percentage of thread dispatches to this processor that were near dispatches. This statistic is not available on systems before POWER7 architectures.
[Sequential = AVG Non-Sequential = AVG]
Note: *The hardware meanings for local, near, and far vary with different architectures.*

Notes:

- *The statistics reported in the CPU.by LPAR table on a shared logical partition are relative to either the entitlement of the partition or to the actual physical processor usage of the partition, whichever is greater.*
- *The statistics reported in the CPU.by LPAR table on a dedicated logical partition are relative to the configured capacity of the partition.*
- *For more information on partition entitlement, shared partitions, or dedicated partitions, see the IBM PowerVM Virtualization documentation.*

Class: CPU

Subclass: by LPAR

IT Resource Name: /TeamQuest/System/*systemname*

TeamQuest Table Name: CPU.by LPAR

Open Table Name: CPUBYLPAR

Statistic Name:

%entc — The percentage of the entitled processor capacity consumed. Available only in a shared dynamic logical partition environment.
[Sequential = AVG Non-Sequential = AVG]

%idle — The percentage of the entitled processing capacity unused while the partition was idle and did not have any outstanding disk I/O requests. Available only in a logical partition environment.
[Sequential = AVG Non-Sequential = AVG]
View Report:
/report/aix/sys-act/cpu/lpar-cpu.rpt

%lpar_phys_busy — The percentage of the processor capacity consumed. If an LPAR moves into or out of the shared adapter pool, this statistic may be displayed as <N/A>. Available only in a shared dynamic logical partition environment.
[Sequential = AVG Non-Sequential = SUM]

%lpar_pool_busy
: The percentage of the physical processor pool capacity consumed. If an LPAR moves into or out of the shared adapter pool, this statistic may be displayed as <N/A>. Available only in a shared dynamic logical partition environment.
[Sequential = AVG Non-Sequential = SUM]

%sys
: The percentage of the entitled processing capacity used while executing at the system level. Available only in a logical partition environment.
[Sequential = AVG Non-Sequential = AVG]
View Report:
/report/aix/sys-act/cpu/lpar-cpu.rpt

%total_pool_busy
: The percentage of the processor pool capacity consumed. Allow performance information collection must be enabled. If the Allow performance information collection is not enabled, this statistic is displayed as <N/A>. If an LPAR moves into or out of the shared adapter pool, this statistic may be displayed as <N/A>. Available only in a shared dynamic logical partition environment.
[Sequential = AVG Non-Sequential = SUM]
Note: *In earlier versions of hardware management console (HMC), the Allow performance information collection name is Allow shared processor pool utilization.*

%user
: The percentage of the entitled processing capacity used while executing at the user level. Available only in a logical partition environment.
[Sequential = AVG Non-Sequential = AVG]
View Report:
/report/aix/sys-act/cpu/lpar-cpu.rpt

%wait
: The percentage of the entitled processing capacity unused while the partition was idle and had outstanding disk I/O requests. Available only in a logical partition environment.
[Sequential = AVG Non-Sequential = AVG]
View Report:
/report/aix/sys-act/cpu/lpar-cpu.rpt

app
: The number of available processors in the shared pool. Allow performance information collection must be enabled. If the Allow performance information collection is not enabled, this statistic is displayed as <N/A>. If an LPAR moves into or out of the shared adapter pool, this statistic may be displayed as <N/A>. Available only in a shared dynamic logical partition environment.
[Sequential = AVG Non-Sequential = SUM]
Note: *In earlier versions of hardware management console (HMC), the Allow performance information collection name is Allow shared processor pool utilization.*

ivcsw
: The number of involuntary virtual context switches per second. An involuntary context switch occurs when a process is interrupted by a higher priority process or exceeds its time allottment.
[Sequential = AVG Non-Sequential = SUM]

pct_fardisp	The percentage of thread dispatches that were far dispatches. This statistic is not available on systems before POWER7 architectures. [Sequential = AVG Non-Sequential = AVG] ***Note:*** *The hardware meanings for local, near, and far vary with different architectures.*
pct_localdisp	The percentage of thread dispatches that were local dispatches. This statistic is not available on systems before POWER7 architectures. [Sequential = AVG Non-Sequential = AVG] ***Note:*** *The hardware meanings for local, near, and far vary with different architectures.*
pct_neardisp	Percentage of thread dispatches that were near dispatches. This statistic is not available on systems before POWER7 architectures. [Sequential = AVG Non-Sequential = AVG] ***Note:*** *The hardware meanings for local, near, and far vary with different architectures.*
phint	The number of phantom (targeted to another shared partition in this pool) interruptions received. Available only in a shared dynamic logical partition environment. [Sequential = AVG Non-Sequential = SUM]
physc	The number of physical processors consumed. Available only in a logical partition environment. [Sequential = AVG Non-Sequential = AVG]
vcsw	The number of virtual context switches that are virtual processor hardware preemptions. Available only in a shared dynamic logical partition environment. [Sequential = AVG Non-Sequential = SUM]
vvcsw	The number of voluntary virtual context switches per second. A voluntary context switch usually occurs when the process has nothing to do or when a process is waiting for an event to happen (for example, an I/O operation to complete). [Sequential = AVG Non-Sequential = SUM]

The CPU.RelativePerformance table is populated for physical systems only. It is not populated for AIX logical partitions (LPARs), VMware guests, Hyper-V guests, Solaris logical domains (LDOMs), Solaris guest LDOMs, KVM guests, and Linux on POWER systems.

Table Field Hierarchy

Class:	CPU
Subclass:	RelativePerformance
IT Resource Name:	/TeamQuest/System/*systemname*/CPU
Table type:	Performance

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = ID]
cpu_relative_performance	The relative performance of the CPU on a common scale [Sequential = AVG Non-Sequential = SUM]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = ID]
rel_unused	The amount of CPU resources not used based on a common, relative scale. This statistic is not available for IBM AIX systems. [Sequential = AVG Non-Sequential = SUM]
rel_used	The amount of CPU resources used based on a common, relative scale [Sequential = AVG Non-Sequential = SUM]
System	The name of the system where the data is collected. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]

Note: *The statistics reported in the CPU.Summary table are relative to the usage of online logical processors in the logical partition. For more information on logical processors, see the IBM PowerVM Virtualization documentation.*

Class:	CPU
Subclass:	Summary
IT Resource Name:	/TeamQuest/System/*systemname*/CPU
TeamQuest Table Name:	CPU.Summary
Open Table Name:	CPUSUM
Statistic Name:	
%busy	The percentage of time the CPU was not idle [Sequential = AVG Non-Sequential = AVG]
%idle	The percentage of total CPU time spent idle while no processes are waiting for I/O completion [Sequential = AVG Non-Sequential = AVG] View Report: /report/aix/sys-act/cpu/cpu-util.rpt
%sys	The percentage of total CPU time spent running in system mode [Sequential = AVG Non-Sequential = AVG] View Report: /report/aix/sys-act/cpu/cpu-util.rpt
%usr	The percentage of total CPU time spent running in user mode [Sequential = AVG Non-Sequential = AVG] View Report: /report/aix/sys-act/cpu/cpu-util.rpt
%wio	The percentage of total CPU time spent idle while some processes are waiting for I/O completion [Sequential = AVG Non-Sequential = AVG] View Report: /report/aix/sys-act/cpu/cpu-util.rpt
online_cpus	The number of CPUs that were online at the end of the sampling interval [Sequential = LST Non-Sequential = SUM]

Note: *The IBM POWER.Block Device Summary table is a derived table and therefore is only available for viewing in TeamQuest Analyzer.*

Table Field Hierarchy

Class:	IBM POWER
Subclass:	Block Device Summary
IT Resource Name:	/TeamQuest/System/*systemname*
Table type:	Performance

Statistic Name	Description
Frame	The physical system name as displayed by the management entity [Sequential = LST Non-Sequential = ID]
mpid	The identifier of the memory pool that the LPAR belongs to [Non-Sequential = ID]
partition_group_id	The LPAR group that the LPAR is a member of [Non-Sequential = ID]
partition_name	The logical partition name as assigned by the management entity [Sequential = LST Non-Sequential = ID]
shared_pool_id	The identifier of the shared pool of physical processors that the LPAR is a member of [Non-Sequential = ID]
transfers/s	The number of physical transfers to and from all devices per second [Sequential = AVG Non-Sequential = SUM]

Note: *The IBM POWER.CPU by LPAR table is a derived table and therefore is only available for viewing in TeamQuest Analyzer.*

Table Field Hierarchy

Class:	IBM POWER
Subclass:	CPU by LPAR
IT Resource Name:	/TeamQuest/System/*systemname*
Table type:	Performance

Statistic Name	Description
%entc	The percentage of the entitled processor capacity consumed. Available only in a shared dynamic logical partition environment. [Sequential = AVG Non-Sequential = AVG]
%idle	The percentage of the entitled processing capacity unused while the partition was idle and did not have any outstanding disk I/O requests. Available only in a logical partition environment. [Sequential = AVG Non-Sequential = AVG]

%lpar_phys_busy	The percentage of the processor capacity consumed. If an LPAR moves into or out of the shared adapter pool, this statistic may be displayed as <N/A>. Available only in a shared dynamic logical partition environment. [Sequential = AVG Non-Sequential = SUM]
%lpar_pool_busy	The percentage of the physical processor pool capacity consumed. If an LPAR moves into or out of the shared adapter pool, this statistic may be displayed as <N/A>. Available only in a shared dynamic logical partition environment. [Sequential = AVG Non-Sequential = SUM]
%sys	The percentage of the entitled processing capacity used while executing at the system level. Available only in a logical partition environment. [Sequential = AVG Non-Sequential = AVG]
%total_pool_busy	The percentage of the processor pool capacity consumed. Allow shared processor pool utilization must be enabled. If an LPAR moves into or out of the shared adapter pool, this statistic may be displayed as <N/A>. Available only in a shared dynamic logical partition environment. [Sequential = AVG Non-Sequential = SUM]
%user	The percentage of the entitled processing capacity used while executing in user mode. Available only in a logical partition environment. [Sequential = AVG Non-Sequential = AVG]
%wait	The percentage of the entitled processing capacity unused while the partition was idle and had outstanding disk I/O requests. Available only in a logical partition environment. [Sequential = AVG Non-Sequential = AVG]
app	The number of available processors in the shared pool. Allow shared processor pool utilization must be enabled. If an LPAR moves into or out of the shared adapter pool, this statistic may be displayed as <N/A>. Available only in a shared dynamic logical partition environment. [Sequential = AVG Non-Sequential = SUM]
Frame	The physical system name as displayed by the management entity [Sequential = LST Non-Sequential = ID]
mpid	The identifier of the memory pool that the LPAR belongs to [Non-Sequential = ID]
partition_group_id	The LPAR group that the LPAR is a member of [Non-Sequential = ID]
partition_name	The logical partition name as assigned by the management entity [Sequential = LST Non-Sequential = ID]
phint	The number of phantom (targeted to another shared partition in this pool) interrupts received. Available only in a shared dynamic logical partition environment. [Sequential = AVG Non-Sequential = SUM]

physc	The number of physical processors consumed. Available only in a logical partition environment. [Sequential = AVG Non-Sequential = AVG]
shared_pool_id	The identifier of the shared pool of physical processors that the LPAR is a member of [Non-Sequential = ID]
vcsw	The number of virtual context switches that are virtual processor hardware preemptions. Available only in a shared dynamic logical partition environment. [Sequential = AVG Non-Sequential = SUM]
vvcsw	The number of voluntary virtual context switches per second. A voluntary context switch usually occurs when the process has nothing to do or when a process is waiting for an event to happen (for example, when an I/O operation completes). [Sequential = AVG Non-Sequential = SUM]

Note: *The IBM POWER.CPU Relative Performance table is a derived table and therefore is only available for viewing in TeamQuest Analyzer.*

Table Field Hierarchy

Class:	IBM POWER
Subclass:	CPU Relative Performance
IT Resource Name:	/TeamQuest/System/*systemname*
Table type:	Performance

Statistic Name	**Description**
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = ID]
cpu_relative_performance	The relative performance of the CPU on a common scale [Sequential = AVG Non-Sequential = SUM]
Frame	The physical system name as displayed by the management entity [Sequential = LST Non-Sequential = ID]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = ID]
mpid	The identifier of the memory pool that the logical partition (LPAR) belongs to [Non-Sequential = ID]
partition_group_id	The identifier of the LPAR group that the LPAR is a member of [Non-Sequential = ID]
partition_name	The logical partition name as assigned by the management entity [Sequential = LST Non-Sequential = ID]

rel_unused	The amount of CPU resources not used based on a common, relative scale. CPU available to an LPAR can vary over time due to configuration (shared versus dedicated CPU for the LPAR), donation of dedicated CPU by the LPAR, usage of shared CPU pools, and so on. Unused relative CPU is not calculated and is reported as <N/A>. This statistic is not available for IBM AIX systems. [Sequential = AVG Non-Sequential = SUM]
rel_used	The amount of CPU resources used based on a common, relative scale [Sequential = AVG Non-Sequential = SUM]
shared_pool_id	The identifier of the shared pool of physical processors that the LPAR is a member of [Non-Sequential = ID]
System	The name of the system where the data is collected. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]

The PowerVM CEC Agent retrieves configuration information for the logical partitions hosted on an IBM POWER server. The information is stored at startup and updated once a day in the IBM POWER.FRAME CONFIG table. In addition, the PowerVM CEC Agent checks for partition configuration changes at a specified interval and records the configuration if changes are detected. This interval is controlled by the Performance Data Policy applied to the database and defaults to 1-hour.

Table Field Hierarchy

Class:	IBM POWER
Subclass:	FRAME CONFIG
IT Resource Name:	/TeamQuest/System/*framename*
TeamQuest Table Name:	IBM POWER.FRAME CONFIG
Open Table Name:	IBMPOWERFRAMECONFIG
Collection interval:	N/A
Default retentions:	1 year
Table type:	Performance

Statistic Name	Description
Frame	The name of the physical system as displayed by the management entity [Sequential = ID Non-Sequential = ID]
managing_node	The name of the entity from which the configuration data was retrieved as given by the PowerVM CEC Policy that is applied to the node. This name is typically a management entity or a VIOS that hosts an Integrated Virtualization Manager (IVM). [Sequential = ID Non-Sequential = ID]
partition_name	The name of the partition profile as it was activated. This field is limited to 51 characters. Any name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
partition_number	The number of the logical partition as assigned by the management entity [Sequential = ID Non-Sequential = ID]
partition_state	The current state of the partition profile. For example, Not Activated, Starting, Running, Shutting Down, Error, Open Firmware, or Not Available. [Sequential = ID Non-Sequential = ID]
System	The domain name system (DNS) host name. This field is determined using the Internet Protocol (IP) address used by the management entity for the partition. If the IP address is available, but cannot be mapped to a DNS name, this value is the IP address of the partition. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]

Note: *The IBM POWER.Memory table is a derived table and therefore is only available for viewing in TeamQuest Analyzer.*

Table Field Hierarchy

Class:	IBM POWER
Subclass:	Memory
IT Resource Name:	/TeamQuest/System/*systemname*
Table type:	Performance

Statistic Name	**Description**
Frame	The physical system name as displayed by the management entity [Sequential = LST Non-Sequential = ID]
freereal (MB)	The amount of real free memory available in megabytes (MB) [Sequential = AVG Non-Sequential = AVG]
mpid	The identifier of the memory pool that the LPAR belongs to [Non-Sequential = ID]
partition_group_id	The LPAR group that the LPAR is a member of [Non-Sequential = ID]
partition_name	The logical partition name as assigned by the management entity [Sequential = LST Non-Sequential = ID]
shared_pool_id	The identifier of the shared pool of physical processors that the LPAR is a member of [Non-Sequential = ID]
totalreal (MB)	The total amount of memory in megabytes (MB) [Sequential = AVG Non-Sequential = AVG]
totalvirt (MB)	The total amount of virtual memory in megabytes (MB) [Sequential = AVG Non-Sequential = AVG]

Note: *The IBM POWER.Memory Page Space table is a derived table and therefore is only available for viewing in TeamQuest Analyzer.*

Table Field Hierarchy

Class:	IBM POWER
Subclass:	Memory Page Space
IT Resource Name:	/TeamQuest/System/*systemname*
Table type:	Performance

Statistic Name	**Description**
Frame	The physical system name as displayed by the management entity [Sequential = LST Non-Sequential = ID]
free (MB)	The amount of free page space in megabytes (MB) [Sequential = AVG Non-Sequential = AVG]
mpid	The identifier of the memory pool that the LPAR belongs to [Non-Sequential = ID]
partition_group_id	The LPAR group that the LPAR is a member of [Non-Sequential = ID]
partition_name	The logical partition name as assigned by the management entity [Sequential = LST Non-Sequential = ID]
reserved (MB)	The amount of reserved page space in megabytes [Sequential = AVG Non-Sequential = AVG]
shared_pool_id	The identifier of the shared pool of physical processors that the LPAR is a member of [Non-Sequential = ID]
total (MB)	The total amount of page space in megabytes (MB) [Sequential = AVG Non-Sequential = AVG]

Note: *The IBM POWER.Memory Real table is a derived table and therefore is only available for viewing in TeamQuest Analyzer.*

Table Field Hierarchy

Class:	IBM POWER
Subclass:	Memory Real
IT Resource Name:	/TeamQuest/System/*systemname*
Table type:	Performance

Statistic Name	Description
client (MB)	The amount of memory currently allocated to cache remotely mounted files in megabytes (MB) [Sequential = AVG Non-Sequential = AVG]
comp (MB)	The amount of real memory currently allocated to computational page frames in megabytes (MB). Computational page frames are generally those that are backed by paging space. [Sequential = AVG Non-Sequential = AVG]
Frame	The physical system name as displayed by the management entity [Sequential = LST Non-Sequential = ID]
free (MB)	The amount of real free memory available in megabytes (MB) [Sequential = AVG Non-Sequential = AVG]
inuse (MB)	The total amount of real memory that is in use in megabytes (MB) [Sequential = AVG Non-Sequential = AVG]
mpid	The identifier of the memory pool that the LPAR belongs to [Non-Sequential = ID]
noncomp (MB)	The amount of real memory currently allocated to noncomputational page frames in megabytes (MB) [Sequential = AVG Non-Sequential = AVG]
partition_group_id	The LPAR group that the LPAR is a member of [Non-Sequential = ID]
partition_name	The logical partition name as assigned by the management entity [Sequential = LST Non-Sequential = ID]
pinned (MB)	The total amount of real memory that is pinned in megabytes (MB) [Sequential = AVG Non-Sequential = AVG]
shared_pool_id	The identifier of the shared pool of physical processors that the LPAR is a member of [Non-Sequential = ID]
total (MB)	The total amount of real memory in megabytes (MB) [Sequential = AVG Non-Sequential = AVG]

Class:	Kernel
Subclass:	Buffers
IT Resource Name:	/TeamQuest/System/*systemname*/Kernel
TeamQuest Table Name:	Kernel.Buffers
Open Table Name:	KNLBUFFS
Statistic Name:	
%rcache	The percentage of logical reads satisfied from the buffer cache [Sequential = AVG Non-Sequential = AVG] View Report: /report/aix/sys-act/kernel/bufc-hit.rpt
%wcache	The percentage of logical writes satisfied from the buffer cache [Sequential = AVG Non-Sequential = AVG] View Report: /report/aix/sys-act/kernel/bufc-hit.rpt
bread/s	The number of reads per second between system buffers and block devices [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/sys-act/kernel/bufc-xfr.rpt
bwrit/s	The number of writes per second between system buffers and block devices [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/sys-act/kernel/bufc-xfr.rpt
lread/s	The number of read accesses of system buffers (logical reads) per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/sys-act/kernel/bufc-xfr.rpt
lwrit/s	The number of write accesses of system buffers (logical writes) per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/sys-act/kernel/bufc-xfr.rpt
pread/s	The number of physical read requests per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/sys-act/kernel/phys-xfr.rpt
pwrit/s	The number of physical write requests per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/sys-act/kernel/phys-xfr.rpt

Class:	Kernel
Subclass:	File Access
IT Resource Name:	/TeamQuest/System/*systemname*/Kernel
TeamQuest Table Name:	Kernel.File Access
Open Table Name:	KNLFILEACCESS
Statistic Name:	
dirblk/s	The number of directory block reads issued per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/sys-act/kernel/f-access.rpt
iget/s	The number of files located by i-node entries per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/sys-act/kernel/f-access.rpt
namei/s	The number of file system path searches per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/sys-act/kernel/f-access.rpt

Class:	Kernel
Subclass:	IPC (inter process communication)
IT Resource Name:	/TeamQuest/System/*systemname*/Kernel
TeamQuest Table Name:	Kernel.IPC
Open Table Name:	KNLIPC
Statistic Name:	
msg/s	The number of message operations (sends and receives) per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/sys-act/kernel/msg-sema.rpt
sema/s	The number of semaphore operations per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/sys-act/kernel/msg-sema.rpt

Class:	Kernel
Subclass:	Load Average
IT Resource Name:	/TeamQuest/System/*systemname*/Kernel
TeamQuest Table Name:	Kernal.Load Average
Open Table Name:	KNLLOADAVG
Statistic Name:	
1 min	The average number of runnable processes in the last one-minute interval that were waiting for system resources [Sequential = LST Non-Sequential = SUM]
5 min	The average number of runnable processes in the last five-minute interval that were waiting for system resources [Sequential = LST Non-Sequential = SUM]
15 min	The average number of runnable processes in the last fifteen-minute interval that were waiting for system resources [Sequential = LST Non-Sequential = SUM]

Class:	Kernel
Subclass:	Paging
IT Resource Name:	/TeamQuest/System/*systemname*/Memory
TeamQuest Table Name:	Kernel.Paging
Open Table Name:	KNLPAGING
Statistic Name:	
backtracks/s	The number of page faults per second that occurred while resolving previous page faults [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/sys-act/kernel/pageflt.rpt
cycles/s	The number of clock hand cycles per second [Sequential = AVG Non-Sequential = SUM]
execfills/s	The number of instruction page faults satisfied per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/sys-act/kernel/pageflt.rpt
freewaits/s	The number of processes per second waiting for free frames to be gathered [Sequential = AVG Non-Sequential = SUM]
iodones/s	The number of virtual memory manager (VMM) read and write I/O requests completed per second [Sequential = AVG Non-Sequential = SUM]
iostarts/s	The number of virtual memory manager (VMM) read and write I/O requests started per second [Sequential = AVG Non-Sequential = SUM]
lockmisses/s	The number of page faults caused by lock misses per second [Sequential = AVG Non-Sequential = SUM]

pendwaits/s	The number of processes waiting for a page-in I/O to complete per second [Sequential = AVG Non-Sequential = SUM]
pflts/s	The number of page faults per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/sys-act/kernel/pageflt.rpt
pgin/s	The number of pages paged in from paging space and file space per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/sys-act/kernel/pagein.rpt
pgout/s	The number of pages paged out to paging space and file space per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/sys-act/kernel/pageout.rpt
pgspin/s	The number of pages paged in from paging space per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/sys-act/kernel/pagein.rpt
pgspout/s	The number of pages paged out to paging space per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/sys-act/kernel/pageout.rpt
rclms/s	The number of page faults satisfied per second without having to initiate new I/O requests [Sequential = AVG Non-Sequential = SUM]
scans/s	The number of pages examined by the clock hand per second [Sequential = AVG Non-Sequential = SUM]
steals/s	The number of page steals per second [Sequential = AVG Non-Sequential = SUM]
zerofills/s	The number of page faults satisfied by zero-filling per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/sys-act/kernel/pageflt.rpt

Class:	Kernel
Subclass:	Queues
IT Resource Name:	/TeamQuest/System/*systemname*/Kernel
TeamQuest Table Name:	Kernel.Queues
Open Table Name:	KNLQS
Statistic Name:	
%runocc	The percentage of time the run queue is occupied [Sequential = AVG Non-Sequential = AVG] View Report: /report/aix/sys-act/kernel/q-util.rpt
avg_cpuq_sz	The average length of the run queue per CPU (a queue of processes in memory and runnable) [Sequential = AVG Non-Sequential = AVG]
avg_runq_sz	The average length of the run queue (a queue of processes in memory and runnable) [Sequential = AVG Non-Sequential = AVG] View Reports: /report/aix/sys-act/kernel/q-sizes.rpt /report/aix/sys-act/kernel/runq.rpt
cpuq_sz	The average length of the run queue per CPU (a queue of processes in memory and runnable) while the run queue is occupied [Sequential = AVG Non-Sequential = AVG]
blocked	The average number of threads blocked on I/O (waiting for an I/O to finish) [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/sys-act/kernel/blocked
pswch/s	The number of process switches per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/sys-act/kernel/p-switch.rpt
runq_sz	The average length of the run queue (a queue of processes in memory and runnable) while the run queue is occupied [Sequential = AVG Non-Sequential = AVG] View Reports: /report/aix/sys-act/kernel/q-sizes.rpt /report/aix/sys-act/kernel/runq.rpt

Class:	Kernel
Subclass:	Tables
IT Resource Name:	/TeamQuest/System/*systemname*/Kernel
TeamQuest Table Name:	Kernel.Tables
Open Table Name:	KNLTABS
Statistic Name:	
file_sz	The number of entries currently being used in the file table. This count is taken at the end of the sampling interval. [Sequential = AVG Non-Sequential = AVG]
proc_sz	The number of entries currently being used in the process table. This count is taken at the end of the sampling interval. [Sequential = AVG Non-Sequential = AVG] View Report: /report/aix/sys-act/kernel/tbl-size.rpt
thread_sz	The number of entries currently being used in the thread table. This count is taken at the end of the sampling interval. [Sequential = AVG Non-Sequential = AVG]

Class:	Kernel
Subclass:	TTY
IT Resource Name:	/TeamQuest/System/*systemname*/Kernel
TeamQuest Table Name:	Kernel.TTY
Open Table Name:	KNLTTY
Statistic Name:	
canch/s	The number of input characters per second processed by canon (canonical queue) [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/sys-act/kernel/tty-xfer.rpt
mdmin/s	The number of modem interrupts per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/sys-act/kernel/tty-intr.rpt
outch/s	The number of output characters transferred per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/sys-act/kernel/tty-xfer.rpt
rawch/s	The number of input characters per second transferred in raw mode [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/sys-act/kernel/tty-xfer.rpt

rcvin/s	The number of receiver hardware interrupts per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/sys-act/kernel/tty-intr.rpt
xmtin/s	The number of transmitter hardware interrupts per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/sys-act/kernel/tty-intr.rpt

Class:	Memory
Subclass:	AME
IT Resource Name:	/TeamQuest/System/*systemname*/Memory
TeamQuest Table Name:	Memory.AME
Open Table Name:	MEMAME
Statistic Name:	
cfr	The amount of free memory in gigabytes in the compressed pool [Sequential = LST Non-Sequential = SUM]
ci/s	The number of decompression operations or page-ins per second from the compressed pool [Sequential = AVG Non-Sequential = SUM]
cmsz	The target size of the compressed memory pool in gigabytes [Sequential = LST Non-Sequential = SUM]
co/s	The number of compression operations or page-outs per second to the compressed pool [Sequential = AVG Non-Sequential = SUM]
cpg	The number of pages in the compressed memory pool [Sequential = LST Non-Sequential = SUM]
cpsz	The compressed size of the pages in gigabytes in the compressed memory pool [Sequential = LST Non-Sequential = SUM]
csz	The size of the compressed memory pool in gigabytes [Sequential = LST Non-Sequential = SUM]
ctsz	The target size of the compressed memory pool in gigabytes [Sequential = LST Non-Sequential = SUM]
cwpg	The number of working storage pages in the compressed pool [Sequential = LST Non-Sequential = SUM]
cwsz	The compressed size of the working pages in gigabytes in the compressed memory pool [Sequential = LST Non-Sequential = SUM]
cxf	The achieved memory expansion factor. This is the factor that the system has been able to expand the true memory by. [Sequential = LST Non-Sequential = AVG]
dxm	The size of the expanded memory deficit in gigabytes [Sequential = LST Non-Sequential = SUM]

mem	The expanded memory size in gigabytes of the LPAR [Sequential = LST Non-Sequential = SUM]
tmem	The true memory size in gigabytes of the LPAR [Sequential = LST Non-Sequential = SUM]
txf	The target memory expansion factor. This is expressed as a multiplier that the system attempts to expand the true memory by. A target expansion factor of 2.0 indicates that the target size of the expanded memory is twice the size of the true memory. [Sequential = LST Non-Sequential = AVG]
usz	The size of the uncompressed memory pool in gigabytes [Sequential = LST Non-Sequential = SUM]

Class:	Memory
Subclass:	AMS
IT Resource Name:	/TeamQuest/System/*systemname*/Memory
TeamQuest Table Name:	Memory.AMS
Open Table Name:	MEMAMS
Statistic Name:	
hpi/s	The number of Hypervisor page-ins per second for the partition (system). A Hypervisor page-in occurs if a page is being referenced but is not available in real memory because it has been previously paged out by the Hypervisor. [Sequential = AVG Non-Sequential = SUM]
hpit	The average time spent per Hypervisor page-ins in milliseconds [Sequential = AVG Non-Sequential = AVG]
iome	The amount of memory in gigabytes permanently reserved in a memory pool to handle I/O activity [Sequential = LST Non-Sequential = SUM]
loan	The amount of logical memory in gigabytes that is loaned to the Hypervisor [Sequential = LST Non-Sequential = SUM]
mpsz	The size of the shared memory pool in gigabytes [Sequential = LST Non-Sequential = SUM]
memwght	The memory weight. This is a relative number used by the Hypervisor to prioritize the physical memory assignment from the shared memory pool to the logical partition. A higher value increases the probability that more physical memory is assigned to the logical partition. [Sequential = LST Non-Sequential = ID]
pmem	The size of the memory pool backing the logical memory in gigabytes [Sequential = LST Non-Sequential = SUM]

Class:	Memory
Subclass:	N/A
IT Resource Name:	/TeamQuest/System/*systemname*/Memory
TeamQuest Table Name:	Memory
Open Table Name:	MEM
Statistic Name:	
freereal (MB)	The amount of real free memory available in megabytes (MB) [Sequential = AVG Non-Sequential = AVG]
totalreal (MB)	The total amount of memory in megabytes (MB) [Sequential = AVG Non-Sequential = AVG]
totalvirt (MB)	The total amount of virtual memory in megabytes (MB) [Sequential = AVG Non-Sequential = AVG]

Class:	Memory
Subclass:	Page Space
IT Resource Name:	/TeamQuest/System/*systemname*/Memory
TeamQuest Table Name:	Memory.Page Space
Open Table Name:	MEMPGSPACE
Statistic Name:	
free (MB)	The amount of free page space in megabytes (MB) [Sequential = AVG Non-Sequential = AVG] View Report: /report/aix/sys-act/memory/pgspmem.rpt
reserved (MB)	The amount of reserved page space in megabytes (MB) [Sequential = AVG Non-Sequential = AVG]
total (MB)	The total amount of page space in megabytes (MB) [Sequential = AVG Non-Sequential = AVG] View Report: /report/aix/sys-act/memory/pgspmem.rpt

Class:	Memory
Subclass:	Real
IT Resource Name:	/TeamQuest/System/*systemname*/Memory
TeamQuest Table Name:	Memory.Real
Open Table Name:	MEMREAL
Statistic Name:	
client (MB)	The amount of memory currently allocated to cache remotely mounted files in megabytes (MB) [Sequential = AVG Non-Sequential = AVG]
comp (MB)	The amount of real memory currently allocated to computational page frames in megabytes (MB). Computational page frames are generally those that are backed by paging space. [Sequential = AVG Non-Sequential = AVG] View Report: /report/aix/sys-act/memory/memuse.rpt
free (MB)	The amount of real free memory available in megabytes (MB) [Sequential = AVG Non-Sequential = AVG] View Reports: /report/aix/sys-act/memory/realmem.rpt /report/aix/sys-act/memory/memuse.rpt
inuse (MB)	The total amount of real memory that is in use in megabytes (MB) [Sequential = AVG Non-Sequential = AVG]
noncomp (MB)	The amount of real memory currently allocated to noncomputational page frames in megabytes (MB) [Sequential = AVG Non-Sequential = AVG] View Report: /report/aix/sys-act/memory/memuse.rpt
pinned (MB)	The total amount of real memory that is pinned in megabytes (MB) [Sequential = AVG Non-Sequential = AVG]
total (MB)	The total amount of real memory in megabytes (MB) [Sequential = AVG Non-Sequential = AVG] View Report: /report/aix/sys-act/memory/realmem.rpt

Class:	System Call
Subclass:	Summary
IT Resource Name:	/TeamQuest/System/*systemname*/Kernel
TeamQuest Table Name:	System Call.Summary
Open Table Name:	SYSCALLSUM
Statistic Name:	
exec/s	The number of exec system calls per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/sys-act/syscall/imp-scal.rpt
fork/s	The number of fork system calls per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/sys-act/syscall/imp-scal.rpt
rchar/s	The number of characters transferred by read system calls in the interval in bytes per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/sys-act/syscall/scal-xfr.rpt
scall/s	The total number of system calls per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/sys-act/syscall/imp-scal.rpt
sread/s	The number of read system calls per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/sys-act/syscall/imp-scal.rpt
swrit/s	The number of write system calls per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/sys-act/syscall/imp-scal.rpt
wchar/s	The number of characters transferred by write system calls in the interval in bytes per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/sys-act/syscall/scal-xfr.rpt

Note: *The following statistics are only available for the TeamQuest database architecture. If the open database architecture is used, a record for each agent using these statistics is created in the TQ.Agent Interval table.*

Class:	TQ
Subclass:	N/A
IT Resource Name:	N/A
TeamQuest Table Name:	N/A
Open Table Name:	N/A
Statistic Name:	
bsp interval	The number of seconds elapsed between two data samples of the System Activity Agent [Sequential = SUM Non-Sequential = ID]
tqbsp_end_time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
tqbsp_interval	The number of seconds elapsed between the end of data collection for the previous sample and the end of data collection for the current sample [Sequential = SUM Non-Sequential = ID]

Table Field Hierarchy

Class:	TQ
Subclass:	Agent Interval
IT Resource Name:	/TeamQuest/System/*systemname*
TeamQuest Table Name:	TQ.Agent Interval
Open Table Name:	AGENTINTERVAL
Collection interval:	Based on the collection period
Default retentions:	8 hours at collection period interval 8 days at 10-minute intervals 35 days at 1-hour intervals 400 days at 8-hour intervals
Table type:	Performance
Derived tables using fields from this table:	N/A

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = ID]
Agent	The name of the agent that is collecting data. This field is limited to 52 characters. Any agent name longer than 52 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Instance	The instance name of the agent that is collecting data. This field is limited to 52 characters. Any instance name longer than 52 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = ID]
PID	The process identifier of the agent instance that is collecting data [Sequential = ID Non-Sequential = ID]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
System	The name of the system where the data is collected. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential LST Non-Sequential = ID]

Note: *WPAR statistics are only collected when TeamQuest Manager is running under a privileged user ID.*

Class:	WPAR
Subclass:	by WPAR
IT Resource Name:	/TeamQuest/System/*systemname*/Wpar
TeamQuest Table Name:	WPAR.by WPAR
Open Table Name:	WPARBYWPAR
Statistic Name:	
%sys	The percentage of used CPU time spent running in system mode. This is a percentage of cycles actually used, not a percentage of the available cycles. [Sequential = AVG Non-Sequential = AVG]
%usr	The percentage of used CPU time spent running in user mode. This is a percentage of cycles actually used, not a percentage of the available cycles. [Sequential = AVG Non-Sequential = AVG]
physc	The number of physical processors consumed by the WPAR [Sequential = AVG Non-Sequential = AVG]
Wentc	The percentage of the WPAR's entitled CPU cycles actually consumed [Sequential = AVG Non-Sequential = AVG]

6.2. Disk Space Statistics

Disk space statistics are maintained in the TeamQuest performance database by the Disk Space Agent. The statistics are classified by the hierarchy of key names. A statistic marked with an asterisk (*) is a derived statistic.

Parameter Hierarchy

Class:	Disk Space
Subclass:	by File System
IT Resource Name:	/TeamQuest/System/*systemname*/Disk
TeamQuest Table Name:	Disk Space.by File System
Open Table Name:	DISKSPACEBYFILESYS
Resource:	file system1, file system2, ...
Statistic Name:	
%inodes free*	The percentage of i-nodes available (not in use) on the file system at the end of the interval View Report: /report/aix/dskspace/total/pct-inod.rpt
%inodes used*	The percentage of i-nodes in use on the file system at the end of the interval View Report: /report/aix/dskspace/total/pct-inod.rpt
%space free*	The percentage of total space available (not in use) on the file system at the end of the interval View Reports: /report/aix/dskspace/total/pctspace.rpt /report/aix/dskspace/total/low-ones.rpt
%space used*	The percentage of total space in use on the file system at the end of the interval View Reports: /report/aix/dskspace/total/pctspace.rpt /report/aix/dskspace/total/fullest.rpt
%user space free*	The percentage of total user space available (not in use) on the file system at the end of the interval View Reports: /report/aix/dskspace/user/pctspace.rpt /report/aix/dskspace/user/low-ones.rpt
%user space used*	The percentage of total user space in use on the file system at the end of the interval View Reports: /report/aix/dskspace/user/pctspace.rpt /report/aix/dskspace/user/fullest.rpt
capacity	The percentage of total space in use on the file system at the end of the interval [Sequential = LST Non-Sequential = AVG]

free (Mb)	The amount of space available (not in use) on the file system in megabytes (Mb) at the end of the interval including the space held back from normal users [Sequential = LST Non-Sequential = SUM] View Reports: /report/aix/dskspace/total/dskspace.rpt /report/aix/dskspace/total/low-ones.rpt
free inodes	The number of available (not in use) i-nodes on the file system at the end of the interval [Sequential = LST Non-Sequential = SUM] View Report: /report/aix/dskspace/total/i-nodes.rpt
total (Mb)	The total (used + available) amount of space on the file system in megabytes (Mb) at the end of the interval including the space held back from normal users [Sequential = LST Non-Sequential = SUM] View Report: /report/aix/dskspace/total/dskspace.rpt
total inodes	The total (used + available) number of i-nodes on the file system at the end of the interval [Sequential = LST Non-Sequential = SUM] View Report: /report/aix/dskspace/total/i-nodes.rpt
user free (Mb)	The amount of space available (not in use) on the file system in megabytes (Mb) at the end of the interval not including the space held back from normal users [Sequential = LST Non-Sequential = SUM] View Reports: /report/aix/dskspace/user/dskspace.rpt /report/aix/dskspace/user/low-ones.rpt
user total (Mb)*	The total (used + available) amount of space on the file system in megabytes (Mb) at the end of the interval not including the space held back from normal users View Report: /report/aix/dskspace/user/dskspace.rpt

Note: *The following statistics are only available for the TeamQuest database architecture. If the open database architecture is used, a record for each agent using these statistics is created in the TQ.Agent Interval table.*

Class:	TQ
Subclass:	N/A
IT Resource Name:	N/A
TeamQuest Table Name:	N/A
Open Table Name:	N/A
Statistic Name:	
dsp interval	The number of seconds elapsed between two data samples of the Disk Space Agent [Sequential = SUM Non-Sequential = ID]
tqdsp_end_time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
tqdsp_interval	The number of seconds elapsed between the end of data collection for the previous sample and the end of data collection for the current sample [Sequential = SUM Non-Sequential = ID]

Table Field Hierarchy

Class:	TQ
Subclass:	Agent Interval
IT Resource Name:	/TeamQuest/System/*systemname*
TeamQuest Table Name:	TQ.Agent Interval
Open Table Name:	AGENTINTERVAL
Collection interval:	Based on the collection period
Default retentions:	8 hours at collection period interval 8 days at 10-minute intervals 35 days at 1-hour intervals 400 days at 8-hour intervals
Table type:	Performance
Derived tables using fields from this table:	N/A

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = ID]
Agent	The name of the agent that is collecting data. This field is limited to 52 characters. Any agent name longer than 52 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Instance	The instance name of the agent that is collecting data. This field is limited to 52 characters. Any instance name longer than 52 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = ID]
PID	The process identifier of the agent instance that is collecting data [Sequential = ID Non-Sequential = ID]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
System	The name of the system where the data is collected. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]

6.3. Network Statistics

The Network Agent collects information on the interaction of the system with the network. The types of data collected by the agent include network interfaces, NFS and Remote Protocol Call (RPC), and Transmission Control Protocol (TCP).

In NFS environments, the term *server* refers to the system that owns a file system and allows other systems on the network to access the files on the file system. A *client* is a system that mounts a nonlocal file system such as NFS and accesses files from the NFS mounted file system. Any given system could be a server to some file systems and a client to other file systems. It is not uncommon to have systems that export several file systems for other systems to use and mount several other network file systems. All of the NFS statistics collected by this agent show the activity of NFS clients and servers that exist on the system where the agent is run.

Note: *The IBM POWER.Network Summary table is a derived table and therefore is only available for viewing in TeamQuest Analyzer.*

Table Field Hierarchy

Class:	IBM POWER
Subclass:	Network Summary
IT Resource Name:	/TeamQuest/System/*systemname*
Table type:	Performance

Statistic Name	Description
errors/s	The total number of network errors per second for all network interfaces on the system [Sequential = AVG Non-Sequential = SUM]
Frame	The physical system name as displayed by the management entity [Sequential = LST Non-Sequential = ID]
in Kbytes/s	The total number of network interface bytes input per second in kilobytes [Sequential = AVG Non-Sequential = SUM]
in packets/s	The total number of network input packets per second for all network interfaces on the system [Sequential = AVG Non-Sequential = SUM]
mpid	The identifier of the memory pool that the LPAR belongs to [Non-Sequential = ID]
out Kbytes/s	The total number of network interface bytes output per second in kilobytes [Sequential = AVG Non-Sequential = SUM]
out packets/s	The total number of network output packets per second for all network interfaces on the system [Sequential = AVG Non-Sequential = SUM]
partition_group_id	The LPAR group that the LPAR is a member of [Non-Sequential = ID]

partition_name	The physical system name as displayed by the management entity [Sequential = LST Non-Sequential = ID]
shared_pool_id	The identifier of the shared pool of physical processors that the LPAR is a member of [Non-Sequential = ID]
total Kbytes/s	The total number of network interface bytes input and output per second in kilobytes [Sequential = AVG Non-Sequential = SUM]
total packets/s	The total number of network packets per second for all network interfaces on the system [Sequential = AVG Non-Sequential = SUM]

Parameter Hierarchy

Class:	Network
Subclass:	by Interface
IT Resource Name:	/TeamQuest/System/*systemname*/Network
TeamQuest Table Name:	Network.by Interface
Open Table Name:	NETBYINTERFACE
Resource:	interface0, interface1, ...
Statistic Name:	
collisions/s	The number of network collisions per second on Carrier Sense Multiple Access (CSMA) interfaces. This value does not include Ethernet interfaces. [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/network/net-errs.rpt
idrops/s	The number of network interface input drops per second. This statistic is not available and will be reported as zero. [Sequential = AVG Non-Sequential = SUM]
ifspeed	The network interface line speed in megabits per second. This statistic is not available and will be reported as zero. [Sequential = LST Non-Sequential = SUM] View Report: /report/aix/network/net-bits.rpt
in bytes/s	The number of network interface bytes input per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/network/net-bytes.rpt
in errors/s	The number of network input errors per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/network/net-errs.rpt
in packets/s	The number of network input packets per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/network/net-pkts.rpt

Mbits/s	The network interface bit count in megabits per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/network/net-bits.rpt
out bytes/s	The number of network interface bytes output per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/network/net-bytes.rpt
out errors/s	The number of network output errors per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/network/net-errs.rpt
out packets/s	The number of network output packets per seconds [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/network/net-pkts.rpt

Class:	Network
Subclass:	Summary
IT Resource Name:	/TeamQuest/System/*systemname*/Network
TeamQuest Table Name:	Network.Summary
Open Table Name:	NETSUM
Statistic Name:	
errors/s	The total number of network errors per second for all network interfaces on the system [Sequential = AVG Non-Sequential = SUM]
in Kbytes/s	The total number of network interface bytes input per second in kilobytes [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/network/sum-bytes.rpt
in packets/s	The total number of network input packets per second for all network interfaces on the system [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/network/net-sum.rpt
out Kbytes/s	The total number of network interface bytes output per second in kilobytes [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/network/sum-bytes.rpt
out packets/s	The total number of network output packets per second for all network interfaces on the system [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/network/net-sum.rpt

total Kbytes/s	The total number of network interface bytes input and output per second in kilobytes [Sequential = AVG Non-Sequential = SUM]
total packets/s	The total number of network packets per second for all network interfaces on the system [Sequential = AVG Non-Sequential = SUM]

Note: *NFS statistics are only collected if TeamQuest Manager is running under a privileged user ID.*

Class:	NFS
Subclass:	Client
IT Resource Name:	/TeamQuest/System/*systemname*/Network
TeamQuest Table Name:	NFS.Client
Open Table Name:	NFSCLI
Statistic Name:	
badcalls/s	The total number of Network File System (NFS) calls per second rejected from the client [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/network/nfs/client.rpt
calls/s	The total number of NFS calls sent by the client [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/network/nfs/client.rpt
gets/s	The total number of times per second an NFS client handle was received [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/network/nfs/client.rpt

Class:	NFS
Subclass:	Server
IT Resource Name:	/TeamQuest/System/*systemname*/Network
TeamQuest Table Name:	NFS.Server
Open Table Name:	NFSSERV
Statistic Name:	
badcalls/s	The total number of NFS calls per second rejected by the server [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/network/nfs/server.rpt
calls/s	The total number of NFS calls per second received by the server [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/network/nfs/server.rpt

Class:	NFSv2
Subclass	Client
IT Resource Name:	/TeamQuest/System/*systemname*/Network
TeamQuest Table Name:	NFSv2.Client
Open Table Name:	NFSV2CLI
Statistic Name:	
calls/s*	The number of NFS version 2 calls per second sent by the client [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/network/nfs/clnt-v2s.rpt

Class:	NFSv2
Subclass:	Client
IT Resource Name:	/TeamQuest/System/*systemname*/Network
TeamQuest Table Name:	NFSv2.Client
Open Table Name:	NFSV2CLI
Resource:	create, getattr, link, lookup, mkdir, null, read, readdir, readlink, remove, rename, rmdir, root, setattr, statfs, symlink, write, writecache
Statistic Name:	
reqs/s	The number of NFS version 2 requests per second sent by the client [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/network/nfs/clnt-v2.rpt

Class:	NFSv2
Subclass:	Server
IT Resource Name:	/TeamQuest/System/*systemname*/Network
TeamQuest Table Name:	NFSv2.Server
Open Table Name:	NFSV2SERV
Statistic Name:	
calls/s*	The number of NFS version 2 calls per second received by the server [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/network/nfs/srvr-v2s.rpt

Class:	NFSv2
Subclass:	Server
IT Resource Name:	/TeamQuest/System/*systemname*/Network
TeamQuest Table Name:	NFSv2.Server
Open Table Name:	NFSV2SERV
Resource:	create, getattr, link, lookup, mkdir, null, read, readdir, readlink, remove, rename, rmdir, root, setattr, statfs, symlink, write, writecache
Statistic Name:	
reqs/s	The number of NFS version 2 requests per second received by the server [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/network/nfs/srvr-v2.rpt

Class:	NFSv3
Subclass:	Client
IT Resource Name:	/TeamQuest/System/*systemname*/Network
TeamQuest Table Name:	NFSv3.Client
Open Table Name:	NFSV3CLI
Statistic Name:	
calls/s*	The number of NFS version 3 calls per second sent by the client [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/network/nfs/clnt-v3s.rpt

Class:	NFSv3
Subclass:	Client
IT Resource Name:	/TeamQuest/System/*systemname*/Network
TeamQuest Table Name:	NFSv3.Client
Open Table Name:	NFSV3CLI
Resource:	access, commit, create, fsinfo, fsstat, getattr, link, lookup, mkdir, mknod, null, pathconf, read, readdir, readdir+, readlink, remove, rename, rmdir, setattr, symlink, write
Statistic Name:	
reqs/s	The number of NFS version 3 requests per second sent by the client [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/network/nfs/clnt-v3.rpt

Class:	NFSv3
Subclass:	Server
IT Resource Name:	/TeamQuest/System/*systemname*/Network
TeamQuest Table Name:	NFSv3.Server
Open Table Name:	NFSV3SERV
Statistic Name:	
calls/s*	The number of NFS version 3 calls per second received by the server [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/network/nfs/srvr-v3s.rpt

Class:	NFSv3
Subclass:	Server
IT Resource Name:	/TeamQuest/System/*systemname*/Network
TeamQuest Table Name:	NFSv3.Server
Open Table Name:	NFSV3SERV
Resource:	access, commit, create, fsinfo, fsstat, getattr, link, lookup, mkdir, mknod, null, pathconf, read, readdir, readdir+, readlink, remove, rename, rmdir, setattr, symlink, write
Statistic Name:	
reqs/s	The number of NFS version 3 requests per second received by the server [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/network/nfs/srvr-v3.rpt

Note: *RPC statistics are only collected if TeamQuest Manager is running under a privileged user ID.*

Class:	RPC
Subclass:	Client.Connectionless
IT Resource Name:	/TeamQuest/System/*systemname*/Network
TeamQuest Table Name:	RPC.Client.Connectionless
Open Table Name:	RPCCLICONNLESS
Statistic Name:	
badcalls/s	The number of connectionless RPC calls per second rejected by the client [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/network/rpc/clnt-cl.rpt
badxid/s	The number of times per second a reply from a server was received that did not correspond to any outstanding connectionless RPC call [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/network/rpc/clnt-cl.rpt
calls/s	The total number of connectionless RPC calls per second sent by the client [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/network/rpc/clnt-cl.rpt
newcred/s	The number of times per second connectionless RPC authentication information had to be refreshed by the client [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/network/rpc/clnt-cl.rpt
retrans/s	The number of times per second a connectionless RPC call had to be retransmitted by the client due to a timeout while waiting for a reply from the server [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/network/rpc/clnt-cl.rpt
timeout/s	The number of times per second a connectionless RPC call timed out while waiting for a reply from the server [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/network/rpc/clnt-cl.rpt

Class:	RPC
Subclass:	Client.Connection Oriented
IT Resource Name:	/TeamQuest/System/*systemname*/Network
TeamQuest Table Name:	RPC.Client.Connection Oriented
Open Table Name:	RPCCLICONNORIENTED
Statistic Name:	
badcalls/s	The number of connection-oriented RPC calls per second rejected from the client [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/network/rpc/clnt-co.rpt
badxid/s	The number of times per second a reply from a server was received that did not correspond to any outstanding connection-oriented RPC call [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/network/rpc/clnt-co.rpt
calls/s	The total number of connection-oriented RPC calls per second sent by the client [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/network/rpc/clnt-co.rpt
newcred/s	The number of times per second connection-oriented RPC authentication information had to be refreshed by the client [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/network/rpc/clnt-co.rpt
timeout/s	The number of times per second a connection-oriented call timed out while waiting for a reply from the server [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/network/rpc/clnt-co.rpt

Class:	RPC
Subclass:	Server.Connectionless
IT Resource Name:	/TeamQuest/System/*systemname*/Network
TeamQuest Table Name:	RPC.Server.Connectionless
Open Table Name:	RPCSERVCONNLESS
Statistic Name:	
badcalls/s	The number of connectionless RPC calls per second rejected by the server. This is the sum of badlens/s and xdrcalls/s. [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/network/rpc/srvr-cl.rpt
badlens/s	The number of connectionless RPC calls per second received by the server with a length shorter than a minimum-sized RPC call [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/network/rpc/srvr-cl.rpt
calls/s	The number of connectionless RPC calls per second received by the server [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/network/rpc/srvr-cl.rpt
nullrecvs/s	The number of times per second a connectionless RPC call was not available when it was thought to be received by the server [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/network/rpc/srvr-cl.rpt
xdrcalls/s	The number of connectionless RPC calls per second by the server whose header could not be External Data Representation (XDR) decoded [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/network/rpc/srvr-cl.rpt

Class:	RPC
Subclass:	Server.Connection Oriented
IT Resource Name:	/TeamQuest/System/*systemname*/Network
TeamQuest Table Name:	RPC.Server.Connection Oriented
Open Table Name:	RPCSERVCONNORIENTED
Statistic Name:	
badcalls/s	The number of connection-oriented RPC calls per second rejected by the server. This is the sum of badlens/s and xdrcalls/s. [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/network/rpc/srvr-co.rpt
badlens/s	The number of connection-oriented RPC calls per second received by the server with a length shorter than a minimum-sized RPC call [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/network/rpc/srvr-co.rpt
calls/s	The number of connection-oriented RPC calls per second received by the server [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/network/rpc/srvr-co.rpt
nullrecvs/s	The number of times per second a connection-oriented RPC call was not available when it was thought to be received by the server [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/network/rpc/srvr-co.rpt
xdrcalls/s	The number of connection-oriented RPC calls per second by the server whose header could not be XDR decoded [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/network/rpc/srvr-co.rpt

Note: *The following statistics are only available for the TeamQuest database architecture. If the open database architecture is used, a record for each agent using these statistics is created in the TQ.Agent Interval table.*

Class:	TQ
Subclass:	N/A
IT Resource Name:	N/A
TeamQuest Table Name:	N/A
Open Table Name:	N/A
Statistic Name:	
net interval	The number of seconds elapsed between two data samples of the Network Agent [Sequential = SUM Non-Sequential = ID]
tqbnp_end_time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
tqbnp_interval	The number of seconds elapsed between the end of data collection for the previous sample and the end of data collection for the current sample [Sequential = SUM Non-Sequential = ID]

Table Field Hierarchy

Class:	TQ
Subclass:	Agent Interval
IT Resource Name:	/TeamQuest/System/*systemname*
TeamQuest Table Name:	TQ.Agent Interval
Open Table Name:	AGENTINTERVAL
Collection interval:	Based on the collection period
Default retentions:	8 hours at collection period interval 8 days at 10-minute intervals 35 days at 1-hour intervals 400 days at 8-hour intervals
Table type:	Performance
Derived tables using fields from this table:	N/A

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = ID]
Agent	The name of the agent that is collecting data. This field is limited to 52 characters. Any agent name longer than 52 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Instance	The instance name of the agent that is collecting data. This field is limited to 52 characters. Any instance name longer than 52 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = ID]
PID	The process identifier of the agent instance that is collecting data [Sequential = ID Non-Sequential = ID]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
System	The name of the system where the data is collected. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]

6.4. Workload Manager Statistics

Workload manager statistics are stored in the TeamQuest performance database tables by the Process-Workload Agent. The workload manager statistics are available when the workload manager (WLM) workload set is turned on.

Table Field Hierarchy

Class:	AIX
Subclass:	WLM
IT Resource Name:	/TeamQuest/System/*systemname*/workload/*workloadset*/*workload*
TeamQuest Table Name:	AIX.WLM
Open Table Name:	AIXWLM
Collection interval:	N/A
Default retention:	1 year
Table type:	Event

Statistic Name	Description
bio_hardmax	The hard maximum limit that is allocated for the WLM disk I/O resource [Non-Sequential = SUM]
bio_min	The minimum value that is allocated for the WLM disk I/O resource [Non-Sequential = SUM]
bio_shares	The number of shares that are allocated for the WLM disk I/O resource. If a given resource is not managed by the WLM, a default value of -1 is used. [Non-Sequential = ID]
bio_softmax	The soft maximum limit that is allocated for the WLM disk I/O resource [Non-Sequential = SUM]
class	The class information that is passed to the WLM [Non-Sequential = ID]
cpu_hardmax	The hard maximum limit allocated for the WLM CPU resource [Non-Sequential = SUM]
cpu_min	The minimum value that is allocated for the WLM CPU resource [Non-Sequential = SUM]
cpu_shares	The number of shares that are allocated for the WLM CPU resource. If a given resource is not managed by the WLM, a default value of -1 is used. [Non-Sequential = ID]
cpu_softmax	The soft maximum limit that is allocated for the WLM CPU resource [Non-Sequential = SUM]
mem_hardmax	The hard maximum limit allocated for the WLM memory resource [Non-Sequential = SUM]
mem_min	The minimum value that is allocated for the WLM memory resource [Non-Sequential = SUM]

mem_shares	The number of shares that are allocated for the WLM memory resource. If a given resource is not managed by the WLM, a default value of -1 is used. [Non-Sequential = ID]
mem_softmax	The soft maximum limit that is allocated for the WLM memory resource [Non-Sequential = SUM]
System	The system name as assigned by the operating system. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Non-Sequential = ID]
tier	The tier number for the class [Non-Sequential = ID]
Time	The timestamp of the data sample [Non-Sequential = LST]

6.5. Workload Statistics

Workload statistics are maintained in the TeamQuest performance database by the Process-Workload Agent. The statistics are classified by the hierarchy of key names.

Note: *The following statistics are only available for the TeamQuest database architecture. If the open database architecture is used, a record for each agent using these statistics is created in the TQ.Agent Interval table.*

Class:	TQ
Subclass:	N/A
IT Resource Name:	N/A
TeamQuest Table Name:	N/A
Open Table Name:	N/A
Statistic Name:	
tqwarp_end_time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
tqwarp_interval	The number of seconds elapsed between the end of data collection for the previous sample and the end of data collection for the current sample [Sequential = SUM Non-Sequential = ID]
warp interval	The number of seconds elapsed between two data samples of the Process-Workload Agent [Sequential = SUM Non-Sequential = ID]

Table Field Hierarchy

Class:	TQ
Subclass:	Agent Interval
IT Resource Name:	/TeamQuest/System/*systemname*
TeamQuest Table Name:	TQ.Agent Interval
Open Table Name:	AGENTINTERVAL
Collection interval:	Based on the collection period
Default retentions:	8 hours at collection period interval 8 days at 10-minute intervals 35 days at 1-hour intervals 400 days at 8-hour intervals
Table type:	Performance
Derived tables using fields from this table:	N/A

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = ID]
Agent	The name of the agent that is collecting data. This field is limited to 52 characters. Any agent name longer than 52 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Instance	The instance name of the agent that is collecting data. This field is limited to 52 characters. Any instance name longer than 52 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = ID]
PID	The process identifier of the agent instance that is collecting data [Sequential = ID Non-Sequential = ID]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
System	The name of the system where the data is collected. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential LST Non-Sequential = ID]

Parameter Hierarchy

Class:	Workload
Subclass:	by Workload
IT Resource Name:	/TeamQuest/System/*systemname*/workload/*workloadset*/*workload*
TeamQuest Table Name:	Workload.by Workload
Open Table Name:	WLBYWORKLOAD
Workload Set:	WLS1, WLS2, ...
Workload:	WL1, WL2, ...
Statistic Name:	
%cpu	The percentage of total CPU consumed by the workload. Total CPU time is the value of the sampling interval multiplied by the number of CPUs on the system. Thus, if the sum of %cpu for all workloads is less than 100%, some CPUs must have been idle for some time during the sampling interval. For shared LPARs, this value represents the percentage of the entitled capacity used. For shared LPARs that are uncapped, the sum of this value across all workloads in a workload set can be greater than 100%. [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/workload/pct-cpu.rpt
avgmem	The cumulative swappable process image size in kilobytes of all of the running processes in the workload at the end of the sampling interval [Sequential = AVG Non-Sequential = SUM]
etime	The sum of the elapsed times in seconds of all of the processes in the workload. Dividing this number by the number of processes in the workload (pongoing + pcomplete) equals the average time a process in the workload existed during the sampling interval. [Sequential = SUM Non-Sequential = SUM]
lioch	The number of logical characters in kilobytes transferred by the workload during the sampling interval [Sequential = SUM Non-Sequential = SUM] View Report: /report/aix/workload/lioch.rpt
majflt	The number of major page faults generated by the workload for processes that were active at the end of the sampling interval. A major page fault is a page fault that requires I/O. [Sequential = SUM Non-Sequential = SUM] View Report: /report/aix/workload/maj-flt.rpt
pcomplete	The number of processes completed in the sampling interval. For process data, the same number is called cproc. [Sequential = SUM Non-Sequential = SUM] View Report: /report/aix/workload/num-proc.rpt

pongoing	The number of processes running at the end of the sampling interval. In process data, the same number is called oproc. The number of processes in a workload could be derived by adding pongoing and pcomplete. This sum is called nproc in process data. [Sequential = LST Non-Sequential = SUM] View Report: /report/aix/workload/num-proc.rpt
prss	An estimate of the resident set size in kilobytes of private memory occupied by all of the running processes in the workload at the end of the sampling interval. The value is derived from memory integrals kept by the kernel. [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/workload/rss.rpt
pstart	The number of processes started in the sampling interval. In process data, this number is called sproc. [Sequential = SUM Non-Sequential = SUM] View Report: /report/aix/workload/num-proc.rpt
record_count	The number of collected records represented by the record written to the database. For nonreduced records, this value is 1. For reduced records, this value is the number of records that are combined into a single database record. [Sequential = AVG Non-Sequential = SUM]
reduction_name	The name of reduction rule [Sequential = ID Non-Sequential = ID]
reduction_source	The source of the reduction record. For reduction records with agent sources, this value is A. For reduction records with harvest sources, this value is H. [Sequential = ID Non-Sequential = ID]
rss	The resident set size (real memory) in kilobytes of all processes running at the end of the interval. If a process ends within the sampling interval, the value is not available and is marked as <N/A>. [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/workload/rss.rpt
srss	An estimate of the resident set size in kilobytes of shared memory occupied by all of the running processes in the workload at the end of the sampling interval. The value is derived from memory integrals kept by the kernel. [Sequential = AVG Non-Sequential = SUM] View Report: /report/aix/workload/rss.rpt

syscpu	The system CPU time in seconds used by this workload. System CPU time is the time spent in kernel mode (for example, the time spent in executing system calls, paging, and so on). [Sequential = SUM Non-Sequential = SUM] View Report: /report/aix/workload/sys-cpu.rpt
threads	The number of threads at the end of the sampling interval [Sequential = LST Non-Sequential = SUM] View Report: /report/aix/workload/threads.rpt
totcpu	The total CPU time in seconds used by the workload. This value is the same as the sum of usrcpu and syscpu. [Sequential = SUM Non-Sequential = SUM] View Report: /report/aix/workload/cpu-util.rpt
usrcpu	The user CPU time in seconds used by the workload. User CPU time is the time the CPU spent running in user mode. [Sequential = SUM Non-Sequential = SUM] View Report: /report/aix/workload/user-cpu.rpt

6.6. LPAR Configuration Statistics

The following statistics are stored in the TeamQuest performance database tables by the System Activity Agent.

Table Field Hierarchy

Class:	IBM POWER
Subclass:	LPAR
IT Resource Name:	/TeamQuest/System/*systemname*
TeamQuest Table Name:	IBM POWER.LPAR
Open Table Name:	IBMPOWERLPAR
Collection interval:	N/A
Default retention:	1 year
Table type:	Event

Statistic Name	Description
active_cpus_in_pool	The current number of active physical CPUs in the shared processor pool being used by the LPAR [Non-Sequential = SUM]
active_physical_cpus_in_system	The current number of active physical CPUs in the system containing the LPAR [Non-Sequential = SUM]
AME	The Active Memory Expansion status of the partition [Non-Sequential = ID]
AMS	The Active Memory Sharing status of the partition [Non-Sequential = ID]
capacity_increment	The granularity at which changes to the entitled capacity can be made. A value in whole multiples indicates a dedicated LPAR. [Non-Sequential = NON]
dedicated_donating	Indicates if the partition is able to donate dedicated processor capacity [Non-Sequential = ID]
entitled_capacity	The number of processing units the LPAR is entitled to receive [Non-Sequential = SUM]
installed_physical_cpus_in_system	The current number of physical CPUs installed on the system containing the LPAR [Non-Sequential = SUM]
maximum_capacity	The maximum number of processing units the LPAR was defined to ever have. Entitled capacity can be increased up to this value. [Non-Sequential = SUM]
maximum_memory	The maximum possible amount of memory in megabytes [Non-Sequential = SUM]
maximum_physical_cpus_in_system	The maximum possible number of physical CPUs in the system containing the LPAR [Non-Sequential = MAX]

maximum_virtual_cpus	The maximum possible number of CPUs (virtual engines) [Non-Sequential = SUM]
minimum_capacity	The minimum number of processing units the LPAR was defined to ever have. Entitled capacity can be reduced down to this value. [Non-Sequential = SUM]
minimum_memory	The minimum memory in megabytes the LPAR was defined to ever have [Non-Sequential = SUM]
minimum_virtual_cpus	The minimum possible number of CPUs the LPAR was defined to ever have [Non-Sequential = SUM]
mode	Indicates whether the LPAR processor capacity is capped, or uncapped and allowed to consume idle cycles from the shared pool. A dedicated LPAR is implicitly capped. [Non-Sequential = ID]
mpid	The identifier of the memory pool that the LPAR belongs to [Non-Sequential = ID]
online_memory	The amount of memory in megabytes currently online [Non-Sequential = SUM]
online_virtual_cpus	The number of CPUs (virtual engines) currently online [Non-Sequential = SUM]
partition_group_id	The LPAR group that the LPAR is a member of [Non-Sequential = ID]
partition_name	The logical partition name as assigned by the management entity [Non-Sequential = ID]
partition_number	The number of the logical partitions assigned by the management entity [Non-Sequential = ID]
physical_cpu_ percentage	The fractional representation relative to whole physical CPUs that these LPAR virtual CPUs equate to. This is a function of Entitled Capacity/Online CPUs. Dedicated LPARs would have a Physical CPU Percentage of 100%. A 4-way virtual with Entitled Capacity of 2 processor units would have a Physical CPU Percentage of 50%. [Non-Sequential = SUM]
shared_pool_id	The identifier of the shared pool of physical processors that the LPAR is a member of [Non-Sequential = ID]
smt	Indicates whether simultaneous multi-threading (SMT) is enabled. This value is SMT-*n* if SMT is enabled, where *n* is the number of threads per core. [Non-Sequential = ID]
System	The system name as assigned by the operating system. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Non-Sequential = ID]

system_name	The name of the physical system as displayed by the management entity [Non-Sequential = ID]
Time	The timestamp of the data sample [Non-Sequential = LST]
type	Indicates whether the LPAR is using dedicated or shared CPU resources [Non-Sequential = ID]
unallocated_capacity	The number of processor units currently unallocated in the shared processor pool being used by the LPAR [Non-Sequential = NON]
Unlicensed Physical CPUs in System*	The current number of physical CPUs installed in the system containing the LPAR which are inactive because they are unlicensed. The CPUs may be available for activation by Capacity on Demand (COD) functions. [Non-Sequential = SUM]
variable_capacity_ weight	The priority weight assigned to the LPAR, which controls how extra (idle) capacity is allocated to it. A weight of -1.0 indicates a soft maximum cap is in place. [Non-Sequential = NON]

Table Field Hierarchy

Class:	IBM POWER
Subclass:	LPAR FRAME
IT Resource Name:	/TeamQuest/System/*systemname*
TeamQuest Table Name:	IBM POWER.LPAR FRAME
Open Table Name:	IBMPOWERLPARFRAME
Collection interval:	Based on the primary aggregation set
Default retention:	3 days at collection period interval 8 days at 10-minute intervals 4 months at 1-hour intervals 9 months at 8-hour intervals
Table type:	Performance

Note: *The IBM POWER.LPAR FRAME default table retentions should closely match the database aggregation set retentions to avoid generating charts with unexpected granularities. The IBM POWER.LPAR FRAME table is used in derived table definitions to join the Frame field with other IBM POWER tables that have retentions based on the database aggregation set retentions.*

Statistic Name	Description
Interval	The desired collection interval [Sequential = SUM Non-Sequential = AVG]
Frame	The physical system name as displayed by the management entity [Sequential = LST Non-Sequential = ID]
mpid	The identifier of the memory pool that the LPAR belongs to [Non-Sequential = ID]
partition_group_id	The LPAR group that the LPAR is a member of [Non-Sequential = ID]
partition_name	The logical partition name as assigned by the management entity [Sequential = LST Non-Sequential = ID]
shared_pool_id	The identifier of the shared pool of physical processors that the LPAR is a member of [Non-Sequential = ID]
System	The system name as assigned by the operating system. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]

Table Field Hierarchy

Class:	AIX
Subclass:	WPAR
IT Resource Name:	/TeamQuest/System/*systemname*
TeamQuest Table Name:	AIX.WPAR
Open Table Name:	AIXWPAR
Collection interval:	N/A
Default retention:	1 year
Table type:	Event

Statistic Name	**Description**
cpu_limit	The percentage of the partition's CPU cycles the WPAR is entitled to receive [Non-Sequential = ID]
entitled_capacity	The number of processors the partition hosting the WPAR is entitled to receive [Non-Sequential = SUM]
mem_limit	The percentage of the partition's memory the WPAR is entitled to receive [Non-Sequential = ID]
System	The name of the global environment which contains the WPAR [Non-Sequential = ID]
Time	The timestamp of the data sample [Non-Sequential = LST]
wpar_name	The name of the WPAR in the global environment [Non-Sequential = ID]

6.7. Process Statistics

The Process-Workload Agent collects process data from the operating system and processes accounting files. The Process-Workload Agent calculates the usage of every process in a given interval, applies reduction definitions to each process, and stores the reduced process data. It also applies workload definitions to the reduced process data and stores system resource usage by workload.

Reduced Process Records

The Process-Workload Agent collects process data and reduces the data according to the user-defined reduction definitions. A reduction definition may cause multiple processes to be merged into a single process record. Thus, a process record contains data about one or more processes. When you are looking at the resource usage numbers, it is important to know how many processes a process record actually represents. The nproc data item indicates exactly how many processes each process record is representing. When a process record is representing more than one process, the resource usage fields such as totcpu, rss, and pio_t are the sum of the resource usage of the individual processes. When all of the processes do not have the same value for a field, the identifier fields such as command, login, and gid are set to <Multi>. When data for some fields is not available, the fields are set to <N/A>.

Disabling Reduction Definitions

If you want to look at the details of every individual process and do not wish to have merged process records, you must disable reduction processing by making all reduction sets inactive. However, with reduction processing disabled, more records have to be stored and more disk space is needed. For information on disabling reductions, see the *TeamQuest Performance Software Administration Guide*.

Process Data with Process Accounting Turned Off

If process accounting is turned off, the process data is incomplete as data about completed processes is not available. In this case, the process data only shows a portion of the activity in the sampling interval. To find out whether process accounting is turned on or off, look at the cproc field of all of the process records. If the cproc field indicates all zeros, it means that processes were not completed in that sampling interval and that the process accounting is turned off.

When process accounting is not turned on, the process record, <Other> includes the CPU time for processes that completed during the interval.

For more information on process accounting, see the *TeamQuest Performance Software Administration Guide*.

Retrieving Hardware Configuration Information

The Process-Workload Agent retrieves hardware configuration information. The information is stored upon startup and once-a-day in the HINV.Summary, HINV.Devices, and HINV.FileSystem table files of the TeamQuest performance database. The information is also stored if the agent detects a change in configuration.

Notes:

- *The statistics reported in the AIX.Process table on a shared logical partition are relative to the entitlement of the partition.*
- *The statistics reported in the AIX.Process table on a dedicated logical partition are relative to the configured capacity of the partition.*
- *For more information on partition entitlement, shared partitions, or dedicated partitions, see the IBM PowerVM Virtualization documentation.*

Table Field Hierarchy

Class:	AIX
Subclass:	Process
IT Resource Name:	/TeamQuest/System/*systemname*/Process
TeamQuest Table Name:	AIX.Process
Open Table Name:	AIXPROC
Collection interval:	Based on the primary aggregation set
Default retention:	1 day
Table type:	Performance

Note: *The collection interval is also dependent on the Processes Only setting in the configuration file for the Process-Workload Agent. For more information, see the section on configuring the Process-Workload Agent in the* TeamQuest Performance Software Administration Guide.

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = ID]
avgmem_t	The size of the swappable process image in kilobytes. If a process ends within the interval, the number is unavailable and is marked as <N/A>. [Sequential = AVG Non-Sequential = SUM]
btime	The start time of the process. For process records representing more than one process, this field shows the earliest of the start times. [Sequential = FST Non-Sequential = ID]

Class	The AIX Workload Manager (WLM) class to which the process belongs. This field will be marked <N/A> if the WLM is not running or the class cannot be obtained. [Sequential = ID Non-Sequential = ID]
command	The command name of the process. If a process starts and ends within the same interval, only up to 8 characters of the command name can be displayed. Otherwise, up to 14 characters are displayed. Therefore, an “automountd” process may appear as “automoun” if it starts and ends within the same interval. In such cases, you may want to set up your workload, reduction, or filter definitions to catch both the command names as in the following: command = {“automoun”, “automountd”}. [Sequential = ID Non-Sequential = ID]
cproc	The number of processes completed in the interval [Sequential = SUM Non-Sequential = SUM]
etime	The elapsed time in seconds for the current interval. This number tells how long a process existed in the current interval. [Sequential = SUM Non-Sequential = SUM]
etime_t	The total elapsed time in seconds. This number tells how long a process existed since it started. For a single process, this is the same as the value of the Time field minus the value of the btime field. [Sequential = LST Non-Sequential = SUM]
fullcmd	The full command string, including arguments, for the process. If a process begins and ends in the sampling interval, the field is unavailable and is marked as <N/A>. This is an important consideration when using a workload, reduction, or filter definition. The number of characters that are stored is determined by the Command Length setting of the Process-Workload Agent configuration file in TeamQuest Manager. You can also have either the first or the last *N* characters of the command displayed. The setting is specified by the Command Orientation setting of the Process-Workload Agent configuration file in TeamQuest Manager. The limit of characters from the operating system data source is 16,383. For a description of how this may affect collection when the LAST Command Orientation is configured for the Process-Workload Agent, see the *TeamQuest Performance Software Administration Guide*. [Sequential = ID Non-Sequential = ID]
gid	The real group identifier of the owner of the process [Sequential = ID Non-Sequential = ID]
group	The group name of the owner of the process. This field is derived from gid. [Sequential = ID Non-Sequential = ID]
Interval	The expected data sampling interval [Sequential = SUM Non-Sequential = ID]

lioch	The number of logical characters in kilobytes transferred in the current interval. The number reported represents only completed processes during the sampling interval. [Sequential = SUM Non-Sequential = SUM]
lioch_t	The total number of logical characters in kilobytes transferred since the process started. The number reported represents only the completed processes during the sampling interval. [Sequential = LST Non-Sequential = SUM]
login	The login name of the owner of the process. This field is derived from uid. [Sequential = ID Non-Sequential = ID]
majflt	The number of major page faults generated in the current interval. A major page fault is a page fault that requires I/O. If a process ends in the sampling interval, the number is unavailable and is marked as <N/A>. [Sequential = SUM Non-Sequential = SUM]
majflt_t	The total number of major page faults generated since the process started. A major page fault is a page fault that requires I/O. If the process starts and ends within the same interval, the number is unavailable and is marked as <N/A>. [Sequential = LST Non-Sequential = SUM]
maxrss	The maximum resident set size in kilobytes for the process. If a process ends within the sampling interval, the value is unavailable and is marked as <N/A>. [Sequential = MAX Non-Sequential = SUM]
nproc	The number of processes that the process record represents. In a reduced record, it is the number of processes that were merged together to form a single process record. When no time consolidation is applied to the process data, this number should equal the sum of cproc and oproc. When consolidating over time, the number represents the average number of processes in the process record for the consolidated period. An average is used because processes can move in and out and between reduced records from interval to interval. [Sequential = AVG Non-Sequential = SUM]
oproc	The number of ongoing processes at the end of the interval [Sequential = LST Non-Sequential = SUM]
pctcpu	The percentage of total available CPU time the process used in the current sampling interval. For shared LPARs, this value represents the percentage of the entitled capacity used. For shared LPARs that are uncapped, the sum of this value across all processes can be greater than 100%. [Sequential = AVG Non-Sequential = SUM]
pid	The process identifier number. If a process starts and ends within an interval, the number is unavailable and is marked as <N/A>. [Sequential = ID Non-Sequential = ID]

ppid	The numerical identifier of the parent of a process. If a process starts and ends within an interval, the number is unavailable and is marked as <N/A>. [Sequential = ID Non-Sequential = ID]
pri	The priority of the process. Higher numbers mean lower priority. If a process ends within an interval, the number is unavailable and is marked as <N/A>. If the process record represents more than one process, the priority is an average of the constituent running processes' priority values. [Sequential = AVG Non-Sequential = AVG]
prss	An estimate of the resident set size in kilobytes of private memory for the process at the end of the sampling interval. If a process ends within the interval, the value is unavailable and is marked as <N/A>. [Sequential = AVG Non-Sequential = SUM]
redname	The reduction name of the process record. If a process did not match any of the reduction definitions, then it would not be reduced and will not have a reduction name. [Sequential = ID Non-Sequential = ID]
rss	The resident set size (real memory size) of the process at the end of the interval. If a process ends within the interval, the value is unavailable and is marked as <N/A>. [Sequential = AVG Non-Sequential = SUM]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
sproc	The number of processes started in the interval [Sequential = SUM Non-Sequential = SUM]
srss	The resident set size in kilobytes of shared memory for the process at the end of the sampling interval. The value is derived from memory integrals kept by the kernel. [Sequential = AVG Non-Sequential = SUM]
syscpu	The system CPU time in seconds for the current interval. System CPU time is the time the CPU spent running in kernel mode (for example, the time spent in executing system calls, paging, and so on). If an application is taking a lot of syscpu time, you may want to optimize the use of system calls (for example, use a larger block size for I/O). [Sequential = SUM Non-Sequential = SUM]
syscpu_t	The total system CPU time in seconds [Sequential = LST Non-Sequential = SUM]
System	The name of the system where the data is collected. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
threads	The number of threads associated with the process at the end of the interval. A thread is a dynamic object that represents a control point in a process and executes a sequence of instructions. [Sequential = LST Non-Sequential = SUM]

Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
totcpu	The total CPU time in seconds used in the current interval. This number is the same as the sum of usrcpu and syscpu. [Sequential = SUM Non-Sequential = SUM]
totcpu_t	The total CPU time (user + system) in seconds used by the process since it started. This number is the same as the sum of usrcpu_t and syscpu_t. [Sequential = LST Non-Sequential = SUM]
tty	The controlling terminal identifier in dev_t format. For the processes without a controlling terminal, this field will contain a -1. [Sequential = ID Non-Sequential = ID]
ttyname	The controlling terminal for the process. It is a device name without the /dev/ prefix. This is derived from tty. For the processes without a controlling terminal, this field will contain a question mark (?). [Sequential = ID Non-Sequential = ID]
uid	The real user id of the process owner [Sequential = ID Non-Sequential = ID]
usrcpu	The user CPU time in seconds for the current interval. User CPU time is the time the CPU spent running user mode. If an application is taking a lot of usrcpu time, you should try to optimize the code, if possible. [Sequential = SUM Non-Sequential = SUM]
usrcpu_t	The total user CPU time in seconds since the start of the process [Sequential = LST Non-Sequential = SUM]
WPAR	The name of the WPAR in the global environment [Sequential = ID Non-Sequential = ID]
Workload	The workload set and the workload associated with the process. When the Process-Workload Agent stores the process record, this field is blank. When process records are reported, the workload can be evaluated and is shown in the report. This field is available for reporting only when using TeamQuest Analyzer and TeamQuest tView. Workload evaluation takes place when data is retrieved from the database, based on workload sets defined in the database where the data is stored. Workload sets reported in the Workload field do not have to be active. For more information on workload evaluation, see the *TeamQuest Analyzer User Guide* or the *TeamQuest Performance Software Command Line Interfaces Reference Manual*. [Sequential = ID Non-Sequential = ID]

workload:*wlsname*	There is one field for each *wlsname* (Workload Set Name). The value for this field shows the name of the workload to which the process belongs. If a process belongs to none of the workloads, it will display the workload name “OTHER.” This field is available for reporting only when useing TeamQuest View or TeamQuest cView. [Sequential = ID Non-Sequential = ID]

6.8. Hardware Inventory Statistics

The hardware inventory statistics listed in this section are stored in the TeamQuest performance database tables by the Process-Workload Agent.

The Process-Workload Agent retrieves hardware configuration information. The information is stored upon startup and once-a-day in the HINV.Summary, HINV.CPUModel, HINV.CPU Thread Speeds, HINV.Devices, and HINV.FileSystem table files of the TeamQuest performance database. The information is also stored if the agent detects a change in configuration.

Note: *The storage of hardware inventory records depends on the Hardware Inventory setting in the configuration file of the Process-Workload Agent. For more information, see the section on configuring the Process-Workload Agent in the* TeamQuest Performance Software Administration Guide.

Table Field Hierarchy

Class:	HINV
Subclass:	Summary
IT Resource Name:	/TeamQuest/System/*systemname*
TeamQuest Table Name:	HINV.Summary
Open Table Name:	HINVSUM
Collection interval:	N/A
Default retention:	1 year
Table type:	State

Statistic Name	Description
core_multi_thread	The status or ability of the processor to support multiple independent threads. The field will contain <N/A> if the information is not available. [Non-Sequential = ID]
cores_per_chip	The number of cores on an individual chip. This statistic is not available for IBM AIX POWER7 and the value is displayed as <N/A>. [Non-Sequential = ID]
cpu_chips	The number of CPU chips. This statistic is not available for IBM AIX POWER7 and the value is displayed as <N/A>. [Non-Sequential = ID]

cpu_count	The current number of active physical CPUs in the system. For LPAR capable systems, the current number of active physical CPUs in the system containing the LPAR. [Non-Sequential = ID]
cpu_speed	The speed of the processor in MHz or GHz [Non-Sequential = ID]
cpu_type	The basic instruction set architecture of the current system [Non-Sequential = ID]
logical_cpu_count	The number of logical processors. This value represents the number of processors as seen by the operating system. This value is influenced by the virtual processor and simultaneous multithreading (SMT) settings. [Non-Sequential = ID]
mem_size	The size of configured random access memory in kilobytes, where 1 kilobyte = 1,024 bytes [Non-Sequential = ID]
memory	The size of configured random access memory in megabytes, where 1 megabyte = 1,048,576 bytes [Non-Sequential = ID]
memory_size	The size of configured random access memory in megabytes or gigabytes [Non-Sequential = ID]
model	Name of the hardware implementation or platform [Non-Sequential = ID]
os_release	The name and level of this implementation of the operating system [Non-Sequential = ID]
pagesize	The size of a page of memory [Non-Sequential = ID]
partition_type	The partition type of the system. The value indicates the system hypervisor type, guest type, logical partition type, zone type, or logical domain type. If the system does not have a partition type, this field will be blank. [Non-Sequential = ID]
serial	The hardware specific serial number of the physical machine [Non-Sequential = ID]
System	The name by which the system is known to a communication network or node name. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Non-Sequential = ID]
system_identifier	Information used to identify the system [Non-Sequential = ID]
system_type	The name of the operating system [Non-Sequential = ID]
Time	The timestamp of the data sample [Non-Sequential = LST]

timezone	The time zone where the data was collected [Non-Sequential = ID]
TQLevel	The level of TeamQuest Manager [Non-Sequential = ID]

The HINV.CPUModel table stores best-match, relative performance data about the system configuration. This table is created by the Hardware Inventory Agent (**tqhinv**) to map physical hardware to a CPU model that describes performance in relative terms. This table is not created for any virtualized system. It is populated for physical systems only. It is not populated for VMware guests, Hyper-V guests, Solaris LDOMs, Solaris guest LDOMs, KVM guests, and Linux on POWER systems.

Table Field Hierarchy

Class:	HINV
Subclass:	CPUModel
IT Resource Name:	/TeamQuest/System/*systemname*
TeamQuest Table Name:	HINV.CPUModel
Open Table Name:	HINVCPUM
Collection interval:	N/A
Default retention:	1 year
Table type:	State

Statistic Name	Description
cpu_chips	The number of CPU chips or sockets [Non-Sequential = ID]
cpu_confidence	The percentage of confidence in the correctness of the CPU match based on model, frequency, and configuration (chips, cores, threads) [Non-Sequential = SUM]
cpu_cores	The number of CPU cores or processors on an individual CPU chip [Non-Sequential = ID]
cpu_name	The name of the selected CPU [Non-Sequential = ID]
cpu_relative_performance	The relative performance of the CPU on a common scale [Non-Sequential = ID]
cpu_speed	The speed of the processor in megahertz (MHz) or gigahertz (GHz) [Non-Sequential = ID]
cpu_threads	The number of CPU threads on an individual CPU core or processor [Non-Sequential = ID]
System	The name by which the system is known to a communication network or node name. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Non-Sequential = ID]

system_type	The name of the operating system [Non-Sequential = ID]
Time	The timestamp of the data sample [Non-Sequential = LST]
user_override	The user override status of the default TeamQuest generated CPU match. This field is not currently used and should appear as 0. [Non-Sequential = ID]

Table Field Hierarchy

Class:	HINV
Subclass:	CPU Thread Speeds
IT Resource Name:	/TeamQuest/System/*systemname*
TeamQuest Table Name:	HINV.CPU Thread Speeds
Open Table Name:	HINVCPUTHREADSPEEDS
Collection interval:	N/A
Default retention:	1 year
Table type:	State

Statistic Name	**Description**
speed_up_factor	The performance improvement when there are multiple active threads per core, compared to when there is only one active thread per core [Non-Sequential = ID]
System	The name by which the system is known to a communication network or node name. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Non-Sequential = ID]
thread_number	The number of active threads [Non-Sequential = ID]
Time	The timestamp of the data sample [Non-Sequential = ID]

Table Field Hierarchy

Class:	HINV
Subclass:	Devices
IT Resource Name:	/TeamQuest/System/*systemname*
TeamQuest Table Name:	HINV.Devices
Open Table Name:	HINVDEVS
Collection interval:	N/A
Default retention:	1 year
Table type:	State

Statistic Name	Description
class	The device classification: controller, disk, or tape [Non-Sequential = ID]
controller	The device path indicator which defines a connection to another device [Non-Sequential = ID]
lun_id	The globally unique Logical Unit Number (LUN) identifier for Storage Area Network (SAN) based disk devices. This field is blank for non-SAN based disk devices, CD-ROM drives, tape drives, and so on. [Non-Sequential = ID]
name	The unique identifier for this device [Non-Sequential = ID]
name2	The alternate device name. This field may be blank. [Non-Sequential = ID]
product	The product identifier. This field may be blank. [Non-Sequential = ID]
revision	The revision level for the product. This field may be blank. [Non-Sequential = ID]
rpm	The speed at which the media spins. If an actual value cannot be obtained for the device, a default value of 7,200 is used. [Non-Sequential = ID]
sequence	The sequence number of the device [Non-Sequential = ID]
swap	A true or false statement which indicates whether or not a swap file exists on the device. [Non-Sequential = ID]
System	The name by which the system is known to a communication network or node. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Non-Sequential = ID]

Time	The timestamp of the data sample [Non-Sequential = ID]
vendor	The name of the device vendor. This field may be blank. [Non-Sequential = ID]

Table Field Hierarchy

Class:	HINV
Subclass:	FileSystem
IT Resource Name:	/TeamQuest/System/*systemname*
TeamQuest Table Name:	HINV.FileSystem
Open Table Name:	HINVFILESYS
Collection interval:	N/A
Default retention:	1 year
Table type:	State

Statistic Name	Description
BlkSize	The size of a block on the file system [Non-Sequential = ID]
Device	The path for the device on which the file system is mounted [Non-Sequential = ID]
Name	The unique identifier for the file system [Non-Sequential = ID]
Source	The source physical disk or logical volume of the file system. This field is always blank for this platform. [Non-Sequential = ID]
System	The name by which the system is known to a communication network or node name. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Non-Sequential = ID]
Time	The timestamp of the data sample [Non-Sequential = LST]
TotBlks	The total number of blocks on the file system [Non-Sequential = ID]
TotFiles	The maximum total number of files, as represented by inodes, possible on the file system. Some inodes may be used for entities other than visible files. [Non-Sequential = ID]
TotSize	The total amount of space on the file system in megabytes [Non-Sequential = ID]
Type	The type of the file system [Non-Sequential = ID]

6.9. System Log Statistics

The System Log Agent is used to collect system log messages generated by the system log daemon (syslogd). The System Log Agent stores these messages in the TeamQuest performance database for analysis and alarm reporting. The log messages are separated into four fields; the time that the message was posted, the host system from where the message was initiated, the program or user that posted the message, and the text of the message.

Table Field Hierarchy

Class:	System
Subclass:	System Log
IT Resource Name:	/TeamQuest/System/*systemname*/System Log
TeamQuest Table Name:	System.System Log
Open Table Name:	SYSSYSTEMLOG
Collection interval:	N/A
Default retention:	4 days
Table type:	Event

Statistic Name	Description
Event_Time	The time that the message was logged to the system log [Non-Sequential = ID]
Loghost	The name of the system that logged the message [Non-Sequential = ID]
Message	The message text [Non-Sequential = ID]
Reporter	The name of the user or process that logged the message [Non-Sequential = ID]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Non-Sequential = ID]
Sequence	The sequence number of the message in the sampling interval [Non-Sequential = ID]
System	The name of the system where the log message originated. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Non-Sequential = ID]
Time	The timestamp of the data sample [Non-Sequential = ID]

6.10. General Log Statistics

The General Log Agent is used to collect log messages generated by application programs. The General Log Agent stores these messages in the TeamQuest performance database for analysis. Examples include backup, security, database, and Web server applications.

Table Field Hierarchy

Class:	System
Subclass:	General Log
IT Resource Name:	/TeamQuest/System/*systemname*/General Log
TeamQuest Table Name:	System.General Log
Open Table Name:	SYSGENERALLOG
Collection interval:	N/A
Default retention:	4 days
Table type:	Event

Statistic Name	Description
Message	The message text [Non-Sequential = ID]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Non-Sequential = ID]
Sequence	The sequence number of the message in the sampling interval [Non-Sequential = ID]
System	The name of the system. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Non-Sequential = ID]
Time	The timestamp of the data sample [Non-Sequential = ID]
Type	The message type [Non-Sequential = ID]

6.11. TeamQuest Log Statistics

The following statistics are stored in the performance database tables by the TeamQuest Log Agent. The collection interval and retention periods can be modified. For more information on modifying the collection interval and retention periods, see the *TeamQuest Performance Software Administration Guide*.

Table Field Hierarchy

Class:	Service
Subclass:	TeamQuest Log
IT Resource Name:	/TeamQuest/System/*systemname*/TeamQuest Log
TeamQuest Table Name:	Service.TeamQuest Log
Open Table Name:	SVCTQLOG
Collection interval:	N/A
Default retention:	1 day
Table type:	Event

Statistic Name	Description
Filename	The name of the TeamQuest log file that was the source of the message text [Non-Sequential = ID]
Message	The message text [Non-Sequential = ID]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Non-Sequential = ID]
Sequence	The sequence number of the message in the sampling interval [Non-Sequential = ID]
System	The name of the system. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Non-Sequential = ID]
Time	The timestamp of the data sample [Non-Sequential = ID]
Type	The log message type. This is always set to **tqlog**. [Non-Sequential = ID]

6.12. Derived Statistics

Some products within TeamQuest Performance Software use derived statistics to display common statistics across different platforms. The derived statistics are inserted into the performance database when databases are created. In this section, a derived statistic is marked with an asterisk (*).

You can find information on the following derived statistics:

- Workload Performance Derived Statistics
- TeamQuest On the Web Derived Statistics
- TeamQuest Alert Derived Statistics

6.12.1. Workload Performance Derived Statistics

TeamQuest Manager maintains derived statistics that use data from the System Activity Agent and the Process-Workload Agent. The workload performance reports reference these statistics. For information on workload performance reports, see the *TeamQuest View Reports Reference Manual*.

Parameter Hierarchy

Class:	Derived
Subclass:	Workload Performance.by Workload
Workload Set:	WLS1, WLS2, ...
Workload:	ALL
Statistic Name:	
%cpu*	The total percentage of CPU utilization. Collected by the Process-Workload Agent. View Report: /report/aix/wkldperf/workload.rpt
Kbytes resident memory/process*	The average amount of resident memory used per process. Collected by the Process-Workload Agent. View Report: /report/aix/wkldperf/workload.rpt
Kbytes virtual memory/process*	The average amount of virtual memory used per process. Collected by the Process-Workload Agent. View Report: /report/aix/wkldperf/workload.rpt
lioch/s*	The number of logical characters transferred in kilobytes per second. Collected by the Process-Workload Agent.
Population (etime/interval)*	The average number of concurrent processes. Collected by the Process-Workload Agent. View Report: /report/aix/wkldperf/workload.rpt

Response (etime/process)*	The elapsed time per process. Collected by the Process-Workload Agent. View Report: /report/aix/wkldperf/workload.rpt
Throughput (processes/sec)*	The number of rocesses completed per second. Collected by the Process-Workload Agent. View Report: /report/aix/wkldperf/workload.rpt
Total Kbytes resident memory*	The average amount of resident memory used by the workload. Collected by the Process-Workload Agent. View Report: /report/aix/wkldperf/workload.rpt
Total Kbytes virtual memory*	The average amount of virtual memory used by the workload. Collected by the Process-Workload Agent. View Report: /report/aix/wkldperf/workload.rpt

Class:	Derived
Subclass:	Workload Performance.Summary
Workload Set:	WLS1, WLS2, ...
Statistic Name:	
%cpu*	The total percentage of CPU utilization. Collected by the Process-Workload Agent. View Report: /report/aix/wkldperf/overall.rpt
block IO r+w/s*	Disk and tape I/Os per second. Collected by the System Activity Agent. View Report: /report/aix/wkldperf/overall.rpt
Kbytes resident memory/process*	Average resident memory used per process. Collected by the Process-Workload Agent. View Report: /report/aix/wkldperf/overall.rpt
Kbytes virtual memory/process*	Average virtual memory used per process. Collected by the Process-Workload Agent. View Report: /report/aix/wkldperf/overall.rpt
Population (etime/interval)*	Average number of concurrent processes. Collected by the Process-Workload Agent. View Report: /report/aix/wkldperf/overall.rpt
Response (etime/process)*	Elapsed time per process. Collected by the Process-Workload Agent. View Report: /report/aix/wkldperf/overall.rpt
Throughput (processes/sec)*	Processes completed per second. Collected by the Process-Workload Agent. View Report: /report/aix/wkldperf/overall.rpt

Total Kbytes resident memory*	Average resident memory used. Collected by the Process-Workload Agent. View Report: /report/aix/wkldperf/overall.rpt
Total Kbytes virtual memory*	Average virtual memory used. Collected by the Process-Workload Agent. View Report: /report/aix/wkldperf/overall.rpt

6.12.2. TeamQuest On the Web Derived Statistics

The derived statistics used by TeamQuest On the Web include the following:

Parameter Hierarchy

Class:	Derived
Subclass:	TQWeb.Summary
Statistic Name:	
avg_disk_queue_length*	The average number of requests outstanding
avg_service_time*	The average amount of time to service each transfer request for all devices in milliseconds
buffer_pct_read_cache*	The percentage of logical reads satisfied from the buffer cache
buffer_pct_write_cache*	The percentage of logical writes satisfied from the buffer cache
disk_xfers_per_sec*	The total number of read and write transfers per second for all devices
free_disk_space*	The amount of space available (not in use) on all file systems in megabytes. This measurement is taken at the end of the sampling interval and includes the space held back from normal users.
free_real_mem*	The amount of free memory available in megabytes. This measurement is taken at the end of the sampling interval.
free_swap_space*	The number of megabytes free for process swapping. This measurement is taken at the end of the sampling interval.
nfs_calls_per_sec*	The total number of NFS calls sent by the client
page_ins_per_sec*	The number of page-in requests per second
page_outs_per_sec*	The number of page-out requests per second
page_scans_per_sec*	The rate per second at which the page daemon scans pages to see if they can be freed
pct_cpu_busy*	The percentage of total CPU time the CPU was busy (not idle). This value includes the time running system code and the time running normal priority user processes.
pct_disk_busy*	The percentage of time a disk was busy servicing a transfer request
pct_sys_cpu*	The percentage of total CPU time spent in system mode
pct_usr_cpu*	The percentage of total CPU time spent running in user mode

pkt_errors_per_sec*	The total number (in + out) of network errors per second for all network interfaces
pkts_in_per_sec*	The total number of network input packets per second for all network interfaces
pkts_out_per_sec*	The total number of network output packets per second for all network interfaces
pkts_per_sec*	The total number (in + out) of network packets per second for all network interfaces
total_disk_space*	The total (used + available) amount of space on all file systems in megabytes. This measurement is taken at the end of the sampling interval and includes the space held back from normal users.
total_processes*	The number of entries currently being used in the process table. This measurement is taken at the end of the sampling interval.
total_real_mem*	The total amount of real (physical) memory in megabytes. This measurement is taken at the end of the sampling interval.
total_swap_space*	The total number of megabytes available for swapping

6.12.3. TeamQuest Alert Derived Statistics

The derived statistics used by TeamQuest Alert include the following:

Parameter Hierarchy

Class:	Derived
Subclass:	TQAlert.Summary
Statistic Name:	
free_real_mem*	The average amount of memory available to user processes in megabytes
net_errors*	The number of network errors for all network interfaces
page_scans*	The number of pages per second scanned by the page-stealing daemon
pct_cpu_busy*	The percentage of time the CPU was not idle
pct_wio*	The percentage of total CPU time spent idle while some process is waiting for I/O completion
run_queue*	The average length of the run queue, a queue of processes in memory and runnable while the run queue is occupied
total_processes*	The total number of processes active on the system

Section 7
KVM Systems

The Libvirt Agent collects configuration and performance data for KVM hosts and virtual machines.

This section contains a listing of the statistics collected by the agent:

- Libvirt.Host Config (see 7.1)
- Libvirt.Host CPU Summary (see 7.2)
- Libvirt.Host Device (see 7.3)
- Libvirt.Host Memory Summary (see 7.4)
- Libvirt.Host Network Config (see 7.5)
- Libvirt.Host Network Filter (see 7.6)
- Libvirt.Host Numa Memory (see 7.7)
- Libvirt.Host Storage Pool Config (see 7.8)
- Libvirt.Host Volume Config (see 7.9)
- Libvirt.Virtual CPU (see 7.10)
- Libvirt.Virtual Disk (see 7.11)
- Libvirt.Virtual Disk Config (see 7.12)
- Libvirt.Virtual Machine (see 7.13)
- Libvirt.Virtual Machine Snapshot (see 7.14)
- Libvirt.Virtual Memory (see 7.15)
- Libvirt.Virtual Network Config (see 7.16)
- Libvirt.Virtual Network Interface (see 7.17)

Note: *At the end of each statistic description, you will see a notation in brackets indicating the method that is used for data consolidation (for example,* [Sequential = SUM Non-Sequential = SUM]). *Sequential means that the field is consolidated over time. Non-Sequential means that the field is consolidated within a specified time interval.*

The following notations are used:

AVG = Average
DIV = Weight
FST = First
ID = Identifier
LST = Last
MAX = Maximum
MIN = Minimum
NON = None or no method was used
SUM = Summation

7.1. Libvirt.Host Config

The Libvirt.Host Config table stores configuration information for host hardware architecture.

Table Field Hierarchy

Class:	Libvirt
Subclass:	Host Config
IT Resource Name:	/TeamQuest/System/Open Virtualization/Host/*systemname*
TeamQuest Table Name:	Libvirt.Host Config
Open Table Name:	LIBVIRTHOSTCONFIG
Collection interval:	N/A
Default retentions:	1 year
Table type:	State

Statistic Name	Description
ActiveCPUs	The number of host CPUs that are active [Non-Sequential = LST]
Cores	The number of CPU cores per socket on the host [Non-Sequential = LST]
CPUFrequency	The expected host CPU frequency in megahertz [Non-Sequential = LST]
CPUModel	The host CPU model [Non-Sequential = NON]
MemorySize	The total installed memory on the host in kilobytes [Non-Sequential = LST]
NUMACells	The total number of Non-Uniform Memory Access (NUMA) cells on the host. This field will contain a 1 for unusual NUMA topologies or uniform memory access. [Non-Sequential = LST]
Sockets	The number of CPU sockets per NUMA cell [Non-Sequential = LST]
System	The name of the host system. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Non-Sequential = ID]
Threads	The number of threads per CPU core on the host [Non-Sequential = LST]
Time	The timestamp of the data sample [Non-Sequential = ID]

7.2. Libvirt.Host CPU Summary

The Libvirt.Host Summary table stores CPU information for host systems.

Table Field Hierarchy

Class:	Libvirt
Subclass:	Host CPU Summary
IT Resource Name:	/TeamQuest/System/Open Virtualization/Host/*systemname*
TeamQuest Table Name:	Libvirt.Host CPU Summary
Open Table Name:	LIBVIRTHOSTCPUSUMY
Collection interval:	Based on the collection period
Default retentions:	3 days at collection period interval 8 days at 10-minute intervals 4 months at 1-hour intervals 9 months at 24-hour intervals
Table type:	Performance

Statistic Name	Description
%busy	The percentage of time the CPU was not idle [Sequential = AVG Non-Sequential = AVG]
%idle	The percentage of CPU time spent idle while no processes are waiting for an I/O operation to complete [Sequential = AVG Non-Sequential = AVG]
%sys	The percentage of total CPU time spent in system mode [Sequential = AVG Non-Sequential = AVG]
%usr	The percentage of total CPU time spent in user mode [Sequential = AVG Non-Sequential = AVG]
%wio	The percentage of total CPU time spent idle while some processes are waiting for an I/O operation to complete [Sequential = AVG Non-Sequential = AVG]
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]

System	The name of the host system. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]

7.3. Libvirt.Host Device

The Libvirt.Host Devices table stores configuration information for host hardware devices.

Table Field Hierarchy

Class:	Libvirt
Subclass:	Host Device
IT Resource Name:	/TeamQuest/System/Open Virtualization/Host/*systemname*
TeamQuest Table Name:	Libvirt.Host Device
Open Table Name:	LIBVIRTHOSTDEVICE
Collection interval:	N/A
Default retentions:	1 year
Table type:	State

Statistic Name	Description
Capability	The description of the host device type or capabilities [Non-Sequential = ID]
Name	The name of the host device. This field is limited to 51 characters. Any value longer than 51 characters will be truncated. [Non-Sequential = ID]
Parent	The name of the parent host device for the current host device [Non-Sequential = ID]
System	The name of the host system. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Non-Sequential = ID]
Time	The timestamp of the data sample [Non-Sequential = ID]

7.4. Libvirt.Host Memory Summary

The Libvirt.Host Memory Summary table stores memory information for host systems.

Table Field Hierarchy

Class:	Libvirt
Subclass:	Host Memory Summary
IT Resource Name:	/TeamQuest/System/Open Virtualization/Host/*systemname*
TeamQuest Table Name:	Libvirt.Host Memory Summary
Open Table Name:	LIBVIRTHOSTMEMSUMY
Collection interval:	Based on the collection period
Default retentions:	3 days at collection period interval 8 days at 10-minute intervals 4 months at 1-hour intervals 9 months at 24-hour intervals
Table type:	Performance

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
buffermem	The amount of memory in megabytes in use by buffers [Sequential = AVG Non-Sequential = AVG]
cachedmem	The amount of cached memory in use in megabytes [Sequential = AVG Non-Sequential = AVG]
freemem	The amount of memory in megaybes available for user processes [Sequential = AVG Non-Sequential = AVG]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
System	The name of the host system. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]

totalmem	The total amount of memory in megabytes [Sequential = AVG Non-Sequential = AVG]
usedmem	The amount of memory in use in megabytes [Sequential = AVG Non-Sequential = AVG]

7.5. Libvirt.Host Network Config

The Libvirt.Host Network Config table stores configuration information for host network interface devices.

Table Field Hierarchy

Class:	Libvirt
Subclass:	Host Network Config
IT Resource Name:	/TeamQuest/System/Open Virtualization/Host/*systemname*
TeamQuest Table Name:	Libvirt.Host Network Config
Open Table Name:	LIBVIRTHOSTNETCONFIG
Collection interval:	N/A
Default retentions:	1 year
Table type:	State

Statistic Name	Description
MacAddr	The Media Access Control (MAC) address of the host network interface [Non-Sequential = ID]
Name	The name of the host network device. This field is limited to 51 characters. Any value longer than 51 characters will be truncated. [Non-Sequential = ID]
State	The state of the host network interface [Non-Sequential = ID]
System	The name of the host system. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Non-Sequential = ID]
Time	The timestamp of the data sample [Non-Sequential = ID]

7.6. Libvirt.Host Network Filter

The Libvirt.Host Network Filter table stores configuration information for host firewall rules.

Table Field Hierarchy

Class:	Libvirt
Subclass:	Host Network Filter
IT Resource Name:	/TeamQuest/System/Open Virtualization/Host/*systemname*
TeamQuest Table Name:	Libvirt.Host Network Filter
Open Table Name:	LIBVIRTHOSTNETFILTER
Collection interval:	N/A
Default retentions:	1 year
Table type:	State

Statistic Name	Description
Name	The name of the network filter. This field is limited to 51 characters. Any value longer than 51 characters will be truncated. [Non-Sequential = ID]
System	The name of the host system. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Non-Sequential = ID]
Time	The timestamp of the data sample [Non-Sequential = ID]
UUID	The universally unique identifier for the network filter [Non-Sequential = ID]

7.7. Libvirt.Host Numa Memory

The Libvirt.Host Numa Memory table stores host free memory information for each Numa cell on the host.

Table Field Hierarchy

Class:	Libvirt
Subclass:	Host Numa Memory
IT Resource Name:	/TeamQuest/System/Open Virtualization/Host/*systemname*
TeamQuest Table Name:	Libvirt.Host Numa Memory
Open Table Name:	LIBVIRTHOSTNUMAMEM
Collection interval:	Based on the collection period
Default retentions:	3 days at collection period interval 8 days at 10-minute intervals 4 months at 1-hour intervals 9 months at 24-hour intervals
Table type:	Performance

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
FreeMemory	The free memory of the NUMA cell in gigabytes [Sequential = LST Non-Sequential = LST]
Index	The numeric index of the Non-Uniform Memory Access (NUMA) cell [Sequential = ID Non-Sequential = ID]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
System	The name of the host system. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]

7.8. Libvirt.Host Storage Pool Config

The Libvirt.Host Storage Pool Config table stores configuration information for host storage pools.

Table Field Hierarchy

Class:	Libvirt
Subclass:	Host Storage Pool Config
IT Resource Name:	/TeamQuest/System/Open Virtualization/Host/*systemname*
TeamQuest Table Name:	Libvirt.Host Storage Pool Config
Open Table Name:	LIBVIRTHOSTSPCONFIG
Collection interval:	N/A
Default retentions:	1 year
Table type:	State

Statistic Name	Description
Allocation	The used portion of the storage pool in gigabytes [Non-Sequential = AVG]
Available	The available portion of the storage pool in gigabytes [Non-Sequential = AVG]
Capacity	The logical size of the storage pool in gigabytes [Non-Sequential = MAX]
Name	The name of the host storage pool device. This field is limited to 51 characters. Any value longer than 51 characters will be truncated. [Non-Sequential = ID]
Persistent	The persistence state of the host storage pool. If the value is Persistent, the storage pool will continue to exist after the host system is restarted. If the value is Transient, the storage pool will not exist after the host system is restarted. [Non-Sequential = ID]
State	The current state of the host storage pool. This value can be any of the following: Initializing pool not available Not Running Running, but not accessible Running Degraded Running Normally [Non-Sequential = ID]

System	The name of the host system. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Non-Sequential = ID]
Time	The timestamp of the data sample [Non-Sequential = ID]

7.9. Libvirt.Host Volume Config

The Libvirt.Host Volume Config table stores configuration information for host storage volumes.

Table Field Hierarchy

Class:	Libvirt
Subclass:	Host Volume Config
IT Resource Name:	/TeamQuest/System/Open Virtualization/Host/*systemname*
TeamQuest Table Name:	Libvirt.Host Volume Config
Open Table Name:	LIBVIRTHOSTVLCONFIG
Collection interval:	N/A
Default retentions:	1 year
Table type:	State

Statistic Name	Description
Allocation	The allocated size of the storage volume in gigabytes [Non-Sequential = AVG]
Capacity	The logical size of the storage volume in gigabytes [Non-Sequential = MAX]
Name	The name of the storage volume. This field is limited to 51 characters. Any value longer than 51 characters will be truncated. [Non-Sequential = ID]
StoragePool	The name of the storage pool associated withthe storage volume [Non-Sequential = ID]
System	The name of the host system. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Non-Sequential = ID]
Time	The timestamp of the data sample [Non-Sequential = ID]

Type	The storage volume type. This value can be any of the following: Block based volume Regular file based volume Unknown storage volume type [Non-Sequential = NON]
Volume	The unique identifier for the storage volume [Non-Sequential = ID]

7.10. Libvirt.Virtual CPU

The Libvirt.Virtual CPU table stores virtual CPU performance information for each virtual machine.

Table Field Hierarchy

Class:	Libvirt
Subclass:	Virtual CPU
IT Resource Name:	/TeamQuest/System/Open Virtualization/Virtual Machine/*virtualmachinename*
TeamQuest Table Name:	Libvirt.Virtual CPU
Open Table Name:	LIBVIRTVIRTUALCPU
Collection interval:	Based on the collection period
Default retentions:	3 days at collection period interval 8 days at 10-minute intervals 4 months at 1-hour intervals 9 months at 24-hour intervals
Table type:	Performance

Statistic Name	Description
%busyphys	The percentage of CPU time used by the virtual CPU during the collection interval relative to the total physical CPU resources of the host [Sequential = AVG Non-Sequential = SUM]
%busyvcpu	The percentage of CPU time used by the virtual CPU during the collection interval relative to the total virtual CPU resources of the virtual machine [Sequential = AVG Non-Sequential = AVG]
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]

CPUTime	The number of CPU seconds used by the virtual CPU during the collection interval [Sequential = SUM Non-Sequential = SUM]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
PhysicalCPU	The physical CPU associated with the virtual CPU. This value is captured at the end of the sampling interval. [Sequential = ID Non-Sequential = ID]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
State	The current state of the virtual CPU. This value can be any of the following: Blocked Offline Running Unknown [Sequential = ID Non-Sequential = ID]
System	The name of the host system. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
vCPUID	The unique identifier of the virtual CPU [Sequential = ID Non-Sequential = ID]
Virtual_Machine	The name of the virtual machine (guest) to which the data applies. This field is limited to 51 characters. Any value longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]

7.11. Libvirt.Virtual Disk

The Libvirt.Virtual Disk table stores virtual disk performance information for each virtual machine.

Table Field Hierarchy

Class:	Libvirt
Subclass:	Virtual Disk
IT Resource Name:	/TeamQuest/System/Open Virtualization/Virtual Machine/*virtualmachinename*
TeamQuest Table Name:	Libvirt.Virtual Disk
Open Table Name:	LIBVIRTVIRTUALDISK
Collection interval:	Based on the collection period
Default retentions:	3 days at collection period interval 8 days at 10-minute intervals 4 months at 1-hour intervals 9 months at 24-hour intervals
Table type:	Performance

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
Errors	The number of I/O operation erros associated with the virtual disk [Sequential = SUM Non-Sequential = SUM]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
Name	The name of the virtual disk device. This field is limited to 51 characters. Any value longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
ReadKB/s	The amount of data in kilobytes read by the virtual disk per second [Sequential = AVG Non-Sequential = SUM]
ReadRqst/s	The number of read requests per second associated with the virtual disk [Sequential = AVG Non-Sequential = SUM]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
System	The name of the host system. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]

Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
Virtual_Machine	The name of the virtual machine (guest) to which the data applies. This field is limited to 51 characters. Any value longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
WriteKB/s	The amount of data in kilobytes written by the virtual disk per second [Sequential = AVG Non-Sequential = SUM]
WriteRqst/s	The number of write requests per second associated with the virtual disk [Sequential = AVG Non-Sequential = SUM]

7.12. Libvirt.Virtual Disk Config

The Libvirt.Virtual Disk Config table stores configuration information for virtual disk block devices in host systems.

Table Field Hierarchy

Class:	Libvirt
Subclass:	Virtual Disk Config
IT Resource Name:	/TeamQuest/System/Open Virtualization/*virtualmachinename*
TeamQuest Table Name:	Libvirt.Virtual Disk Config
Open Table Name:	LIBVIRTVDISKCONFIG
Collection interval:	N/A
Default retentions:	1 year
Table type:	State

Statistic Name	Description
Allocation	The highest allocated extent of the virtual disk block device backing image in gigabytes [Non-Sequential = AVG]
Capacity	The logical size of the virtual disk block device backing image in gigabytes [Non-Sequential = AVG]
Name	The name of the virtual disk block device. This field is limited to 51 characters. Any value longer than 51 characters will be truncated. [Non-Sequential = ID]
Physical	The physical size of the container of the virtual disk block device backing image in gigabytes [Non-Sequential = AVG]

System	The name of the host system. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Non-Sequential = ID]
Time	The timestamp of the data sample [Non-Sequential = ID]
Virtual_Machine	The name of the virtual machine to which the data applies. This field is limited to 51 characters. Any value longer than 51 characters will be truncated. [Non-Sequential = ID]

7.13. Libvirt.Virtual Machine

The Libvirt.Virtual Machine table stores configuration information for virtual machines associated with the collected host system.

Table Field Hierarchy

Class:	Libvirt
Subclass:	Virtual Machine
IT Resource Name:	/TeamQuest/System/Open Virtualization/Virtual Machine/*virtualmachinename*
TeamQuest Table Name:	Libvirt.Virtual Machine
Open Table Name:	LIBVIRTVM
Collection interval:	N/A
Default retentions:	1 month
Table type:	State

Statistic Name	Description
Autostart	The autostart state of the virtual machine. If the value is TRUE, the virtual machine is started when the host is started. [Non-Sequential = LST]
Id	The numeric identifier of the virtual machine. This identifier is assigned when the virtual machine is started. This field may report a value of -1 for inactive virtual machines. [Non-Sequential = ID]
MaxMemory	The maximum amount of memory the virtual machine is allowed to use in kilobytes [Non-Sequential = LST]
Memory	The memory used by the virtual machine in kilobytes [Non-Sequential = LST]
OSType	The operating system type of the virtual machine [Non-Sequential = ID]

Persistent	The persistence state of the virtual machine. If the value is TRUE, the virtual machine will continue to exist after it has been deactivated or if the host system is restarted. [Non-Sequential = LST]
State	The current state of the virtual machine. This value can be any of the following: Blocked on a resource Crashed No State Paused Running Shut off Shutting down Unknown state [Non-Sequential = ID]
System	The name of the host system. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Non-Sequential = ID]
Time	The timestamp of the data sample [Non-Sequential = ID]
UUID	The univerally unique identifier of the virtual machine [Non-Sequential = ID]
Virtual_Machine	The name of the virtual machine to which the data applies. This field is limited to 51 characters. Any value longer than 51 characters will be truncated. [Non-Sequential = ID]
VirtualCPUs	The number of virtual CPUs assigned to the virtual machine [Non-Sequential = SUM]

7.14. Libvirt.Virtual Machine Snapshot

The Libvirt.Virtual Machine Snapshot table stores configuration information for virtual machine snapshots.

Table Field Hierarchy

Class:	Libvirt
Subclass:	Virtual Machine Snapshot
IT Resource Name:	/TeamQuest/System/Open Virtualization/Virtual Machine/*virtualmachinename*
TeamQuest Table Name:	Libvirt.Virtual Machine Snapshot
Open Table Name:	LIBVIRTVMSNAPSHOT
Collection interval:	N/A
Default retentions:	1 month
Table type:	State

Statistic Name	Description
Name	The name of the virtual machine snapshot. This field is limited to 51 characters. Any value longer than 51 characters will be truncated. [Non-Sequential = ID]
System	The name of the host system. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Non-Sequential = ID]
Time	The timestamp of the data sample [Non-Sequential = ID]
Virtual_Machine	The name of the virtual machine (guest) to which the data applies. This field is limited to 51 characters. Any value longer than 51 characters will be truncated. [Non-Sequential = ID]

7.15. Libvirt.Virtual Memory

The Libvirt.Virtual Memory table stores memory performance information for each virtual machine.

Table Field Hierarchy

Class:	Libvirt
Subclass:	Virtual Memory
IT Resource Name:	/TeamQuest/System/Open Virtualization/Virtual Machine/*virtualmachinename*
TeamQuest Table Name:	Libvirt.Virtual Memory
Open Table Name:	LIBVIRTVIRTUALMEMORY
Collection interval:	Based on the collection period
Default retentions:	3 days at collection period interval 8 days at 10-minute intervals 4 months at 1-hour intervals 9 months at 24-hour intervals
Table type:	Performance

Statistic Name	Description
ActualBalloon	The memory balloon value for the virtual machine in kilobytes. This field contains <N/A> if this functionality is not available. [Sequential = SUM Non-Sequential = SUM]
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
Available	The total amount of usable memory by the virtual machine in kilobytes [Sequential = SUM Non-Sequential = SUM]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
MajorFault	The number of major page faults. A page fault occurs when a process accesses virtual memory that is not available. When servicing the page fault, if disk I/O operations are required, it is considered a major fault. [Sequential = SUM Non-Sequential = SUM]
MinorFault	The number of minor page faults. A page fault occurs when a process accesses virtual memory that is not available. When servicing the page fault, if disk I/O operations are not required, it is considered a minor fault. [Sequential = SUM Non-Sequential = SUM]

Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
SwapIn	The total amount of data read from swap space in kilobytes [Sequential = SUM Non-Sequential = SUM]
SwapOut	The total amount of data written to swap space in kilobytes [Sequential = SUM Non-Sequential = SUM]
System	The name of the host system. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
Unused	The amount of memory left unused by the virtual machine in kiloybytes [Sequential = SUM Non-Sequential = SUM]
Virtual_Machine	The name of the virtual machine (guest) to which the data applies. This field is limited to 51 characters. Any value longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]

7.16. Libvirt.Virtual Network Config

The Libvirt.Virtual Network Config table stores configuration information for host virtual networks.

Table Field Hierarchy

Class:	Libvirt
Subclass:	Virtual Network Config
IT Resource Name:	/TeamQuest/System/Open Virtualization/Virtual Machine/*virtualmachinename*
TeamQuest Table Name:	Libvirt.Virtual Network Config
Open Table Name:	LIBVIRTVNETCONFIG
Collection interval:	N/A
Default retentions:	1 year
Table type:	State

Statistic Name	Description
Active	The state of the virtual network. This field contains True if the virtual network is active. [Non-Sequential = LST]
Autostart	The autostart state of the virtual network. This field contains True if the virtual network will be started when the virtual machine is started. [Non-Sequential = LST]
Bridge	The name of the network bridge associated with the virtual network [Non-Sequential = ID]
Name	The name of the virtual network. This field is limited to 51 characters. Any value longer than 51 characters will be truncated. [Non-Sequential = ID]
Persistent	The persistence state of the virtual network. If the value is TRUE, the virtual network will continue to exist after it has been deactivated or if the host system is restarted. [Non-Sequential = LST]
System	The name of the host system. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Non-Sequential = ID]
Time	The timestamp of the data sample [Non-Sequential = ID]
UUID	The univerally unique identifier of the virtual network [Non-Sequential = ID]

7.17. Libvirt.Virtual Network Interface

The Libvirt.Virtual Network Interface table stores virtual machine performance data for virtual network interfaces.

Table Field Hierarchy

Class:	Libvirt
Subclass:	Virtual Network Interface
IT Resource Name:	/TeamQuest/System/Open Virtualization/Virtual Machine/*virtualmachinename*
TeamQuest Table Name:	Libvirt.Virtual Network Interface
Open Table Name:	LIBVIRTVNETINTERFACE
Collection interval:	Based on the collection period
Default retentions:	3 days at collection period interval 8 days at 10-minute intervals 4 months at 1-hour intervals 9 months at 24-hour intervals
Table type:	Performance

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
Name	The name of the virtual network interface. This field is limited to 51 characters. Any value longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
RcvDrops	The number of dropped recieve packets for the virtual network interface device [Sequential = SUM Non-Sequential = SUM]
RcvErrors	The number of errors received by the virtual network interface device [Sequential = SUM Non-Sequential = SUM]
RcvKB/s	The amount of data received by the virtual network interface device in kilobytes [Sequential = SUM Non-Sequential = SUM]
RcvPackets/s	The number of packets received by the virtual network interface device [Sequential = SUM Non-Sequential = SUM]

Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
System	The name of the host system. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
Virtual_Machine	The name of the virtual machine to which the data applies. This field is limited to 51 characters. Any value longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
XmitDrops	The number of dropped write packets for the virtual network interface device [Sequential = SUM Non-Sequential = SUM]
XmitErrors	The number of write errors for the virtual network interface device [Sequential = SUM Non-Sequential = SUM]
XmitKB/s	The amount of data writted by the virtual network interface device in kilobytes [Sequential = SUM Non-Sequential = SUM]
XmitPackets/s	The number of packets written by the virtual network interface device [Sequential = SUM Non-Sequential = SUM]

Section 8
Linux Systems

Notes:

- *Red Hat Linux is supported only for unmodified kernel releases that are part of a Red Hat Linux distribution.*
- *SuSE Linux is supported only for unmodified kernel releases that are part of a SuSE Linux distribution.*

Statistics for Linux systems are collected by the TeamQuest collection agents.

This section contains a listing of the statistics collected for the system:

- System Activity Statistics (see 8.1)
- Disk Space Statistics (see 8.2)
- Network Statistics (see 8.3)
- LPAR Configuration Statistics (see 8.4)
- Workload Statistics (see 8.5)
- Process Statistics (see 8.6)
- Hardware Inventory Statistics (see 8.7)
- System Log Statistics (see 8.8)
- General Log Statistics (see 8.9)
- TeamQuest Log Statistics (see 8.10)
- Derived Statistics (see 8.11)

Note: *At the end of each statistic description, you will see a notation in brackets indicating the method that is used for data consolidation (for example,* [Sequential = SUM Non-Sequential = SUM]). *Sequential means that the field is consolidated over time. Non-Sequential means that the field is consolidated within a specified time interval.*

The following notations are used:

AVG = Average
DIV =Weight
FST = First
ID = Identifier
LST = Last
MAX = Maximum
MIN = Minimum
NON = None or no method was used
SUM = Summation

If you are using TeamQuest View to view aggregation set data, the sequential method is used for data consolidation.

Because derived statistics are not stored in the performance database, the data consolidation method is not shown in the description of a derived statistic.

8.1. System Activity Statistics

The System Activity Agent is used to collect a wide variety of important system statistics. Major resources monitored by this agent include processors, memory, disks, network interfaces, and the operating system kernel.

Special Processing When Using Sequential Consolidation Method

Special processing occurs when certain records in the Block Device.by Device table are consolidated using the Sequential consolidation method. The following formulas are used to calculate the %busy, Actual_Interval, and record_count statistic values:

%busy

The %busy field uses a new consolidation method that uses the following formula to produce the consolidated %busy value:

$$\text{consolidated \%busy} = \text{\%busy} * \text{record_count} * \text{Actual_Interval}$$

At the end of the aggregation processing step after multiple records have been combined together to produce a single consolidated record, the %busy field contains the consolidated %busy value.

An additional processing step is performed using the following formula to produce a final %busy value that is stored into the consolidated record:

$$\text{\%busy} = \frac{\text{consolidated \%busy}}{\text{record_count} * \text{Interval}}$$

Note: The record_count field value used in the above formula must have already been generated using the record_count formula.

Block Device.by Device table records that have been stored by previous levels of TeamQuest collection agents do not contain the record_count field. For these records, a value of 1 is assumed for the record_count value.

Actual_Interval

For consolidated records (both reduced and not reduced), the Actual_Interval field should contain the Interval value at the end of the aggregation processing step.

record_count

The record_count field value is updated at the end of the aggregation processing step using the following formula:

$$\text{record_count} = \frac{(\Sigma(\text{record_count} * \text{Actual_Interval})) + (\text{Interval} - \Sigma\text{Actual_Interval})}{\text{Interval}}$$

The first part of the numerator is a summation of the record_count value multiplied by the Actual_Interval value across all of the consolidated records. This value should exist in the record_count field at the end of the aggregation processing step since the record_count field is weighted by Actual_Interval.

The Actual_Interval value used in the second part of the numerator is a summation of all the Actual_Interval values of the consolidated records. This value should exist in the Actual_Interval field at the end of the aggregation processing step since Actual_Interval is a summation.

The Interval value in the formula is the time range in seconds that the final consolidated record represents. For example, if 5-minute records are generated, the Interval value is calculated as 5 multiplied by 60.

Parameter Hierarchy

Class:	Block Device
Subclass:	by Device
IT Resource Name:	/TeamQuest/System/*systemname*/Disk
TeamQuest Table Name:	Block Device.by Device
Open Table Name:	BLKDEVBYDEVICE
Resource:	disk0, disk1, ...
Statistic Name:	
%busy	The percentage of time this device was servicing a transfer request [Sequential = AVG Non-Sequential = AVG] View Report: /report/hp-ux/sys-act/io/dsk-util.rpt
actq_avwait*	The average run queue wait time in milliseconds
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = ID]
avgresp*	The average response time of an I/O on a device. Calculated as avwait + avserv
avque	The average number of requests outstanding [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/sys-act/io/dsk-q.rpt
avserv	The average time in milliseconds to service each transfer request (includes seek, rotation latency, and data transfer times) for the device [Sequential = AVG Non-Sequential = AVG] View Report: /report/hp-ux/sys-act/io/dsk-time.rpt
avwait	The average time in milliseconds that transfer requests are idle in the queue while the queue is occupied [Sequential = AVG Non-Sequential = AVG] View Report: /report/hp-ux/sys-act/io/dsk-time.rpt

Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = ID]
IO_intensity*	The activity of an I/O device. This is the product of the I/O response time in milliseconds and the I/O transfer rate in I/Os per second. This is proportional to the average queue length (the number of I/O requests waiting or in progress at the I/O device).
Kbytes/s	The rate at which data is transferred in kilobytes per second [Sequential = AVG Non-Sequential = SUM] View Reports: /report/hp-ux/sys-act/io/dsk-xfer.rpt /report/hp-ux/sys-act/io/top-dsk.rpt
record_count	The number of collected records represented by the record written to the database. For nonreduced records, this value is 1. For reduced records, this value is the number of records that are combined into a single database record. [Sequential = AVG Non-Sequential = SUM]
reduction_name	The name of reduction rule [Sequential = ID Non-Sequential = ID]
reduction_source	The source of the reduction record. For reduction records with agent sources, this value is A. For reduction records with harvest sources, this value is H. [Sequential = ID Non-Sequential = ID]
transfers/s	The number of physical transfers to and from the disk per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/sys-act/io/dsk-xfer.rpt
waitq_avwait*	The average wait queue wait time in milliseconds

Class:	Block Device
Subclass:	Summary
IT Resource Name:	/TeamQuest/System/*systemname*/Disk
TeamQuest Table Name:	Block Device.Summary
Open Table Name:	BLKDEVSUM
Statistic Name:	
transfers/s	The number of physical transfers to and from the disk per second [Sequential = AVG Non-Sequential = SUM]

Class:	CPU
Subclass:	by LPAR
IT Resource Name:	/TeamQuest/System/*systemname*/CPU
TeamQuest Table Name:	CPU.by LPAR
Open Table Name:	CPUBYLPAR
Statistic Name:	
%entc	The percentage of the entitled processor capacity consumed [Sequential = AVG Non-Sequential = AVG]
%lpar_phys_busy	The percentage of the processor capacity consumed [Sequential = AVG Non-Sequential = SUM]
physc	The number of physical processors consumed [Sequential = AVG Non-Sequential = AVG]

Class:	CPU
Subclass:	by Processor
IT Resource Name:	/TeamQuest/System/*systemname*/CPU
TeamQuest Table Name:	CPU.by Processor
Open Table Name:	CPUBYPROC
Resource:	cpu0, cpu1, ...
Statistic Name:	
%idle	The percentage of CPU time spent idle while no processes are waiting for I/O completion for the CPU [Sequential = AVG Non-Sequential = AVG] View Report: /report/linux/sys-act/cpu/per-cpu.rpt
%guest	The percentage of CPU time spent running a virtual CPU for guest operating systems under the control of the Linux kernel. If the kernel level is below 2.6.32 or the system does not support virtualization, the value will be 0. [Sequential = AVG Non-Sequential = AVG] View Report: /report/linux/sys-act/cpu/per-cpu.rpt

%guest_nice	The percentage of CPU time spent running a virtual CPU for guest operating systems, in low priority, under the control of the Linux kernel. If the kernel level is below 2.6.33 or the system does not support virtualization, the value will be 0. [Sequential = AVG Non-Sequential = AVG] View Report: /report/linux/sys-act/cpu/per-cpu.rpt
%nice	The percentage of CPU time spent running low priority user processes for the CPU [Sequential = AVG Non-Sequential = AVG] View Report: /report/linux/sys-act/cpu/per-cpu.rpt
%steal	The percentage of total CPU time that was utilized (stolen) by another virtual guest of the same real system [Sequential = AVG Non-Sequential = AVG] View Report: /report/linux/sys-act/cpu/per-cpu.rpt
%sys	The percentage of CPU time spent running in system mode for the CPU [Sequential = AVG Non-Sequential = AVG] View Report: /report/linux/sys-act/cpu/per-cpu.rpt
%usr	The percentage of CPU time spent running normal priority user processes for the CPU [Sequential = AVG Non-Sequential = AVG] View Report: /report/linux/sys-act/cpu/per-cpu.rpt
%wio	The percentage of CPU time spent idle while some process is waiting for I/O completion [Sequential = AVG Non-Sequential = AVG]

Table Field Hierarchy

Class:	CPU
Subclass:	RelativePerformance
IT Resource Name:	/TeamQuest/System/*systemname*/CPU
TeamQuest Table Name:	CPU.RelativePerformance
Open Table Name:	CPURELPERF
Collection interval:	1 minute
Default retentions:	1 month
Table type:	Performance
Derived tables using fields from this table:	N/A

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = ID]
cpu_relative_performance	The relative performance of the CPU on a common scale [Sequential = AVG Non-Sequential = SUM]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = ID]
rel_unused	The amount of CPU resources not used based on a common, relative scale [Sequential = AVG Non-Sequential = SUM]
rel_used	The amount of CPU resources used based on a common, relative scale [Sequential = AVG Non-Sequential = SUM]
System	The name of the system where the data is collected. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]

Class:	CPU
Subclass:	Summary
IT Resource Name:	/TeamQuest/Systethe partitionm/*systemname*/CPU
TeamQuest Table Name:	CPU.Summary
Open Table Name:	CPUSUM
Statistic Name:	
%busy	The percentage of time the CPU was not idle [Sequential = AVG Non-Sequential = AVG]
%guest	The percentage of total CPU time spent running a virtual CPU for guest operating systems under the control of the Linux kernel. If the kernel level is below 2.6.32 or the system does not support virtualization, the value will be 0. [Sequential = AVG Non-Sequential = AVG] View Report: /report/linux/sys-act/cpu/cpu-util.rpt
%guest_nice	The percentage of total CPU time spent running a virtual CPU for guest operating systems, in low priority, under the control of the Linux kernel. If the kernel level is below 2.6.33 or the system does not support virtualization, the value will be 0. [Sequential = AVG Non-Sequential = AVG] View Report: /report/linux/sys-act/cpu/cpu-util.rpt
%idle	The percentage of total CPU time spent idle while no processes are waiting for I/O completion [Sequential = AVG Non-Sequential = AVG] View Report: /report/linux/sys-act/cpu/cpu-util.rpt
%nice	The percentage of total CPU time spent running low priority user processes [Sequential = AVG Non-Sequential = AVG] View Report: /report/linux/sys-act/cpu/cpu-util.rpt
%steal	The percentage of total CPU time that was utilized (stolen) by another virtual guest of the same real system [Sequential = AVG Non-Sequential = AVG] View Report: /report/linux/sys-act/cpu/cpu-util.rpt
%sys	The percentage of total CPU time spent in system mode [Sequential = AVG Non-Sequential = AVG] View Report: /report/linux/sys-act/cpu/cpu-util.rpt
%usr	The percentage of total CPU time spent in user mode [Sequential = AVG Non-Sequential = AVG] View Report: /report/linux/sys-act/cpu/cpu-util.rpt

%wio	The percentage of total CPU time spent idle while some process is waiting for I/O completion [Sequential = AVG Non-Sequential = AVG]
online_cpus	The number of CPUs that were online at the end of the sampling interval [Sequential = LST Non-Sequential = SUM]

Class:	Device Partition
Subclass:	by Partition
IT Resource Name:	/TeamQuest/System/*systemname*/Disk
TeamQuest Table Name:	Device Partition.by Partition
Open Table Name:	DEVPARTBYPARTITION
Resource:	partition0, partition1, ...
Statistic Name:	
%busy	The percentage of time the partition was servicing a transfer request. Available for kernel releases 2.6.25 and later. [Sequential = AVG Non-Sequential = AVG] View Reports: /report/linux/sys-act/io/par-util.rpt /report/linux/sys-act/io/topn-par.rpt
avque	The average number of requests outstanding per second. Available for kernel releases 2.6.25 and later. [Sequential = AVG Non-Sequential = SUM] View Report: /report/linux/sys-act/io/par-q.rpt
avserv	The average service time in milliseconds for I/O requests for the partition. Available for kernel releases 2.6.25 and later. [Sequential = AVG Non-Sequential = AVG]
avwait	The average time in milliseconds for a transfer request to be completed by the partition. This includes time spent in queue and disk service time. Available for kernel releases 2.6.25 and later. [Sequential = AVG Non-Sequential = AVG] View Report: /report/linux/sys-act/io/par-time.rpt
KB read/s	The number of kilobytes (KB) read from the partition per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/linux/sys-act/io/par-rdwr.rpt
KB write/s	The number of kilobytes (KB) transferred to the partition per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/linux/sys-act/io/par-rdwr.rpt

r+w/s	The number of read and write transfers to the partition per second [Sequential = AVG Non-Sequential = SUM] View Reports: /report/linux/sys-act/io/par-xfer.rpt /report/linux/sys-act/io/topn-par.rpt
reads/s	The number of read operations from the partition per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/linux/sys-act/io/par-rdwr.rpt
writes/s	The number of write operations to the partition per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/linux/sys-act/io/par-rdwr.rpt

Class:	Device Partition
Subclass:	Summary
IT Resource Name:	/TeamQuest/System/*systemname*/Disk
TeamQuest Table Name:	Device Partition.Summary
Open Table Name:	DEVPARTSUM
Statistic Name:	
transfers/s	The number of read and write transfers to all of the partitions per second [Sequential = AVG Non-Sequential = SUM]

Class:	Kernel
Subclass:	Load Average
IT Resource Name:	/TeamQuest/System/*systemname*/Kernel
TeamQuest Table Name:	Kernel.Load Average
Open Table Name:	KNLLOADAVG
Statistic Name:	
1 min	The number of processes in the run queue averaged over the last 1 minute [Sequential = LST Non-Sequential = SUM] View Report: /report/linux/sys-act/kernel/load-avg.rpt
5 min	The number of processes in the run queue averaged over the last 5 minutes [Sequential = LST Non-Sequential = SUM] View Report: /report/linux/sys-act/kernel/load-avg.rpt
15 min	The number of processes in the run queue averaged over the last 15 minutes [Sequential = LST Non-Sequential = SUM] View Report: /report/linux/sys-act/kernel/load-avg.rpt

Class:	Kernel
Subclass:	Paging
IT Resource Name:	/TeamQuest/System/*systemname*/Memory
TeamQuest Table Name:	Kernel.Paging
Open Table Name:	KNLPAGING
Statistic Name:	
activepg	The number of active (recently touched) pages in memory [Sequential = LST Non-Sequential = SUM]
inactivepg	The number of inactive pages in memory [Sequential = LST Non-Sequential = AVG]
pgpgin/s	The number of pages paged in per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/linux/sys-act/kernel/paging.rpt
pgpgout/s	The number of pages paged out per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/linux/sys-act/kernel/paging.rpt
pgsize	The size of the memory page [Sequential = LST Non-Sequential = SUM]

Class:	Kernel
Subclass:	Queues
IT Resource Name:	/TeamQuest/System/*systemname*/Kernel
TeamQuest Table Name:	Kernel.Queues
Open Table Name:	KNLQS
Statistic Name:	
runq_sz	The length of the run queue at the end of the sample interval [Sequential = AVG Non-Sequential = AVG]
cpuq_sz	The average length of the run queue per CPU at the end of the sample interval [Sequential = AVG Non-Sequential = AVG] View Report: /report/linux/sys-act/kernel/q-sizes.rpt

Class:	Kernel
Subclass:	Swapping
IT Resource Name:	/TeamQuest/System/*systemname*/Memory
TeamQuest Table Name:	Kernel.Swapping
Open Table Name:	KNLSWAPPING
Statistic Name:	
pgswapin/s	The number of pages swapped in per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/linux/sys-act/kernel/swapping.rpt
pgswapout/s	The number of pages swapped out per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/linux/sys-act/kernel/swapping.rpt

Class:	Kernel
Subclass:	System Call
IT Resource Name:	/TeamQuest/System/*systemname*/Kernel
TeamQuest Table Name:	Kernel.System Call
Open Table Name:	KNLSYSCALL
Statistic Name:	
forks/s	The number of fork system calls per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/linux/sys-act/syscall/imp-scal.rpt
pswch/s	The number of process switches per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/linux/sys-act/syscall/imp-scal.rpt

Class:	Kernel
Subclass:	Tables
IT Resource Name:	/TeamQuest/System/*systemname*/Kernel
TeamQuest Table Name:	Kernel.Tables
Open Table Name:	KNLTABS
Statistic Name:	
proc-sz	The number of entries presently used in the process table, which includes processes and threads. This count is taken at the end of the sampling interval. [Sequential = AVG Non-Sequential = AVG] View Report: /report/linux/sys-act/kernel/tbl-size.rpt

Class:	Memory
Subclass:	N/A
IT Resource Name:	/TeamQuest/System/*systemname*/Memory
TeamQuest Table Name:	Memory
Open Table Name:	MEM
Statistic Name:	
buffermem	The average amount of memory in use by buffers in megabytes [Sequential = LST Non-Sequential = SUM] View Report: /report/linux/sys-act/memory/memory.rpt
cachedmem	The average amount of cached memory in use in megabytes [Sequential = LST Non-Sequential = SUM] View Report: /report/linux/sys-act/memory/memory.rpt
freemem	The average amount of memory available to user processes in megabytes [Sequential = AVG Non-Sequential = SUM] View Reports: /report/linux/sys-act/memory/freemem.rpt /report/linux/sys-act/memory/memory.rpt
highfree	The amount of free memory in megabytes that is not directly mapped to kernel space [Sequential = LST Non-Sequential = SUM]
hightotal	The total amount of memory in megabytes that is not directly mapped into kernel space [Sequential = LST Non-Sequential = SUM]
lowfree	The amount of free memory in megabytes that is directly mapped into kernel space [Sequential = LST Non-Sequential = SUM]
lowtotal	The total amount of memory in megabytes that is directly mapped into kernel space [Sequential = LST Non-Sequential = SUM]

mlocked	The amount of memory in megabytes that is not available for paging. This statistic may be available on Linux systems with kernel releases 2.6.27 and later. [Sequential = LST Non-Sequential = SUM]
totalmem	The total amount of memory in megabytes [Sequential = LST Non-Sequential = SUM] View Report: /report/linux/sys-act/memory/memory.rpt
usedmem	The average amount of memory in use in megabytes [Sequential = LST Non-Sequential = SUM] View Report: /report/linux/sys-act/memory/memory.rpt

Class:	Swap Space
Subclass:	Summary
IT Resource Name:	/TeamQuest/System/*systemname*/Memory
TeamQuest Table Name:	Swap Space.Summary
Open Table Name:	SWAPSPACESUM
Statistic Name:	
free	The amount of swap space in megabytes free at the end of the interval [Sequential = LST Non-Sequential = SUM] View Report: /report/linux/sys-act/swap/swpspc.rpt
in_use	The amount of swap space in megabytes in use at the end of the interval [Sequential = LST Non-Sequential = SUM]
total	The total amount of swap space in megabytes [Sequential = LST Non-Sequential = SUM] View Report: /report/linux/sys-act/swap/swpspc.rpt

Note: *The following statistics are only available for the TeamQuest database architecture. If the open database architecture is used, a record for each agent using these statistics is created in the TQ.Agent Interval table.*

Class:	TQ
Subclass:	N/A
IT Resource Name:	N/A
TeamQuest Table Name:	N/A
Open Table Name:	N/A
Statistic Name:	
bsp interval	The number of seconds elapsed between two data samples of the System Activity Agent [Sequential = SUM Non-Sequential = ID]
tqbsp_end_time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
tqbsp_interval	The number of seconds elapsed between the end of data collection for the previous sample and the end of data collection for the current sample [Sequential = SUM Non-Sequential = ID]

Table Field Hierarchy

Class:	TQ
Subclass:	Agent Interval
IT Resource Name:	/TeamQuest/System/*systemname*
TeamQuest Table Name:	TQ.Agent Interval
Open Table Name:	AGENTINTERVAL
Collection interval:	Based on the collection period
Default retentions:	8 hours at collection period interval 8 days at 10-minute intervals 35 days at 1-hour intervals 400 days at 8-hour intervals
Table type:	Performance
Derived tables using fields from this table:	N/A

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = ID]
Agent	The name of the agent that is collecting data. This field is limited to 52 characters. Any agent name longer than 52 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Instance	The instance name of the agent that is collecting data. This field is limited to 52 characters. Any instance name longer than 52 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = ID]
PID	The process identifier of the agent instance that is collecting data [Sequential = ID Non-Sequential = ID]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
System	The name of the system where the data is collected. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential LST Non-Sequential = ID]

8.2. Disk Space Statistics

The Disk Space Agent tracks the disk space usage of locally mounted file systems. However, any data about Network File System (NFS) mounted file systems are not collected by the agent because the loss of the network connection to the NFS may result in hung processes.

Note: *File system names longer than 51 characters will be truncated.*

Parameter Hierarchy

Class:	Disk Space
Subclass:	by File System
IT Resource Name:	/TeamQuest/System/*systemname*/Disk
TeamQuest Table Name:	Disk Space.by File System
Open Table Name:	DISKSPACEBYFILESYS
Resource:	file system1, file system2, ...
Statistic Name:	
%inodes free*	The percentage of i-nodes available (not in use) on the file system at the end of the interval View Report: /report/linux/dskspace/total/pct-inod.rpt
%inodes used*	The percentage of i-nodes in use on the file system at the end of the interval View Report: /report/linux/dskspace/total/pct-inod.rpt
%space free*	The percentage of total space available (not in use) on the file system at the end of the interval View Reports: /report/linux/dskspace/io/total/pctspace.rpt /report/linux/dskspace/total/low-ones.rpt
%space used*	The percentage of total space in use on the file system at the end of the interval View Reports: /report/linux/dskspace/total/pctspace.rpt /report/linux/dskspace/total/fullest.rpt
%user space free*	The percentage of total user space available (not in use) on the file system at the end of the interval View Reports: /report/linux/dskspace/user/pctspace.rpt /report/linux/dskspace/user/low-ones.rpt
%user space used*	The percentage of total user space in use on the file system at the end of the interval View Report: /report/linux/dskspace/user/pctspace.rpt /report/linux/dskspace/user/fullest.rpt

capacity	The percentage of total space in use on the file system at the end of the interval [Sequential = LST Non-Sequential = AVG]
free (Mb)	The amount of space available (not in use) on the file system in megabytes (Mb) at the end of the interval including the space held back from normal users [Sequential = LST Non-Sequential = SUM] View Reports: /report/linux/dskspace/total/dskspace.rpt /report/linux/dskspace/total/low-ones.rpt
free inodes	The number of available (not in use) i-nodes on the file system at the end of the interval [Sequential = LST Non-Sequential = SUM] View Report: /report/linux/dskspace/total/i-nodes.rpt
total inodes	The total (used + available) number of i-nodes on the file system at the end of the interval [Sequential = LST Non-Sequential = SUM] View Report: /report/linux/dskspace/total/i-nodes.rpt
total (Mb)	The total (used + available) amount of space on the file system in megabytes (Mb) at the end of the interval including the space held back from normal users [Sequential = LST Non-Sequential = SUM] View Report: /report/linux/dskspace/total/dskspace.rpt
user free (Mb)	The amount of space available (not in use) on the file system in megabytes (Mb) at the end of the interval not including the space held back from normal users [Sequential = LST Non-Sequential = SUM] View Reports: /report/linux/dskspace/user/dskspace.rpt /report/linux/dskspace/user/low-ones.rpt
user total (Mb)*	The total (used + available) amount of space on the file system in megabytes (Mb) at the end of the interval not including the space held back from normal users View Report: /report/linux/dskspace/user/dskspace.rpt

Note: *The following statistics are only available for the TeamQuest database architecture. If the open database architecture is used, a record for each agent using these statistics is created in the TQ.Agent Interval table.*

Class:	TQ
Subclass:	N/A
IT Resource Name:	N/A
TeamQuest Table Name:	N/A
Open Table Name:	N/A
Statistic Name:	
dsp interval	The number of seconds elapsed between two data samples of the Disk Space Agent [Sequential = SUM Non-Sequential = ID]
tqdsp_end_time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
tqdsp_interval	The number of seconds elapsed between the end of data collection for the previous sample and the end of data collection for the current sample [Sequential = SUM Non-Sequential = ID]

Table Field Hierarchy

Class:	TQ
Subclass:	Agent Interval
IT Resource Name:	/TeamQuest/System/*systemname*
TeamQuest Table Name:	TQ.Agent Interval
Open Table Name:	AGENTINTERVAL
Collection interval:	Based on the collection period
Default retentions:	8 hours at collection period interval 8 days at 10-minute intervals 35 days at 1-hour intervals 400 days at 8-hour intervals
Table type:	Performance
Derived tables using fields from this table:	N/A

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = ID]
Agent	The name of the agent that is collecting data. This field is limited to 52 characters. Any agent name longer than 52 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Instance	The instance name of the agent that is collecting data. This field is limited to 52 characters. Any instance name longer than 52 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = ID]
PID	The process identifier of the agent instance that is collecting data [Sequential = ID Non-Sequential = ID]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
System	The name of the system where the data is collected. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential LST Non-Sequential = ID]

8.3. Network Statistics

Network statistics are maintained in the TeamQuest performance database by the System Activity Agent. The statistics are classified by the hierarchy of key names.

Parameter Hierarchy

Class:	Network
Subclass:	by Interface
IT Resource Name:	/TeamQuest/System/*systemname*/Network
TeamQuest Table Name:	Network.by Interface
Open Table Name:	NETBYINTERFACE
Resource:	interface0, interface1, ...
Statistic Name:	
collisions/s	The number of network collisions per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/linux/network/net-errs.rpt
in bytes/s	The number of network bytes input per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/linux/network/net-byte.rpt
in drops/s	The number of network input drops per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/linux/network/net-drop.rpt
in errors/s	The number of network input errors per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/linux/network/net-errs.rpt
in packets/s	The number of network input packets per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/linux/network/net-pkts.rpt
out bytes/s	The number of network bytes output per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/linux/network/net-byte.rpt
out drops/s	The number of network output drops per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/linux/network/net-drop.rpt

out errors/s	The number of network output errors per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/linux/network/net-errs.rpt
out packets/s	The number of network output packets per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/linux/network/net-pkts.rpt

Class:	Network
Subclass:	Summary
IT Resource Name:	/TeamQuest/System/*systemname*/Network
TeamQuest Table Name:	Network.Summary
Open Table Name:	NETSUM
Statistic Name:	
errors/s	The total number of network errors per second for all network interfaces on the system [Sequential = AVG Non-Sequential = SUM]
in packets/s	The number of input packets per second summed from all network interfaces excluding the loop back interface [Sequential = AVG Non-Sequential = SUM] View Report: /report/linux/network/net-sum.rpt
out packets/s	The number of output packets per second summed from all network interfaces excluding the loop back interface [Sequential = AVG Non-Sequential = SUM] View Report: /report/linux/network/net-sum.rpt
total packets/s	The number of input and output packets per second summed from all network interfaces excluding the loop back interface [Sequential = AVG Non-Sequential = SUM]

Class:	NFSv2
Subclass:	Client
IT Resource Name:	/TeamQuest/System/*systemname*/Network
TeamQuest Table Name:	NFSv2.Client
Open Table Name:	NFSV2CLI
Statistic Name:	
calls/s*	The number of Network File System (NFS) version 2 calls per second sent by the client [Sequential = AVG Non-Sequential = SUM] View Report: /report/linux/network/clnt-v2.rpt

Class:	NFSv2
Subclass:	Client
IT Resource Name:	/TeamQuest/System/*systemname*/Network
TeamQuest Table Name:	NFSv2.Client
Open Table Name:	NFSV2CLI
Resource:	create, getattr, link, lookup, mkdir, null, read, readdir, readlink, remove, rename, rmdir, root, stattr, statfs, symlink, write, writecache
Statistic Name:	
reqs/s	The number of NFS version 2 requests per second sent by the client [Sequential = AVG Non-Sequential = SUM] View Report: /report/linux/network/clnt-v2.rpt

Class:	NFSv2
Subclass:	Server
IT Resource Name:	/TeamQuest/System/*systemname*/Network
TeamQuest Table Name:	NFSv2.Server
Open Table Name:	NFSV2SERV
Statistic Name:	
calls/s*	The number of NFS version 2 calls per second received by the server [Sequential = AVG Non-Sequential = SUM] View Report: /report/linux/network/srvr-v2.rpt

Class:	NFSv2
Subclass:	Server
IT Resource Name:	/TeamQuest/System/*systemname*/Network
TeamQuest Table Name:	NFSv2.Server
Open Table Name:	NFSV2SERV
Resource:	create, getattr, link, lookup, mkdir, null, read, readdir, readlink, remove, rename, rmdir, root, stattr, statfs, symlink, write, writecache
Statistic Name:	
reqs/s	The number of NFS version 2 requests per second received by the server [Sequential = AVG Non-Sequential = SUM] View Report: /report/linux/network/srvr-v2.rpt

Class:	NFSv3
Subclass:	Client
IT Resource Name:	/TeamQuest/System/*systemname*/Network
TeamQuest Table Name:	NFSv3.Client
Open Table Name:	NFSV3CLI
Statistic Name:	
calls/s*	The number of NFS version 3 calls per second received by the server [Sequential = AVG Non-Sequential = SUM] View Report: /report/linux/network/srvr-v2.rpt

Class:	NFSv3
Subclass:	Client
IT Resource Name:	/TeamQuest/System/*systemname*/Network
TeamQuest Table Name:	NFSv3.Client
Open Table Name:	NFSV3CLI
Resource:	access, commit, create, fsinfo, fsstat, getattr, link, lookup, mkdir, mknod, null, pathconf, read, readdir, readdir+, readlink, remove, rename, rmdir, setattr, symlink, write
Statistic Name:	
reqs/s	The number of NFS version 3 requests per second sent by the client [Sequential = AVG Non-Sequential = SUM] View Report: /report/linux/network/clnt-v3.rpt

Class:	NFSv3
Subclass:	Server
IT Resource Name:	/TeamQuest/System/*systemname*/Network
TeamQuest Table Name:	NFSv3.Server
Open Table Name:	NFSV3SERV
Statistic Name:	
calls/s*	The number of NFS version 3 calls per second received by the server [Sequential = AVG Non-Sequential = SUM] View Report: /report/linux/network/srvr-v3.rpt

Class:	NFSv3
Subclass:	Server
IT Resource Name:	/TeamQuest/System/*systemname*/Network
TeamQuest Table Name:	NFSv3.Server
Open Table Name:	NFSV3SERV
Resource:	access, commit, create, fsinfo, fsstat, getattr, link, lookup, mkdir, mknod, null, pathconf, read, readdir, readdir+, readlink, remove, rename, rmdir, setattr, symlink, write
Statistic Name:	
reqs/s	The number of NFS version 3 requests per second received by the server [Sequential = AVG Non-Sequential = SUM] View Report: /report/linux/network/srvr-v3.rpt

Class:	RPC
Subclass:	Client
IT Resource Name:	/TeamQuest/System/*systemname*/Network
TeamQuest Table Name:	RPC.Client
Open Table Name:	RPCCLI
Statistic Name:	
authrefrsh/s	The number of times authentication information had to be refreshed per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/linux/network/rpc/client.rpt
calls/s	The number of RPC calls per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/linux/network/rpc/client.rpt
retrans/s	The number of times a call had to be retransmitted due to a time-out while waiting for a reply from the server per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/linux/network/rpc/client.rpt

Class:	RPC
Subclass:	Server
IT Resource Name:	/TeamQuest/System/*systemname*/Network
TeamQuest Table Name:	RPC.Server
Open Table Name:	RPCSERV
Statistic Name:	
badauth/s	The total number of RPC calls per second [Sequential = AVG Non-Sequential = SUM]
badcalls/s	The number of calls rejected by the RPC layer per second. This is the sum of badlens/s and xdrcalls/s. [Sequential = AVG Non-Sequential = SUM]
badclnt/s	The number of calls per second rejected by the RPC layer because of a bad client [Sequential = AVG Non-Sequential = SUM]
calls/s	The number of RPC calls received per second [Sequential = AVG Non-Sequential = SUM]
xdrcalls/s	The number of RPC calls per second whose header could not be External Data Representation (XDR) decoded [Sequential = AVG Non-Sequential = SUM]

Note: *The following statistics are only available for the TeamQuest database architecture. If the open database architecture is used, a record for each agent using these statistics is created in the TQ.Agent Interval table.*

Class:	TQ
Subclass:	N/A
IT Resource Name:	N/A
TeamQuest Table Name:	N/A
Open Table Name:	N/A
Statistic Name:	
tqwarp_end_time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
tqwarp_interval	The number of seconds elapsed between the end of data collection for the previous sample and the end of data collection for the current sample [Sequential = SUM Non-Sequential = ID]
warp interval	The number of seconds elapsed between two data samples of the Process-Workload Agent [Sequential = SUM Non-Sequential = ID]

Table Field Hierarchy

Class:	TQ
Subclass:	Agent Interval
IT Resource Name:	/TeamQuest/System/*systemname*
TeamQuest Table Name:	TQ.Agent Interval
Open Table Name:	AGENTINTERVAL
Collection interval:	Based on the collection period
Default retentions:	8 hours at collection period interval 8 days at 10-minute intervals 35 days at 1-hour intervals 400 days at 8-hour intervals
Table type:	Performance
Derived tables using fields from this table:	N/A

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = ID]
Agent	The name of the agent that is collecting data. This field is limited to 52 characters. Any agent name longer than 52 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Instance	The instance name of the agent that is collecting data. This field is limited to 52 characters. Any instance name longer than 52 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = ID]
PID	The process identifier of the agent instance that is collecting data [Sequential = ID Non-Sequential = ID]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
System	The name of the system where the data is collected. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential LST Non-Sequential = ID]

8.4. LPAR Configuration Statistics

The following statistics are stored in the TeamQuest performance database tables by the System Activity Agent.

Note: *LPAR statistics are supported only on Linux POWER systems.*

Table Field Hierarchy

Class:	IBM POWER
Subclass:	LPAR
IT Resource Name:	/TeamQuest/System/*systemname*
TeamQuest Table Name:	IBM POWER.LPAR
Open Table Name:	IBMPOWERLPAR
Collection interval:	N/A
Default retention:	1 year
Table type:	Event

Statistic Name	Description
active_cpus_in_pool	The current number of active physical CPUs in the shared processor pool being used by this LPAR [Non-Sequential = SUM]
active_physical_cpus_in_system	The current number of active physical CPUs in the system containing this LPAR [Non-Sequential = SUM]
capacity_increment	The granule at which changes to the Entitled Capacity can be made. A value in whole multiples indicates a dedicated LPAR. [Non-Sequential = NON]
entitled_capacity	The number of processing units this LPAR is entitled to receive [Non-Sequential = SUM]
maximum_capacity	The maximum number of processing units this LPAR was defined to ever have. Entitled capacity can be increased up to this value. [Non-Sequential = SUM]
maximum_memory	The maximum possible amount of memory [Non-Sequential = SUM]
maximum_physical_cpus_in_system	The maximum possible number of physical CPUs in the system containing this LPAR [Non-Sequential = MAX]
maximum_virtual_cpus	The maximum possible number of CPUs (virtual engines). This statistic is not available from the Linux operating system and is set to <N/A>. [Non-Sequential = SUM]
minimum_capacity	The minimum number of processing units this LPAR was defined to ever have. Entitled capacity can be reduced down to this value. [Non-Sequential = SUM]

minimum_memory	The minimum amount of memory this LPAR was defined to ever have. This statistic is not available from the Linux operating system and is set to <N/A>. [Non-Sequential = SUM]
minimum_ virtual_cpus	The minimum possible number of CPUs this LPAR was defined to ever have [Non-Sequential = SUM]
mode	Indicates whether the LPAR processor capacity is capped, or uncapped and allowed to consume idle cycles from the shared pool. A dedicated LPAR is implicitly capped. [Non-Sequential = ID]
os_name	The system name as assigned by the operating system [Non-Sequential = ID]
online_memory	The amount of memory currently online [Non-Sequential = SUM]
online_virtual_cpus	The number of CPUs (virtual engines) currently online [Non-Sequential = SUM]
partition_group_id	The identifier of the shared pool of physical processors of which the LPAR is a member [Non-Sequential = ID]
partition_name	The logical partition name as assigned by the hardware management console (HMC) [Non-Sequential = ID]
partition_number	The number of the logical partition [Non-Sequential = ID]
physical_cpu_ percentage	The fractional representation relative to whole physical CPUs that the LPAR virtual CPUs equate to. This is a function of Entitled Capacity/Online CPUs. Dedicated LPARs would have a Physical CPU Percentage of 100%. A 4-way virtual with Entitled Capacity of 2 processor units would have a Physical CPU Percentage of 50%. [Non-Sequential = SUM]
shared_pool_id	The LPAR group of which the LPAR is a memberof which the LPAR is a member. This statistic is not available from the Linux operating system and is set to <N/A>. [Non-Sequential = ID]
smt	Indicates whether simultaneous multi-threading (SMT) is enabled. This statistic is not available from the Linux operating system and is set to <N/A>. [Non-Sequential = ID]
system_name	The name of the physical system [Non-Sequential = ID]
timestamp	The timestamp when the data was collected [Non-Sequential = LST]
type	Indicates whether the LPAR is using dedicated or shared CPU resources [Non-Sequential = ID]

unallocated_capacity	The number of processor units currently unallocated in the shared processor pool being used by this LPAR [Non-Sequential = NON]
variable_capacity_ weight	The priority weight assigned to this LPAR, which controls how extra (idle) capacity is allocated to it. A weight of -1 indicates a soft cap is in place. [Non-Sequential = NON]

8.5. Workload Statistics

Workload statistics are maintained in the TeamQuest performance database by the Process-Workload Agent. The statistics are classified by the hierarchy of key names.

Parameter Hierarchy

Class:	Workload
Subclass:	by Workload
IT Resource Name:	/TeamQuest/System/*systemname*/workload/*workloadset*/*workload*
TeamQuest Table Name:	Workload.by Workload
Open Table Name:	WLBYWORKLOAD
Workload Set:	WLS1, WLS2, ...
Workload:	WL1, WL2, ...
Statistic Name:	
%cpu	The percentage of total CPU consumed by the workload. Total CPU time is the value of the sampling interval multiplied by the number of CPUs on the system. Thus, if the sum of %cpu for all workloads is less than 100%, some CPUs must have been idle for some time during the sampling interval. [Sequential = AVG Non-Sequential = AVG] View Report: /report/linux/workload/pct-cpu.rpt
avgmem	The cumulative swap process image size in kilobytes of the running processes in the workload at the end of the sampling interval [Sequential = AVG Non-Sequential = SUM]
etime	The sum of the elapsed times in seconds of all of the processes in the workload. Dividing this number by the number of processes in the workload (ponging + pcomplete) gives the average time a process in the workload existed during the sampling interval. [Sequential = SUM Non-Sequential = SUM]
lioch	The number of logical characters in kilobytes transferred by the workload during the sampling interval. Available for kernel releases 2.6.20 and later. [Sequential = SUM Non-Sequential = SUM]

majflt	The number of major page faults generated by the workload for processes that were active at the end of the sampling interval. A major page fault is a page fault that requires I/O. [Sequential = SUM Non-Sequential = SUM] View Report: /report/linux/workload/maj-flt.rpt
pcomplete	The number of processes completed in the sampling interval. For process data, the same number is called cproc. [Sequential = SUM Non-Sequential = SUM] View Report: /report/linux/workload/num-proc.rpt
pio	The number of physical I/O transfers done by the workload during the sampling interval. The number reported represents only the completed processes during the sampling interval. This value is always zero for Linux systems. [Sequential = SUM Non-Sequential = SUM] View Report: /report/linux/workload/pio.rpt
pongoing	The number of processes running at the end of the sampling interval. In process data, the same number is called oproc. The number of processes in a workload could be derived by adding pongoing and pcomplete. This sum is called nproc in process data. [Sequential = LST Non-Sequential = SUM] View Report: /report/linux/workload/num-proc.rpt
prss	The resident set size in kilobytes of private memory occupied by the running processes in the workload at the end of the sampling interval [Sequential = AVG Non-Sequential = SUM] View Report: /report/linux/workload/rss.rpt
pstart	The number of processes started in the sampling interval. In process data, this number is called sproc. [Sequential = SUM Non-Sequential = SUM] View Report: /report/linux/workload/num-proc.rpt
record_count	The number of collected records represented by the record written to the database. For nonreduced records, this value is 1. For reduced records, this value is the number of records that are combined into a single database record. [Sequential = AVG Non-Sequential = SUM]
reduction_name	The name of reduction rule [Sequential = ID Non-Sequential = ID]
reduction_source	The source of the reduction record. For reduction records with agent sources, this value is A. For reduction records with harvest sources, this value is H. [Sequential = ID Non-Sequential = ID]

rss	The resident set size (real memory) in kilobytes of all processes running at the end of the interval. If a process ends within the sampling interval, the value is not available and is marked as <N/A>. [Sequential = AVG Non-Sequential = SUM] View Report: /report/linux/workload/rss.rpt
rwKB	The number of kilobytes that the workload read from and wrote to disk devices per sample. The kernel may read and write more data than requested by the workload. This value will represent the amount that the kernel read and wrote. Available for kernel releases 2.6.20 and later. [Sequential = SUM Non-Sequential = SUM]
rwKBt	The number of kilobytes the workload read from and wrote to page cache, disks, and terminals per sample. Available for kernel releases 2.6.20 and later. [Sequential = SUM Non-Sequential = SUM]
rwsysc	The number of read and write system calls made by the workload per sample. Available for kernel releases 2.6.20 and later. [Sequential = SUM Non-Sequential = SUM]
srss	The resident set size in kilobytes of shared memory occupied by the running processes in the workload at the end of the sampling interval [Sequential = AVG Non-Sequential = SUM] View Report: /report/linux/workload/rss.rpt
syscpu	The system CPU time in seconds used by the workload. System CPU time is the time spent in kernel mode (for example, the time spent in executing system calls, paging, and so on). [Sequential = SUM Non-Sequential = SUM] View Report: /report/linux/workload/sys-cpu.rpt
threads	The number of threads at the end of the sampling interval [Sequential = LST Non-Sequential = SUM] View Report: /report/linux/workload/threads.rpt
totcpu	The total CPU time in seconds used by the workload. This value is the same as the sum of usrcpu + syscpu. [Sequential = SUM Non-Sequential = SUM] View Report: /report/linux/workload/cpu-util.rpt
usrcpu	The user CPU time in seconds used by the workload. User CPU time is the time the CPU spent running in user mode. [Sequential = SUM Non-Sequential = SUM] View Report: /report/linux/workload/user-cpu.rpt

8.6. Process Statistics

The Process-Workload Agent collects process data from the operating system and processes accounting files. The Process-Workload Agent calculates the usage of every process in a given interval, applies reduction definitions to each process, and stores the reduced process data. It also applies workload definitions to the reduced process data and stores system resource usage by workload.

Reduced Process Records

The Process-Workload Agent collects process data and reduces the data according to the user-defined reduction definitions. A reduction definition may cause multiple processes to be merged into a single process record. Thus, a process record contains data about one or more processes. When you are looking at the resource usage numbers, it is important to know how many processes a process record actually represents. The nproc data item indicates exactly how many processes each process record is representing. When a process record is representing more than one process, the resource usage fields such as totcpu, rss, and pio_t are the sum of the resource usage of the individual processes. When all of the processes do not have the same value for a field, the identifier fields such as command, login, and gid are set to <Multi>. When data for some fields is not available, the fields are set to <N/A>.

Disabling Reduction Definitions

If you want to look at the details of every individual process and do not wish to have merged process records, you must disable reduction processing by making all reduction sets inactive. However, with reduction processing disabled, more records have to be stored and more disk space is needed. For information on disabling reductions, see the *TeamQuest Performance Software Administration Guide*.

Process Data with Process Accounting Turned Off

If process accounting is turned off, the process data is incomplete as data about completed processes is not available. In this case, the process data only shows a portion of the activity in the sampling interval. To find out whether process accounting is turned on or off, look at the cproc field of all of the process records. If the cproc field indicates all zeros, it means that processes were not completed in that sampling interval and that the process accounting is turned off.

When process accounting is not turned on, the process record, <Other> includes the CPU time for processes that completed during the interval.

For more information on process accounting, see the *TeamQuest Performance Software Administration Guide*.

Retrieving Hardware Configuration Information

The Process-Workload Agent retrieves hardware configuration information. The information is stored upon startup and once-a-day in the HINV.Summary, HINV.Devices, and HINV.FileSystem table files of the TeamQuest performance database. The information is also stored when starting the agent and when the agent detects a change in configuration.

Retrieving Process I/O Statistics

When file access to I/O statistics (/proc/<pid>/io) is restricted by the Linux kernel, non-root users cannot collect process I/O statistics for other users. These statistics are stored as <N/A>. However, running the Process-Workload Agent as root collects process I/O statistics for all users.

Table Field Hierarchy

Class:	LINUX
Subclass:	Process
IT Resource Name:	/TeamQuest/System/*systemname*/Process
TeamQuest Table Name:	LINUX.Process
Open Table Name:	LNXPROC
Collection interval:	Based on the primary aggregation set
Default retention:	1 day
Table type:	Performance

Note: *The collection interval is also dependent on the Processes Only setting in the configuration file for the Process-Workload Agent. For more information, see the section on configuring the Process-Workload Agent in the* TeamQuest Performance Software Administration Guide.

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = ID]
avgmem_t	The size of the swappable process image in kilobytes. If a process starts and ends within the same interval, the number is unavailable and is marked as <N/A>. [Sequential = AVG Non-Sequential = SUM]
btime	The start time of the process. For process records representing more than one process, this field shows the earliest of the start times. [Sequential = FST Non-Sequential = ID]
command	The command name of the process. If a process starts and ends within the same interval, only up to 8 characters of the command name can be displayed. Otherwise, up to 32 characters are displayed. Therefore, an “automountd” process may appear as “automoun” if it starts and ends within the same interval. In such cases, you may want to set up your workload, reduction, or filter definitions to catch both the command names as in the following: command = {“automoun”, “automountd”}. [Sequential = ID Non-Sequential = ID]
cproc	The number of processes completed in the interval [Sequential = SUM Non-Sequential = SUM]

cwriteKB	The number of kilobytes that the process caused to not happen by truncating page cache. For example, if the process writes 1 MB to a file and deletes the file, the write function to the disk is canceled because the file has been deleted. Available for kernel releases 2.6.20 and later. [Sequential = SUM Non-Sequential = SUM]
cwriteKB_t	The number of kilobytes that the process caused to not happen by truncating page cache since the process started. For example, if the process writes 1 MB to a file and deletes the file, the write function to the disk is canceled because the file has been deleted. Available for kernel releases 2.6.20 and later. [Sequential = LST Non-Sequential = SUM]
etime	The elapsed time in seconds for the current interval. This number tells how long a process existed in the current interval. [Sequential = SUM Non-Sequential = SUM]
etime_t	The total elapsed time in seconds. This number tells how long a process existed since it started. For a single process, this is the same as the value of the Time field minus the value of the btime field. [Sequential = LST Non-Sequential = SUM]
fullcmd	The full command string, including arguments, for the process. If a process begins and ends in the sampling interval, the field is unavailable and is marked as <N/A>. This is an important consideration when using a workload, reduction, or filter definition. The number of characters that are stored is determined by the Command Length setting of the Process-Workload Agent configuration file in TeamQuest Manager. You can also have either the first or the last *N* characters of the command displayed. The setting is specified by the Command Orientation setting of the Process-Workload Agent configuration file in TeamQuest Manager. The limit of characters from the operating system data source is 4095. For a description of how this may affect collection when the LAST Command Orientation is configured for the Process-Workload Agent, see the *TeamQuest Performance Software Administration Guide*. [Sequential = ID Non-Sequential = ID]
gid	The real group identifier of the owner of the process [Sequential = ID Non-Sequential = ID]
group	The group name of the owner of the process. This field is derived from gid. [Sequential = ID Non-Sequential = ID]
Interval	The expected data sampling interval [Sequential = SUM Non-Sequential = ID]
login	The login name of the owner of the process. This field is derived from uid. [Sequential = ID Non-Sequential = ID]

majflt	The number of major page faults generated in the current interval. A major page fault is a page fault that requires I/O. If a process ends in the sampling interval, the number is unavailable and is marked as <N/A>. [Sequential = SUM Non-Sequential = SUM]
majflt_t	The total number of major page faults generated since the process started. A major page fault is a page fault that requires I/O. [Sequential = LST Non-Sequential = SUM]
nproc	The number of processes that the process record represents. If a process starts and ends with the same interval, the number is unavailable and is marked as <N/A>. In a reduced record, it is the number of processes that were merged together to form a single process record. When time consolidation is not applied to the process data, this number should equal the sum of cproc and oproc. When consolidating over time, the number represents the average number of processes in the process record for the consolidated period. An average is used because processes can move in and out and between reduced records from interval to interval. [Sequential = AVG Non-Sequential = SUM]
oproc	The number of ongoing processes at the end of the interval [Sequential = LST Non-Sequential = SUM]
pctcpu	The percentage of total available CPU time the process used in the current sampling interval [Sequential = AVG Non-Sequential = SUM]
pid	The process identifier number. If a process starts and ends within an interval, this number is unavailable and is marked as <N/A>. [Sequential = ID Non-Sequential = ID]
pio	The number of physical I/O requests for the current interval. The number reported represents only the completed processes during the sampling interval. This value is always zero for Linux systems. [Sequential = SUM Non-Sequential = SUM]
pio_t	The total number of physical I/O requests since the process started. The number reported represents only the completed processes during the sampling interval. [Sequential = LST Non-Sequential = SUM]
ppid	The numerical identifier of the parent of a process. If a process starts and ends within an interval, the number is unavailable and is marked as <N/A>. [Sequential = ID Non-Sequential = ID]
pri	The priority of the process. Higher numbers mean lower priority. If a process ends within an interval, the number is unavailable and is marked as <N/A>. If the process record represents more than one process, the priority is an average of the constituent running processes' priority values. [Sequential = AVG Non-Sequential = AVG]

prss	The resident set size in kilobytes of private memory for the process at the end of the sampling interval. If a process ends within the interval, the value is unavailable and is marked as <N/A>. [Sequential = AVG Non-Sequential = SUM]
readKB	The number of kilobytes that the process read from disk devices per sample. The kernel may read more data than requested by the process. This value will represent the amount that the kernel read. Available for kernel releases 2.6.20 and later. [Sequential = SUM Non-Sequential = SUM]
readKB_t	The number of kilobytes that the process read from disk devices since the process started. The kernel may read more data than requested by the process. This value will represent the amount that the kernel read. Available for kernel releases 2.6.20 and later. [Sequential = LST Non-Sequential = SUM]
readKBt	The number of kilobytes the process read from page cache, disks, and terminals per sample. Available for kernel releases 2.6.20 and later. [Sequential = SUM Non-Sequential = SUM]
readKBt_t	The number of kilobytes the process read from page cache, disks, and terminals since the process started. Available for kernel releases 2.6.20 and later. [Sequential = LST Non-Sequential = SUM]
redname	The reduction name of the process record. If a process did not match any of the reduction definitions, then it would not be reduced and the field will be blankthe running. [Sequential = ID Non-Sequential = ID]
rss	The resident set size (real memory size) of the running process at the end of the interval. If a process ends within the interval, the value is unavailable and is marked as <N/A>. [Sequential = AVG Non-Sequential = SUM]
rsysc	The number of read system calls made by the process per sample. Available for kernel releases 2.6.20 and later. [Sequential = SUM Non-Sequential = SUM]
rsysc_t	The number of read system calls made by the process since the process started. Available for kernel releases 2.6.20 and later. [Sequential = LST Non-Sequential = SUM]
rwKB	The number of kilobytes that the process read from and wrote to disk devices per sample. The kernel may read and write more data than requested by the process. This value will represent the amount that the kernel read and wrote. Available for kernel releases 2.6.20 and later. [Sequential = SUM Non-Sequential = SUM]
rwKB_t	The number of kilobytes that the process read from and wrote to disk devices per sample since the process started. The kernel may read and write more data than requested by the process. This value will represent the amount that the kernel read and wrote. Available for kernel releases 2.6.20 and later. [Sequential = LST Non-Sequential = SUM]

rwKBt	The number of kilobytes the process read from and wrote to page cache, disks, and terminals. Available for kernel releases 2.6.20 and later. [Sequential = SUM Non-Sequential = SUM]
rwKBt_t	The number of kilobytes that the process read from and wrote to the page cache, disks, and terminals since the process started. Available for kernel releases 2.6.20 and later. [Sequential = LST Non-Sequential = SUM]
rwsysc	The number of read and write system calls made by the process per sample. Available for kernel releases 2.6.20 and later. [Sequential = SUM Non-Sequential = SUM]
rwsysc_t	The number of read and write system calls made by the process since the process started. Available for kernel releases 2.6.20 and later. [Sequential = LST Non-Sequential = SUM]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
sproc	The number of processes started in the interval [Sequential = SUM Non-Sequential = SUM]
srss	The resident set size in kilobytes of shared memory occupied by the running processes at the end of the sampling interval. If a process ends within the interval, the value is unavailable and is marked as <N/A>. [Sequential = AVG Non-Sequential = SUM]
syscpu	The system CPU time in seconds for the current interval. System CPU time is the time the CPU spent running in kernel mode (for example, the time spent in executing system calls, paging, and so on). If an application is taking a lot of syscpu time, you may want to optimize the use of system calls (for example, use a larger block size for I/O). [Sequential = SUM Non-Sequential = SUM]
syscpu_t	The total system CPU time in seconds [Sequential = LST Non-Sequential = SUM]
System	The name of the system where the data is collected. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
threads	The number of threads associated with the process at the end of the interval. This value represents the number of light-weight processes (LWP) or kernel-supported user threads. A thread is a dynamic object that represents a control point in a process and executes a sequence of instructions. [Sequential = LST Non-Sequential = SUM]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]

totcpu	The total CPU time in seconds used in the current interval. This number is the same as the sum of usrcpu and syscpu. [Sequential = SUM Non-Sequential = SUM]
totcpu_t	The total CPU time (user + system) in seconds used by the process since it started [Sequential = LST Non-Sequential = SUM]
tty	The controlling terminal identifier in dev_t format. For the processes without a controlling terminal, this field will contain a -1. [Sequential = ID Non-Sequential = ID]
ttyname	The controlling terminal for the process. It is a device name without the /dev/ prefix. This is derived from tty. For the processes without a controlling terminal, this field will contain a question mark (?). [Sequential = ID Non-Sequential = ID]
uid	The real user id of the process owner [Sequential = ID Non-Sequential = ID]
usrcpu	The user CPU time in seconds for the current interval. User CPU time is the time the CPU spent running in user mode. If an application is taking a lot of usrcpu time, you should try to optimize the code, if possible. [Sequential = SUM Non-Sequential = SUM]
usrcpu_t	The total user CPU time in seconds since the start of the process [Sequential = LST Non-Sequential = SUM]
Workload	The workload set and the workload associated with the process. When the Process-Workload Agent stores the process record, this field is blank. When process records are reported, the workload can be evaluated and is shown in the report. This field is available for reporting only when using TeamQuest Analyzer and TeamQuest tView. Workload evaluation takes place when data is retrieved from the database, based on workload sets defined in the database where the data is stored. Workload sets reported in the Workload field do not have to be active. For more information on workload evaluation, see the *TeamQuest Analyzer User Guide* or the *TeamQuest Performance Software Command Line Interfaces Reference Manual*. [Sequential = ID Non-Sequential = ID]
workload:*wlsname*	There is one field for each *wlsname* (Workload Set Name). The value for this field shows the name of the workload to which the process belongs. If a process belongs to none of the workloads, it will display the workload name “OTHER.” This field is available for reporting only when useing TeamQuest View or TeamQuest cView. [Sequential = ID Non-Sequential = ID]

writeKB	The number of kilobytes that the process wrote to disk devices per sample. The kernel may write more data than requested by the process. This value will represent the amount that the kernel wrote. Available for kernel releases 2.6.20 and later. [Sequential = SUM Non-Sequential = SUM]
writeKB_t	The number of kilobytes that the process wrote to disk devices since the process started. The kernel may write more data than requested by the process. This value will represent the amount that the kernel wrote. Available for kernel releases 2.6.20 and later. [Sequential = LST Non-Sequential = SUM]
writeKBt	The number of kilobytes written by the process to page cache, disks, and terminals per sample. Available for kernel releases 2.6.20 and later. [Sequential = SUM Non-Sequential = SUM]
writeKBt_t	The number of kilobytes the process wrote to page cache, disks, and terminals since the process started. Available for kernel releases 2.6.20 and later. [Sequential = LST Non-Sequential = SUM]
wsysc	The number of write system calls made by the process per sample. Available for kernel releases 2.6.20 and later. [Sequential = SUM Non-Sequential = SUM]
wsysc_t	The number of write system calls made by the process since the process started. Available for kernel releases 2.6.20 and later. [Sequential = LST Non-Sequential = SUM]

8.7. Hardware Inventory Statistics

The Process-Workload Agent retrieves hardware configuration information. The information is stored upon startup and once-a-day in the HINV.Summary, HINV.CPUModel, HINV.CPU Thread Speeds, HINV.Devices, and HINV.FileSystem table files of the TeamQuest performance database. The information is also stored if the agent detects a change in configuration.

Note: *The storage of hardware inventory records depends on the Hardware Inventory setting in the configuration file of the Process-Workload Agent. For more information, see the section on configuring the Process-Workload Agent in the* TeamQuest Performance Software Administration Guide.

Table Field Hierarchy

Class:	HINV
Subclass:	Summary
IT Resource Name:	/TeamQuest/System/*systemname*
TeamQuest Table Name:	HINV.Summary
Open Table Name:	HINVSUM
Collection interval:	N/A
Default retention:	1 year
Table type:	State

Statistic Name	Description
core_multi_thread	The status or ability of the processor to support multiple independent threads. The field will contain <N/A> if the information is not available. [Non-Sequential = ID]
cores_per_chip	The number of cores or processors on an individual chip. The field will contain <N/A> if the information is not available. [Non-Sequential = ID]
cpu_chips	The number of CPU chips or sockets. The field will contain <N/A> if the information is not available. [Non-Sequential = ID]
cpu_count	The number of configured processors. The field will contain <N/A> if the information is not available. [Non-Sequential = ID]
cpu_speed	The speed of the processor in MHz or GHz [Non-Sequential = ID]
cpu_type	The basic instruction set architecture of the current system [Non-Sequential = ID]
logical_cpu_count	The number of logical processors [Non-Sequential = ID]

mem_size	The size of configured random access memory in kilobytes where 1 kilobyte = 1,024 bytes [Non-Sequential = ID]
memory	The size of configured random access memory in megabytes where 1 megabyte = 1,048,576 bytes [Non-Sequential = ID]
memory_size	The size of configured random access memory in megabytes or gigabytes [Non-Sequential = ID]
model	Name of the hardware implementation or platform [Non-Sequential = ID]
os_release	The name and level of this implementation of the operating system [Non-Sequential = ID]
pagesize	The size of a page of memory [Non-Sequential = ID]
partition_type	The partition type of the system. The value indicates the system hypervisor type, guest type, logical partition type, zone type, or logical domain type. If the system does not have a partition type, this field will be blank. [Non-Sequential = ID]
serial	The hardware-specific serial number of the physical machine [Non-Sequential = ID]
System	The name by which the system is known to a communication network or node name. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Non-Sequential = ID]
system_identifier	Information used to identify the system [Non-Sequential = ID]
system_type	The name of the operating system [Non-Sequential = ID]
Time	The timestamp of the data sample [Non-Sequential = ID]
timezone	The time zone where the data was collected [Non-Sequential = ID]
TQLevel	The level of TeamQuest Manager [Non-Sequential = ID]

The HINV.CPUModel table stores best-match, relative performance data about the system configuration. This table is created by the Hardware Inventory Agent (**tqhinv**) to map physical hardware to a CPU model that describes performance in relative terms. This table is not created for any virtualized system. It is populated for physical systems only. It is not populated for VMware guests, Hyper-V guests, Solaris logical domains (LDOMs), Solaris guest LDOMs, KVM guests, and Linux on POWER systems.

Table Field Hierarchy

Class:	HINV
Subclass:	CPUModel
IT Resource Name:	/TeamQuest/System/*systemname*
TeamQuest Table Name:	HINV.CPUModel
Open Table Name:	HINVCPUM
Collection interval:	N/A
Default retention:	1 year
Table type:	State

Statistic Name	Description
cpu_chips	The number of CPU chips or sockets [Non-Sequential = ID]
cpu_confidence	The percentage of confidence in the correctness of the CPU match based on model, frequency, and configuration (chips, cores, threads) [Non-Sequential = SUM]
cpu_cores	The number of CPU cores or processors on an individual CPU chip [Non-Sequential = ID]
cpu_name	The name of the selected CPU [Non-Sequential = ID]
cpu_relative_performance	The relative performance of the CPU on a common scale [Non-Sequential = ID]
cpu_speed	The speed of the processor in megahertz (MHz) or gigahertz (GHz) [Non-Sequential = ID]
cpu_threads	The number of CPU threads on an individual CPU core or processor [Non-Sequential = ID]
System	The name by which the system is known to a communication network or node name. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Non-Sequential = ID]
system_type	The name of the operating system [Non-Sequential = ID]
Time	The timestamp of the data sample [Non-Sequential = LST]
user_override	The user override status of the default TeamQuest generated CPU match. This field is not currently used and should appear as 0. [Non-Sequential = ID]

Table Field Hierarchy

Class:	HINV
Subclass:	CPU Thread Speeds
IT Resource Name:	/TeamQuest/System/*systemname*
TeamQuest Table Name:	HINV.CPU Thread Speeds
Open Table Name:	HINVCPUTHREADSPEEDS
Collection interval:	N/A
Default retention:	1 year
Table type:	State

Statistic Name	Description
speed_up_factor	The performance improvement when there are multiple active threads per core, compared to when there is only one active thread per core [Sequential = AVG Non-Sequential = ID]
System	The name by which the system is known to a communication network or node name. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
thread_number	The number of active threads [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = ID Non-Sequential = ID]

Table Field Hierarchy

Class:	HINV
Subclass:	Devices
IT Resource Name:	/TeamQuest/System/*systemname*
TeamQuest Table Name:	HINV.Devices
Open Table Name:	HINVDEVS
Collection interval:	N/A
Default retention:	1 year
Table type:	State

Statistic Name	Description
class	The device classification: controller, disk, or tape [Non-Sequential = ID]
controller	The device path indicator which defines a connection to another device [Non-Sequential = ID]
lun_id	The globally unique Logical Unit Number (LUN) identifier for Storage Area Network (SAN) based disk devices. This field is blank for non-SAN based disk devices, CD-ROM drives, tape drives, and so on. [Non-Sequential = ID]
name	The unique identifier for the device [Non-Sequential = ID]
name2	The alternate device name. This field may be blank. [Non-Sequential = ID].
product	The product identifier. This field may be blank. [Non-Sequential = ID]
revision	The revision level for this product. This field may be blank. [Non-Sequential = ID]
rpm	The speed at which the media spins. If an actual value cannot be obtained for the device, a default value of 7,200 is used. [Non-Sequential = ID]
sequence	The sequence number of the device [Non-Sequential = ID]
swap	A true or false statement which indicates whether or not a swap file exists on the device [Non-Sequential = ID]
System	The name by which the system is known to a communication network or node. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Non-Sequential = ID]
Time	The timestamp when the data was collected [Non-Sequential = ID]
vendor	The name of the device vendor. This field may be blank. [Non-Sequential = ID]

Table Field Hierarchy

Class:	HINV
Subclass:	FileSystem
IT Resource Name:	/TeamQuest/System/*systemname*
TeamQuest Table Name:	HINV.FileSystem
Open Table Name:	HINVFILESYS
Collection interval:	N/A
Default retention:	1 year
Table type:	State

Statistic Name	Description
BlkSize	The size of a block on the file system [Non-Sequential = ID]
Device	The path for the device on which the file system is mounted [Non-Sequential = ID]
Name	The unique identifier for the file system [Non-Sequential = ID]
Source	The source physical disk or logical volume of the file system. This field is always blank for this platform. [Non-Sequential = ID]
System	The name by which the system is known to a communication network or node name. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Non-Sequential = ID]
Time	The timestamp of the data sample [Non-Sequential = LST]
TotBlks	The total number of blocks on the file system [Non-Sequential = ID]
TotFiles	The maximum total number of files, as represented by inodes, possible on the file system. Some inodes may be used for entities other than visible files. [Non-Sequential = ID]
TotSize	The total amount of space on the file system in megabytes [Non-Sequential = ID]
Type	The type of the file system [Non-Sequential = ID]

8.8. System Log Statistics

The System Log Agent is used to collect system log messages generated by the system log daemon (syslogd). The System Log Agent stores these messages in the TeamQuest performance database for analysis and alarm reporting. The log messages are separated into four fields; the time that the message was posted, the host system from where the message was initiated, the program or user that posted the message, and the text of the message.

Table Field Hierarchy

Class:	System
Subclass:	System Log
IT Resource Name:	/TeamQuest/System/*systemname*/System Log
TeamQuest Table Name:	System.System Log
Open Table Name:	SYSSYSTEMLOG
Collection interval:	N/A
Default retention:	4 days
Table type:	Event

Statistic Name	Description
Event_Time	The time that the message was logged to the system log [Non-Sequential = ID]
Loghost	The name of the system that logged the message [Non-Sequential = ID]
Message	The message text [Non-Sequential = ID]
Reporter	The name of the user or process that logged the message [Non-Sequential = ID]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Non-Sequential = ID]
Sequence	The sequence number of the message in the sampling interval [Non-Sequential = ID]
System	The name of the system where the log message originated. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Non-Sequential = ID]
Time	The timestamp of the data sample [Non-Sequential = ID]

8.9. General Log Statistics

The General Log Agent is used to collect log messages generated by application programs. The General Log Agent stores these messages in the TeamQuest performance database for analysis. Examples include backup, security, database, and Web server applications.

Table Field Hierarchy

Class:	System
Subclass:	General Log
IT Resource Name:	/TeamQuest/System/*systemname*/General Log
TeamQuest Table Name:	System.General Log
Open Table Name:	SYSGENERALLOG
Collection interval:	N/A
Default retention:	4 days
Table type:	Event

Statistic Name	Description
Message	The message text [Non-Sequential = ID]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Non-Sequential = ID]
Sequence	The sequence number of the message in the sampling interval [Non-Sequential = ID]
System	The name of the system. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Non-Sequential = ID]
Time	The timestamp of the data sample [Non-Sequential = ID]
Type	The message type [Non-Sequential = ID]

8.10. TeamQuest Log Statistics

The following statistics are stored in the performance database tables by the TeamQuest Log Agent. The collection interval and retention periods can be modified. For more information on modifying the collection interval and retention periods, see the *TeamQuest Performance Software Administration Guide*.

Table Field Hierarchy

Class:	Service
Subclass:	TeamQuest Log
IT Resource Name:	/TeamQuest/System/*systemname*/TeamQuest Log
TeamQuest Table Name:	Service.TeamQuest Log
Open Table Name:	SVCTQLOG
Collection interval:	N/A
Default retention:	1 day
Table type:	Event

Statistic Name	Description
Filename	The name of the TeamQuest log file that was the source of the message text [Non-Sequential = ID]
Message	The message text [Non-Sequential = ID]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Non-Sequential = ID]
Sequence	The sequence number of the message in the sampling interval [Non-Sequential = ID]
System	The name of the system. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Non-Sequential = ID]
Time	The timestamp of the data sample [Non-Sequential = ID]
Type	The log message type. This is always set to **tqlog**. [Non-Sequential = ID]

8.11. Derived Statistics

Some products within TeamQuest Performance Software use derived statistics to display common statistics across different platforms. The derived statistics are inserted into the performance database when databases are created. In this section, a derived statistic is marked with an asterisk (*).

You can find information on the following derived statistics:

- Workload Performance Derived Statistics
- TeamQuest On the Web Derived Statistics
- TeamQuest Alert Derived Statistics

8.11.1. Workload Performance Derived Statistics

TeamQuest Manager maintains the following derived statistics that use data from the System Activity Agent and the Process-Workload Agent. The workload performance reports reference these statistics. For information on workload performance reports, see the *TeamQuest View Reports Reference Manual*.

Parameter Hierarchy

Class:	Derived
Subclass:	Workload Performance.by Workload
Workload Set:	WLS1, WLS2, ...
Workload:	ALL
Statistic Name:	
%cpu*	The total percentage of CPU utilization. Collected by the Process-Workload Agent.
Kbytes resident memory/process*	The average amount of resident memory used per process. Collected by the Process-Workload Agent.
Kbytes virtual memory/process*	The average amount of virtual memory used per process. Collected by the Process-Workload Agent.
PIOs/sec*	The number of physical I/Os per second. Collected by the Process-Workload Agent.
Population (etime/interval)*	The average number of concurrent processes. Collected by the Process-Workload Agent.
Response (etime/process)*	The elapsed time per process. Collected by the Process-Workload Agent.
Throughput (processes/sec)*	The number of processes completed per second. Collected by the Process-Workload Agent.
Total Kbytes resident memory*	The average amount of resident memory used by the workload. Collected by the Process-Workload Agent.
Total Kbytes virtual memory*	The average amount of virtual memory used by the workload. Collected by the Process-Workload Agent.

Class:	Derived
Subclass:	Workload Performance.Summary
Workload Set:	WLS1, WLS2, ...
Statistic Name:	
%cpu*	The total percentage of CPU utilization. Collected by the Process-Workload Agent.
Kbytes resident memory/process*	The average amount of resident memory used per process. Collected by the Process-Workload Agent.
Kbytes virtual memory/process*	The average amount of virtual memory used per process. Collected by the Process-Workload Agent.
PIOs/sec*	The number of physical I/Os per second. Collected by the Process-Workload Agent.
Population (etime/interval)*	The average number of concurrent processes. Collected by the Process-Workload Agent.
Response (etime/process)*	The elapsed time per process. Collected by the Process-Workload Agent.
Throughput (processes/sec)*	The number of processes completed per second. Collected by the Process-Workload Agent.
Total Kbytes resident memory*	The average amount of resident memory used by the workload. Collected by the Process-Workload Agent.
Total Kbytes virtual memory*	The average amount of virtual memory used by the workload. Collected by the Process-Workload Agent.

8.11.2. TeamQuest On the Web Derived Statistics

The derived statistics used by TeamQuest On the Web include the following:

Parameter Hierarchy

Class:	Derived
Subclass:	TQWeb.Summary
Statistic Name:	
disk_xfers_per_sec*	The total number of read and write transfers per second for all devices
free_disk_space*	The amount of space available (not in use) on all file systems in megabytes. This measurement is taken at the end of the sampling interval and includes the space held back from normal users.
free_real_mem*	The amount of free memory available in megabytes. This measurement is taken at the end of the sampling interval.
free_swap_space*	The number of megabytes free for process swapping
pct_cpu_busy*	The percentage of total CPU time the CPU was busy (not idle). This value includes the time running system code and the time running normal priority user processes.
pct_sys_cpu*	The percentage of total CPU time spent in system mode
pct_usr_cpu*	The percentage of total CPU time spent running in user mode
pkt_errors_per_sec*	The total number (in + out) of network errors per second for all network interfaces
pkts_in_per_sec*	The total number of network input packets per second for all network interfaces
pkts_out_per_sec*	The total number of network output packets per second for all network interfaces
pkts_per_sec*	The total number (in + out) of network packets per second for all network interfaces
total_disk_space*	The total (used + available) amount of space on all file systems in megabytes. This measurement is taken at the end of the sampling interval and includes the space held back from normal users.
total_processes*	The number of entries currently being used in the process table. This measurement is taken at the end of the sampling interval.
total_real_mem*	The total amount of real (physical) memory in megabytes. This measurement is taken at the end of the sampling interval.
total_swap_space*	The total number of megabytes available for swapping

8.11.3. TeamQuest Alert Derived Statistics

The derived statistics used by TeamQuest Alert include the following:

Parameter Hierarchy

Class:	Derived
Subclass:	TQAlert.Summary
Statistic Name:	
net_errors*	The number of network errors for all network interfaces
pct_swap_free*	Percentage of unused swap space in megabytes at the end of the interval
total_processes*	The total number of processes active on the system

Section 9
Microsoft Windows Systems

Statistics for Microsoft Windows systems are collected by the TeamQuest collection agents.

This section contains a listing of the statistics collected for the system:

- System Activity Statistics (see 9.1)
- Workload Statistics (see 9.2)
- Process Statistics (see 9.3)
- Hardware Inventory Statistics (see 9.4)
- General Log Statistics (see 9.5)
- TeamQuest Log Statistics (see 9.6)
- Windows Event Log Statistics (see 9.7)
- Windows Services Statistics (see 9.8)
- Derived Statistics (see 9.9)
- Optional System Activity Statistics (see 9.10)

Note: *At the end of each statistic description, you will see a notation in brackets indicating the method that is used for data consolidation (for example,* [Sequential = SUM Non-Sequential = SUM]). *Sequential means that the field is consolidated over time. Non-Sequential means that the field is consolidated within a specified time interval.*

The following notations are used:

AVG = Average
DIV = Weight
FST = First
ID = Identifier
LST = Last
MAX = Maximum
MIN = Minimum
NON = None or no method was used
SUM = Summation

If you are using TeamQuest View to view aggregation set data, the sequential method is used for data consolidation.

Because derived statistics are not stored in the performance database, the data consolidation method is not shown in the description of a derived statistic.

9.1. System Activity Statistics

The system activity statistics are collected by the System Activity Agent and stored into the aggregation sets of the TeamQuest performance database. The statistics are classified by the hierarchy of key names. By default, to conserve CPU time and disk space, the System Activity Agent collects only a subset of all of the available metrics on your system.

The **tqbsp** version of the System Activity Agent collects the performance data using the Registry Win32 application program interface (API). The **tqw2kbsp** version of the System Activity Agent uses the Windows Management Instrumentation (WMI) API to collect the performance data. By default, the Registry API version of the System Activity Agent (**tqbsp**) is used for data collection. You can change this setting by using the Edit System Activity Agent page of the TeamQuest Manager administration interface.

While the **tqw2kbsp** and **tqbsp** parameter names employ a 5-key hierarchy (System, Class, Subclass, Statistic Name, and Resource), the Registry Win32 and WMI metrics consist of only a 4-key hierarchy (System, Object, Counter, and Instance). The **tqw2kbsp** and **tqbsp** agents create TeamQuest Manager parameter key names from Win32 and WMI API performance metric names as shown here:

TeamQuest Manager	Registry Win32 and WMI API
System	System Name
Class	Object Name
Subclass	(empty)
Statistic Name	Counter Name
Resource	Instance Name

In this section, the terms *metric* and *parameter* are used interchangeably.

Win32 Performance Data API Limitations

A number of objects are associated with the Transmission Control Protocol/Internet Protocol (TCP/IP). To enable the statistics for the TCP/IP objects, you must install the TCP/IP protocol along with the Simple Network Management Protocol (SNMP) by using the Network option in the Control Panel.

The metrics documented here represent the default sets that are collected by the System Activity Agent. Many additional metrics will be available on your system and may be collected by customizing the data collection of these agents. For more information on customizing data collection to include additional metrics, see the *TeamQuest Performance Software Administration Guide*.

Parameter Hierarchy

Class:	Cache
Subclass:	N/A
IT Resource Name:	/TeamQuest/System/*systemname*/Memory
TeamQuest Table Name:	Cache
Open Table Name:	CACHE
Statistic Name:	
Copy Read Hits %	The percentage of cache copy read requests that are satisfied from the cache (for example, the requests did not require a disk read to provide access to the page in the cache). A copy read is a file read operation that is satisfied by a memory copy from a cache page to the application's buffer. This method is used by the local area network (LAN) redirector for retrieving cache information, by the LAN server for small transfers, and by the disk file systems. [Sequential = AVG Non-Sequential = AVG]

Table Field Hierarchy

Class:	CPU
Subclass:	RelativePerformance
IT Resource Name:	/TeamQuest/System/*systemname*/CPU
TeamQuest Table Name:	CPU.RelativePerformance
Open Table Name:	CPURELPERF
Collection interval:	1 minute
Default retentions:	1 month
Table type:	Performance
Derived tables using fields from this table:	N/A

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = ID]
cpu_relative_performance	The relative performance of the CPU on a common scale [Sequential = AVG Non-Sequential = SUM]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = ID]
rel_unused	The amount of CPU resources not used based on a common, relative scale [Sequential = AVG Non-Sequential = SUM]
rel_used	The amount of CPU resources used based on a common, relative scale [Sequential = AVG Non-Sequential = SUM]
System	The name of the system where the data is collected. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]

Parameter Hierarchy

Class:	CPU
Subclass:	Summary
IT Resource Name:	/TeamQuest/System/*systemname*/CPU
TeamQuest Table Name:	CPU.Summary
Open Table Name:	CPUSUM
Statistic Name:	
%busy	The percentage of the elapsed time that processors are busy executing non-idle threads. This statistic can be viewed as the fraction of time spent doing useful work. This value matches the value of Hyper-V Hypervisor Logical Processor:::% Total Run Time:_Total when running on Microsoft Hyper-V systems. When running on nonMicrosoft Hyper-V systems, this value matches Processor:::% Processor Time:_Total. [Sequential = AVG Non-Sequential = AVG]

Class:	LogicalDisk
Subclass:	N/A
IT Resource Name:	/TeamQuest/System/*systemname*/Disk
TeamQuest Table Name:	LogicalDisk
Open Table Name:	LOGDISK
Statistic Name:	
% Free Space	The ratio of the free space available on the logical disk unit to the total usable space provided by the selected logical disk drive [Sequential = AVG Non-Sequential = AVG] View Report: \report\windows\disk\pctfree.rpt
Free Megabytes	The unallocated space on the disk drive in megabytes. 1 megabyte = 1,048,576 bytes. [Sequential = LST Non-Sequential = SUM] View Report: \report\windows\disk\dskspace.rpt
record_count	The number of collected records represented by the record written to the database. For nonreduced records, this value is 1. For reduced records, this value is the number of records that are combined into a single database record. [Sequential = AVG Non-Sequential = SUM]
reduction_name	The name of reduction rule [Sequential = ID Non-Sequential = ID]
reduction_source	The source of the reduction record. For reduction records with agent sources, this value is A. For reduction records with harvest sources, this value is H. [Sequential = ID Non-Sequential = ID]

Class:	Memory
Subclass:	N/A
IT Resource Name:	/TeamQuest/System/*systemname*/Memory
TeamQuest Table Name:	Memory
Open Table Name:	MEM
Statistic Name:	
Available Bytes	The amount of physical memory in bytes available to processes running on the computer. It is calculated by adding the amount of space on the Free, Zeroed, and Standby memory lists. Free memory is ready for use; Zeroed memory consists of pages of memory filled with zeros to prevent subsequent processes from seeing data used by a previous process; Standby memory is memory that has been removed from a working set of a process (its physical memory) on route to disk, but is still available to be recalled. This counter displays the last observed value only; it is not an average. [Sequential = LST Non-Sequential = SUM] View Report: \report\windows\memory\freemem.rpt
Cache Bytes	The number of bytes currently in use by the system cache. The system cache is used to buffer data retrieved from disk or Local Area Network (LAN). The system cache uses memory not in use by active processes in the computer. [Sequential = LST Non-Sequential = SUM] View Report: \report\windows\memory\cache.rpt
Cache Faults/sec	The number of cache faults per second. Cache faults occur whenever the cache manager does not find a file's page in the immediate cache and must ask the memory manager to locate the page elsewhere in memory or on the disk so that it can be loaded into the immediate cache. [Sequential = AVG Non-Sequential = SUM] View Report: \report\windows\memory\faults.rpt
Commit Limit	The size in bytes of virtual memory that can be committed without having to extend the paging files. If the paging files can be extended, this is a soft limit. [Sequential = LST Non-Sequential = SUM]
Committed Bytes	The size of virtual memory in bytes that has been committed as opposed to simply reserved. Committed memory must have backing storage (for example, disk) available or must be assured never to need disk storage because main memory is large enough to hold it. This is an instantaneous count, not an average over the time interval. [Sequential = LST Non-Sequential = SUM]

Page Faults/sec	The number of page faults per second in the processor. A page fault occurs when a process refers to a virtual memory page that is not in its working set in main memory. A page fault does not cause the page to be fetched from the disk if that page is on the standby list and hence already in main memory, or if it is in use by another process that shares the page. [Sequential = AVG Non-Sequential = SUM] View Report: \report\windows\memory\faults.rpt
Page Reads/sec	The number of times per second the disk was read to retrieve pages of virtual memory necessary to resolve page faults. Multiple pages can be read during a disk read operation. [Sequential = AVG Non-Sequential = SUM] View Report: \report\windows\memory\pageops.rpt
Page Writes/sec	The number of times per second pages have been written to the disk because they were changed since last retrieved. Each write operation may transfer a number of pages. [Sequential = AVG Non-Sequential = SUM] View Report: \report\windows\memory\pageops.rpt
Pages Input/sec	The number of pages read from the disk per second to resolve memory references to pages that were not in memory at the time of the reference. This counter includes paging traffic on behalf of the system cache to access file data for applications. This is an important counter to observe if you are concerned about excessive memory pressure (for example, thrashing) and the excessive paging that may result. [Sequential = AVG Non-Sequential = SUM] View Report: \report\windows\memory\pagevol.rpt
Pages Output/sec	The number of pages that are written to disk per second because the pages have been modified in main memory [Sequential = AVG Non-Sequential = SUM] View Report: \report\windows\memory\pagevol.rpt
Pages/sec	The number of pages read from the disk or written to the disk per second to resolve memory references to pages that were not in memory at the time of the reference. This is the sum of Pages Input/sec and Pages Output/sec. This counter includes paging traffic on behalf of the system cache to access file data for applications. This is the primary counter to observe if you are concerned about excessive memory pressure (for example, thrashing) and the excessive paging that may result. [Sequential = AVG Non-Sequential = SUM]

Pool Nonpaged Bytes	The number of bytes in the nonpaged pool, a system memory area where space is acquired by operating system components as they accomplish their appointed tasks. Nonpaged pool pages cannot be paged out to the paging file, but instead remain in main memory as long as they are allocated. This metric is not collected by default. [Sequential = LST Non-Sequential = SUM]
Total Bytes	The total number of bytes of physical memory [Sequential = LST Non-Sequential = SUM]

Class:	Network Interface
Subclass:	N/A
IT Resource Name:	/TeamQuest/System/*systemname*/Network
TeamQuest Table Name:	Network Interface
Open Table Name:	NETINTERFACE
Statistic Name:	
Output Queue Length	The length of the output packet queue in packets. If this is longer than 2, delays are being experienced and the bottleneck should be found and eliminated if possible. Since the requests are queued by Network Device Interface Specification (NDIS) in this implementation. The value is always 0. [Sequential = LST Non-Sequential = MAX]
Packets Outbound Errors	The number of outbound packets that could not be transmitted because of errors [Sequential = LST Non-Sequential = SUM] View Report: \report\windows\network\errors.rpt
Packets Received Errors	The number of inbound packets that contained errors preventing the packets from being deliverable to a higher-layer protocol [Sequential = LST Non-Sequential = SUM] View Report: \report\windows\network\errors.rpt
Packets Received Non-Unicast/sec	The number of non-unicast packets (for example, subnet broadcast or subnet multicast) delivered per second to a higher-layer protocol [Sequential = AVG Non-Sequential = SUM] View Report: \report\windows\network\non-uni.rpt
Packets Received/sec	The number of packets received per second by the network interface [Sequential = AVG Non-Sequential = SUM] View Report: \report\windows\network\packets.rpt

Packets Sent Non-Unicast/sec	The number of packets requested per second to be transmitted to non-unicast addresses (for example, subnet broadcast or subnet multicast) by higher-level protocols. The number includes the packets that were discarded or not sent. [Sequential = AVG Non-Sequential = SUM] View Report: \report\windows\network\non-uni.rpt
Packets Sent/sec	The number of packets sent per second on the network interface [Sequential = AVG Non-Sequential = SUM] View Report: \report\windows\network\packets.rpt

Class:	Objects
Subclass:	N/A
IT Resource Name:	/TeamQuest/System/*systemname*/General Objects
TeamQuest Table Name:	Objects
Open Table Name:	OBJS
Statistic Name:	
Processes	The number of processes in the computer at the time of data collection. This is an instantaneous count, not an average over the time interval. Each process represents the running of a program. [Sequential = LST Non-Sequential = SUM] View Report: \report\windows\objects\active.rpt
Semaphores	The number of semaphores in the computer at the time of data collection. This is an instantaneous count, not an average over the time interval. Threads use semaphores to obtain exclusive access to data structures that are shared with other threads. [Sequential = LST Non-Sequential = SUM] View Report: \report\windows\objects\active.rpt
Threads	The number of threads in the computer at the time of data collection. This is an instantaneous count, not an average over the time interval. A thread is the basic executable entity that can execute instructions in a processor. [Sequential = LST Non-Sequential = SUM] View Report: \report\windows\objects\active.rpt

Class:	Paging File
Subclass:	N/A
IT Resource Name:	/TeamQuest/System/*systemname*/General Objects
TeamQuest Table Name:	Paging File
Open Table Name:	PAGINGFILE
Statistic Name:	
% Usage	The percentage of the page file instance in use. See also NT:Process:pagefileMB. [Sequential = AVG Non-Sequential = AVG] View Report: \report\windows\memory\pagefile.rpt

Class:	PhysicalDisk
Subclass:	N/A
IT Resource Name:	/TeamQuest/System/*systemname*/Disk
TeamQuest Table Name:	PhysicalDisk
Open Table Name:	PHYSDISK
Statistic Name:	
% Disk Time	The time duration of the I/O requests. This statistic is derived as: Avg. Disk sec/Transfer * Disk Transfers/sec This statistic does not represent disk utilization. [Sequential = AVG Non-Sequential = AVG] View Report: \report\SQLServer\PctPhysicalDiskTime.rpt
% Idle Time	The percentage of time during the sampling interval that the disk was idle [Sequential = AVG Non-Sequential = AVG]
Avg. Disk Bytes/Read	The average number of bytes transferred from the disk during read operations [Sequential = AVG Non-Sequential = AVG]
Avg. Disk Bytes/Transfer	The average number of bytes transferred to or from the disk during write or read operations. This metric is not collected by default. [Sequential = AVG Non-Sequential = AVG]
Avg. Disk Bytes/Write	The average number of bytes transferred to the disk during write operations [Sequential = AVG Non-Sequential = AVG]
Avg. Disk sec/Read	The average time in seconds of a read of data from the disk [Sequential = AVG Non-Sequential = AVG] View Report: \report\windows\disk\response.rpt
Avg. Disk sec/Transfer	The average time in seconds that the disk transfer took to complete [Sequential = AVG Non-Sequential = AVG]

Avg. Disk sec/Write	The average time in seconds of a write of data to the disk [Sequential = AVG Non-Sequential = AVG] View Report: \report\windows\disk\response.rpt
Current Disk Queue Length	The number of requests outstanding on the disk at the time the performance data is collected. It includes requests in service at the time of the snapshot. This is an instantaneous length, not an average over the time interval. Multi-spindle disk devices can have multiple requests active at one time, but other concurrent requests are awaiting service. This counter may reflect a transitory high or low queue length, but if there is a sustained load on the disk drive, it is likely that this will be consistently high. Requests are experiencing delays proportional to the length of this queue minus the number of spindles on the disks. This difference should average less than 2 for good performance. [Sequential = LST Non-Sequential = AVG]
Disk Bytes/sec	The number of bytes transferred per second to or from the disk during write or read operations [Sequential = AVG Non-Sequential = SUM]
Disk Read Bytes/sec	The number of bytes transferred per second from the disk during read operations [Sequential = AVG Non-Sequential = SUM] View Report: \report\windows\disk\volume.rpt
Disk Reads/sec	The number of read operations on the disk per second [Sequential = AVG Non-Sequential = SUM] View Report: \report\windows\disk\transfer.rpt
Disk Transfers/sec	The number of read and write operations on the disk per second [Sequential = AVG Non-Sequential = SUM]
Disk Write Bytes/sec	The number of bytes transferred per second to the disk during write operations [Sequential = AVG Non-Sequential = SUM] View Report: \report\windows\disk\volume.rpt
Disk Writes/sec	The number of write operations on the disk per second [Sequential = AVG Non-Sequential = SUM] View Report: \report\windows\disk\transfer.rpt
record_count	The number of collected records represented by the record written to the database. For nonreduced records, this value is 1. For reduced records, this value is the number of records that are combined into a single database record. [Sequential = AVG Non-Sequential = SUM]

reduction_name	The name of reduction rule [Sequential = ID Non-Sequential = ID]
reduction_source	The source of the reduction record. For reduction records with agent sources, this value is A. For reduction records with harvest sources, this value is H. [Sequential = ID Non-Sequential = ID]

Class:	Processor
Subclass:	N/A
IT Resource Name:	/TeamQuest/System/*systemname*/CPU
TeamQuest Table Name:	Processor
Open Table Name:	PROC
Statistic Name:	
% DPC Time	The percentage of elapsed time that the processor spent in deferred procedure calls (DPC). When a hardware device interrupts the processor, the interrupt handler may elect to execute the majority of its work in a DPC. DPCs run at lower priority than interrupts and so permit interrupts to occur while DPCs execute. DPCs are executed in privileged mode, so this is a component of Processor:::% Privileged Time. This counter can help determine the source of excessive time being spent in privileged mode. This metric is collected by default on Microsoft Windows Server. [Sequential = AVG Non-Sequential = AVG]
% Interrupt Time	The percentage of elapsed time that the processor spent handling hardware interrupts. When a hardware device interrupts the processor, the interrupt handler executes to handle the condition, usually by signaling I/O completion and possibly issuing another pending I/O request. Some of this work may be done in a DPC (see Processor:::% DPC Time). However, time spent in DPCs is not counted as time in interrupts. Interrupts are executed in privileged mode, so this is a component of Processor:::% Privileged Time. This counter can help determine the source of excessive time being spent in privileged mode. [Sequential = AVG Non-Sequential = AVG]

% Privileged Time	The percentage of processor time spent in privileged mode using non-idle threads. The Microsoft Windows service layer, the Executive routines, and the Microsoft Windows Kernel execute in privileged mode. Device drivers for most devices other than graphics adapters and printers also execute in privileged mode. Unlike some early operating systems, Microsoft Windows uses process boundaries for subsystem protection in addition to the traditional protection of user and privileged modes. These subsystem processes provide additional protection. Therefore, some work done by Microsoft Windows on behalf of your application may appear in other subsystem processes in addition to the Privileged Time in your process. [Sequential = AVG Non-Sequential = AVG] View Reports: \report\windows\system\cpu-util-2000.rpt \report\windows\system\cpu-util-xp.rpt \report\windows\system\per-cpu.rpt
% Processor Time	A percentage of the elapsed time that a processor is busy executing a non-idle thread. It can be viewed as the fraction of the time spent doing useful work. Each processor is assigned an idle thread in the idle process that consumes those unproductive processor cycles not used by any other threads. [Sequential = AVG Non-Sequential = AVG]
% User Time	The percentage of processor time spent in user mode using non-idle threads. All application code and subsystem code execute in user mode. The graphics engine, graphics device drivers, printer device drivers, and the window manager also execute in user mode. Code executing in user mode cannot damage the integrity of the Microsoft Windows Executive, Kernel, and device drivers. Unlike some early operating systems, Microsoft Windows uses process boundaries for subsystem protection in addition to the traditional protection user and privilege modes. These subsystem processes provide additional protection. Therefore, some work done by Microsoft Windows on behalf of your application may appear in other processes in addition to the Privileged Time in your process. [Sequential = AVG Non-Sequential = AVG] View Reports: \report\windows\system\cpu-util-2000.rpt \report\windows\system\cpu-util-xp.rpt \report\windows\system\per-cpu.rpt

Class:	Redirector
Subclass:	N/A
IT Resource Name:	/TeamQuest/System/*systemname*/General Objects
TeamQuest Table Name:	Redirector
Open Table Name:	REDIRECTOR
Statistic Name:	
Bytes Total/sec	The number of data bytes the redirector is processing per second. This includes all application data, file data, and network protocol information (such as packet headers). [Sequential = AVG Non-Sequential = SUM] View Report: \report\windows\redirect\volume.rpt
Current Commands	The number of requests to the redirector that are currently queued for service. If this number is much larger than the number of network adapter cards installed in the computer, the networks and the servers being accessed are seriously bottlenecked. [Sequential = LST Non-Sequential = SUM] View Report: \report\windows\redirect\queued.rpt
Network Errors/sec	The number of serious unexpected errors per second. These errors generally indicate the redirector and one or more servers are having serious communication difficulties. For example, a Server Manager Block (SMB) protocol error generates a network error. Network errors result in an entry in the system event log, which will provide details. [Sequential = AVG Non-Sequential = SUM] View Report: \report\windows\redirect\errors.rpt
Packets Received/sec	The number of packets or Server Manager Blocks (SMBs) received per second by the redirector. Network transmissions are divided into packets. The average number of bytes received in a packet can be obtained by dividing Bytes Received/sec by this counter. Some packets received may not contain incoming data. For example an acknowledgment to a write made by the redirector would count as an incoming packet. [Sequential = AVG Non-Sequential = SUM] View Report: \report\windows\redirect\packets.rpt

Packets Transmitted/sec	The number of packets or Server Manager Blocks (SMBs) sent per second by the redirector. Network transmissions are divided into packets. The average number of bytes transmitted in a packet can be obtained by dividing Redirector:::Bytes Transmitted/sec by this counter. (Bytes Transmitted/sec is not collected by default.) [Sequential = AVG Non-Sequential = SUM] View Report: \report\windows\redirect\packets.rpt
Server Sessions	The total number of security objects the redirector is managing. For example, a logon to a server followed by a network access to the same server will establish one connection, but two sessions. [Sequential = LST Non-Sequential = SUM] View Report: \report\windows\redirect\sessions.rpt

Class:	Server
Subclass:	N/A
IT Resource Name:	/TeamQuest/System/*systemname*/General Objects
TeamQuest Table Name:	Server
Open Table Name:	SERV
Statistic Name:	
Bytes Total/sec	The number of bytes the server sent to and received from the network per second. This value provides an overall indication of the load on the server. [Sequential = AVG Non-Sequential = SUM] View Report: \report\windows\server\volume.rpt
Pool Nonpaged Failures	The number of times allocations from nonpaged pool have failed. This indicates that the computer's physical memory is too small. [Sequential = AVG Non-Sequential = SUM]

Class:	System
Subclass:	N/A
IT Resource Name:	/TeamQuest/System/*systemname*/General Objects /TeamQuest/System/*systemname*/Kernel
TeamQuest Table Name:	System
Open Table Name:	SYS
Statistic Name:	
Context Switches/sec	The number of switches from one thread to another per second. Thread switches can occur either inside of a single process or across processes. A thread switch may be caused either by one thread asking another for information or by a thread being preempted by another higher priority thread becoming ready to run. Unlike some early operating systems, Microsoft Windows uses process boundaries for subsystem protection in addition to the traditional protection of user and privileged modes. These subsystem processes provide additional protection. Therefore, some work done by Microsoft Windows on behalf of an application may appear in other subsystem processes in addition to the Privileged Time in the application. Switching to the subsystem process causes one context switch in the application thread. Switching back causes another context switch in the subsystem thread. [Sequential = AVG Non-Sequential = SUM] View Report: \report\windows\system\switches.rpt
Processor Queue Length	The instantaneous length of the processor queue in units of threads. This counter is always 0 unless you are also monitoring a thread counter. All processors use a single queue in which threads wait for processor cycles. This length does not include the threads that are currently executing. A sustained processor queue length greater than 2 generally indicates processor congestion. This is an instantaneous count, not an average over the time interval. [Sequential = LST Non-Sequential = SUM] View Report: \report\windows\system\cpu-qlen.rpt
System Calls/sec	The frequency of calls to Microsoft Windows system service routines per second. These routines perform all of the basic scheduling and synchronization of activities on the computer and provide access to non-graphical devices, memory management, and name space management. [Sequential = AVG Non-Sequential = SUM] View Report: \report\windows\system\syscalls.rpt

Class:	TCP
Subclass:	N/A
IT Resource Name:	/TeamQuest/System/*systemname*/Network
TeamQuest Table Name:	TCP
Open Table Name:	TCP
Statistic Name:	
Connections Active	The number of times TCP connections have made a direct transition to the SYN-SENT state from the CLOSED state [Sequential = LST Non-Sequential = SUM] View Report: \report\windows\tcp\connects.rpt
Connections Established	The number of TCP connections for which the current state is either ESTABLISHED or CLOSE-WAIT [Sequential = LST Non-Sequential = SUM] View Report: \report\windows\tcp\connects.rpt
Connections Passive	The number of times TCP connections have made a direct transition to the SYN-RCVD state from the LISTEN state [Sequential = LST Non-Sequential = SUM] View Report: \report\windows\tcp\connects.rpt

Class:	TCPv4
Subclass:	N/A
IT Resource Name:	/TeamQuest/System/*systemname*/Network
TeamQuest Table Name:	TCPv4
Open Table Name:	TCPV4
Statistic Name:	
Connections Active	The number of times TCP connections have made a direct transition to the SYN-SENT state from the CLOSED state [Sequential = LST Non-Sequential = SUM]
Connections Established	The number of TCP connections for which the current state is either ESTABLISHED or CLOSE-WAIT [Sequential = LST Non-Sequential = SUM]
Connections Passive	The number of times TCP connections have made a direct transition to the SYN-RCVD state from the LISTEN state [Sequential = LST Non-Sequential = SUM]

Class:	TCPv6
Subclass:	N/A
IT Resource Name:	/TeamQuest/System/*systemname*/Network
TeamQuest Table Name:	TCPv6
Open Table Name:	TCPV6
Statistic Name:	
Connections Active	The number of times TCP connections have made a direct transition to the SYN-SENT state from the CLOSED state [Sequential = LST Non-Sequential = SUM]
Connections Established	The number of TCP connections for which the current state is either ESTABLISHED or CLOSE-WAIT [Sequential = LST Non-Sequential = SUM]
Connections Passive	The number of times TCP connections have made a direct transition to the SYN-RCVD state from the LISTEN state [Sequential = LST Non-Sequential = SUM]

Note: *The following statistics are only available for the TeamQuest database architecture. If the open database architecture is used, a record for each agent using these statistics is created in the TQ.Agent Interval table.*

Class:	TQ
Subclass:	N/A
IT Resource Name:	N/A
TeamQuest Table Name:	N/A
Open Table Name:	N/A
Statistic Name:	
bsp interval	The number of seconds elapsed between two data samples of the System Activity Agent [Sequential = SUM Non-Sequential = ID]
tqbsp_end_time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
tqbsp_interval	The number of seconds elapsed between the end of data collection for the previous sample and the end of data collection for the current sample [Sequential = SUM Non-Sequential = ID]

Table Field Hierarchy

Class:	TQ
Subclass:	Agent Interval
IT Resource Name:	/TeamQuest/System/*systemname*
TeamQuest Table Name:	TQ.Agent Interval
Open Table Name:	AGENTINTERVAL
Collection interval:	Based on the collection period
Default retentions:	8 hours at collection period interval 8 days at 10-minute intervals 35 days at 1-hour intervals 400 days at 8-hour intervals
Table type:	Performance
Derived tables using fields from this table:	N/A

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = ID]
Agent	The name of the agent that is collecting data. This field is limited to 52 characters. Any agent name longer than 52 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Instance	The instance name of the agent that is collecting data. This field is limited to 52 characters. Any instance name longer than 52 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = ID]
PID	The process identifier of the agent instance that is collecting data [Sequential = ID Non-Sequential = ID]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
System	The name of the system where the data is collected. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential LST Non-Sequential = ID]

9.2. Workload Statistics

TeamQuest Manager maintains workload statistics in the performance database. All statistics listed here are collected by the Process-Workload Agent into workloads in the aggregation sets defined for the database.

Note: *The following statistics are only available for the TeamQuest database architecture. If the open database architecture is used, a record for each agent using these statistics is created in the TQ.Agent Interval table.*

Class:	TQ
Subclass:	N/A
IT Resource Name:	N/A
TeamQuest Table Name:	N/A
Open Table Name:	N/A
Statistic Name:	
tqwarp_end_time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
tqwarp_interval	The number of seconds elapsed between the end of data collection for the previous sample and the end of data collection for the current sample [Sequential = SUM Non-Sequential = ID]
warp interval	The number of seconds elapsed between two data samples of the Process-Workload Agent [Sequential = SUM Non-Sequential = ID]

Table Field Hierarchy

Class:	TQ
Subclass:	Agent Interval
IT Resource Name:	/TeamQuest/System/*systemname*
TeamQuest Table Name:	TQ.Agent Interval
Open Table Name:	AGENTINTERVAL
Collection interval:	Based on the collection period
Default retentions:	8 hours at collection period interval 8 days at 10-minute intervals 35 days at 1-hour intervals 400 days at 8-hour intervals
Table type:	Performance
Derived tables using fields from this table:	N/A

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = ID]
Agent	The name of the agent that is collecting data. This field is limited to 52 characters. Any agent name longer than 52 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Instance	The instance name of the agent that is collecting data. This field is limited to 52 characters. Any instance name longer than 52 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = ID]
PID	The process identifier of the agent instance that is collecting data [Sequential = ID Non-Sequential = ID]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
System	The name of the system where the data is collected. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential LST Non-Sequential = ID]

Parameter Hierarchy

Class:	Workload
Subclass:	by Workload
IT Resource Name:	/TeamQuest/System/*systemname*/Workload/*workloadset* / *workload*
TeamQuest Table Name:	Workload.by Workload
Open Table Name:	WLBYWORKLOAD
Workload Set:	WLS1, WLS2, ...
Workload:	WL1, WL2, ...
Statistic Name:	
%cpu	The percentage of total CPU consumed by the workload. Total CPU time is the sampling interval times the number of CPUs on the system. Thus, if the sum of %cpu for all workloads is less than 100%, then that missing usage is not accounted for in any workload. [Sequential = AVG Non-Sequential = SUM] View Report: \report\windows\workload\cpu-util.rpt
databytes	The number of bytes read or written by all of the processes in the workload in I/O operations during the sampling interval. I/O activity generated by the processes includes file, network, and device I/Os. [Sequential = SUM Non-Sequential = SUM]
dataops	The number of read and write I/O operations issued by all of the processes in the workload during the sampling interval. I/O activity generated by the processes includes file, network and device I/Os. [Sequential = SUM Non-Sequential = SUM]
elapsed	The sum of the elapsed time in seconds of all of the processes in the workload. Dividing this number by the number of processes in the workload (nproc) gives the average time a process in the workload existed during the sampling interval. [Sequential = SUM Non-Sequential = SUM]
handles	The total number of handles currently open by all of the processes in the workload [Sequential = LST Non-Sequential = SUM]
otherbytes	The number of bytes issued by all of the processes in the workload to I/O operations during the sampling interval that are neither a read nor a write operation. An example of this type of operation would be a control function. I/O activity generated by the processes includes file, network and device I/Os. [Sequential = SUM Non-Sequential = SUM]
otherops	The number of I/O operations issued by all of the processes in a workload during the sampling interval that are neither a read nor a write operation. An example of this type of operation would be a control function. I/O activity generated by the processes includes file, network, and device I/Os. [Sequential = SUM Non-Sequential = SUM]

pagefaults	The sum of the page faults that occurred in all of the threads of the workload [Sequential = SUM Non-Sequential = SUM] View Report: \report\windows\workload\pageflts.rpt
pagefileMB	The current number of megabytes (MB) the process has used in the paging files. Paging files store pages of memory used by the process that are not contained in other files. Paging files are shared by all of the processes. Lack of space in paging files can prevent other processes from allocating memory. [Sequential = AVG Non-Sequential = SUM]
pcompleted	The number of processes that end in the sampling interval [Sequential = SUM Non-Sequential = SUM]
pongoing	The number of ongoing (active) processes at the end of the sampling interval [Sequential = LST Non-Sequential = SUM] View Report: \report\windows\workload\nproc.rpt
privateMB	The current number of megabytes (MB) the process has allocated that cannot be shared with other processes [Sequential = AVG Non-Sequential = SUM]
privcpu	The privileged mode CPU time in seconds used by the workload. Privileged mode CPU time is the time spent in kernel mode (for example, the time spent in executing system calls, paging, and so on). [Sequential = SUM Non-Sequential = SUM] View Report: \report\windows\workload\privcpu.rpt
pstarted	The number of processes that started in the sampling interval and were still active at the end of the interval [Sequential = SUM Non-Sequential = SUM]
readbytes	The number of reads from I/O operations by all of the processes in the workload during the sampling interval. I/O activity generated by the processes includes file, network, and device I/Os. [Sequential = SUM Non-Sequential = SUM]
readops	The number of read operations issued by the processes in the workload during the sampling interval. I/O activity generated by the processes includes file, network, and device I/Os. [Sequential = SUM Non-Sequential = SUM]
record_count	The number of collected records represented by the record written to the database. For nonreduced records, this value is 1. For reduced records, this value is the number of records that are combined into a single database record. [Sequential = AVG Non-Sequential = SUM]
reduction_name	The name of reduction rule [Sequential = ID Non-Sequential = ID]

reduction_source	The source of the reduction record. For reduction records with agent sources, this value is A. For reduction records with harvest sources, this value is H. [Sequential = ID Non-Sequential = ID]
tcompleted	The number of threads that completed for all of the processes in the workload in the sampling interval. The value represents a sum of the differences in active threads from the previous interval for each process in the workload. If fewer threads are active for an individual process at the end of the current sampling interval than in the previous interval, the value will be nonzero for that process. Otherwise, the value will be zero. [Sequential = SUM Non-Sequential = SUM]
tongoing	The number of threads active for all of the processes in the workload at the end of the sampling [Sequential = LST Non-Sequential = SUM] View Report: \report\windows\workload\nproc.rpt
totcpu	The total CPU time in seconds used by all of the processes in the workload in the current interval. The value is the sum of usercpu and privcpu. [Sequential = SUM Non-Sequential = SUM] View Report: \report\windows\workload\totcpu.rpt
tstarted	The number of threads that all of the processes in the workload started in the sampling interval. The value represents a sum of the differences in active threads from the previous interval for each process in the workload. If more threads are active for an individual process at the end of the current sampling interval than in the previous interval, the value will be nonzero for that process. Otherwise, this value will be zero. [Sequential = SUM Non-Sequential = SUM]
usercpu	The user CPU time in seconds used by the workload. User CPU time is the time CPU spent running in user mode. [Sequential = SUM Non-Sequential = SUM] View Report: \report\windows\workload\usercpu.rpt
virtualMB	The virtual address space size in megabytes (MB) of all of the running processes in the workload at the end of the sampling interval [Sequential = AVG Non-Sequential = SUM]
writebytes	The number of bytes written to I/O operations by all of the processes in the workload during the sampling interval. I/O activity generated by the processes includes file, network, and device I/Os. [Sequential = SUM Non-Sequential = SUM]

writeops	The number of write I/O operations issued by all of the processes in the workload during the sampling interval. I/O activity generated by the processes includes file, network, and device I/Os. [Sequential = SUM Non-Sequential = SUM]
wssMB	The working set size in megabytes (MB) occupied by all of the running processes in the workload at the end of the sampling interval [Sequential = AVG Non-Sequential = SUM] View Report: \report\windows\workload\wss.rpt

9.3. Process Statistics

The Process-Workload Agent (**tqwarp** or **tqw2kwarp**) collects process data, calculates the usage of every process in a given interval, applies the reduction definitions to each process, and stores the reduced process data. It also applies workload definitions to the reduced process data and stores system resource usage by workload.

Reduced Process Records

The Process-Workload Agent collects process data and reduces the data according to the user-defined reduction definitions. A reduction definition may cause multiple processes to be merged into a single process record. Thus, a process record contains data about one or more processes. When you are looking at the resource usage numbers, it is important to know how many processes a process record actually represents. The nproc data item indicates exactly how many processes each process record is representing. When a process record is representing more than one process, the resource usage fields such as wssMB, usercpu, and pagefaults are the sum of the resource usage of the individual processes. When all of the processes do not have the same value for a field, the identifier fields such as command are set to <Multi>. When data for some fields is not available, the fields are set to <N/A>.

Disabling Reduction Definitions

If you want to look at the details of every individual process and do not wish to have merged process records, you must disable reduction processing by making all reduction sets inactive. However, with reduction processing disabled, more records have to be stored and more disk space is needed. For information on disabling reductions, see the *TeamQuest Performance Software Administration Guide*.

Retrieving Hardware Configuration Information

The Process-Workload Agent retrieves hardware configuration information. The information is stored upon startup and once-a-day in the HINV.Summary and the HINV.Devices table files of the TeamQuest performance database. The information is also stored if the agent detects a change in configuration.

Table Field Hierarchy

Class:	NT
Subclass:	Process
IT Resource Name:	/TeamQuest/System/*systemname* /TeamQuest/System/*systemname*/Process
TeamQuest Table Name:	NT.Process
Open Table Name:	NTPROC
Collection interval:	Based on the primary aggregation set
Default retention:	1 day
Table type:	Performance

Note: *The collection interval depends on the Processes Only setting in the configuration file for the Process-Workload Agent. For more information, see the section on configuring the Process-Workload Agent in the* TeamQuest Performance Software Administration Guide.

Statistic Name	Description
actual_interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = ID]
btime	The start time of the process. For process records representing more than one process, the field shows the earliest of the start times. [Sequential = FST Non-Sequential = ID]
command	The command name of the process. Up to 51 characters are displayed. [Sequential = ID Non-Sequential = ID]
cproc	The number of processes that ended in the sampling interval [Sequential = SUM Non-Sequential = SUM]
cthread	The number of threads that completed in the process in the sampling interval. The value represents the difference in active threads from the previous interval. If fewer threads are active at the end of the current sampling interval than in the previous interval, the value will be nonzero. Otherwise, this value will be zero. [Sequential = SUM Non-Sequential = SUM]
databytes	The number of bytes read or written by the process in I/O operations during the sampling interval. I/O activity generated by the processes includes file, network, and device I/Os. [Sequential = SUM Non-Sequential = SUM]

databytes_t	The number of bytes read or written by the process in I/O operations since the process started running. I/O activity generated by the processes includes file, network, and device I/Os. This statistic is not collected by default. [Sequential = LST Non-Sequential = SUM]
dataops	The number of read and write I/O operations issued by the process during the sampling interval. I/O activity generated by the processes includes file, network, and device I/Os. [Sequential = SUM Non-Sequential = SUM]
dataops_t	The number of read and write I/O operations issued since the process started running. I/O activity generated by the processes includes file, network, and device I/Os. This statistic is not collected by default. [Sequential = LST Non-Sequential = SUM]
elapsed	The elapsed time in seconds for the current interval. This number tells how long a process existed in the current interval. [Sequential = SUM Non-Sequential = SUM]
elapsed_t	The total elapsed time in seconds. This number tells how long a process existed since it started. For a single process, this is the same as timestamp minus btime. [Sequential = LST Non-Sequential = SUM]
fullcmd	The full command line of the process. Up to 2048 characters are displayed. This statistic is not collected by default. When this statistic is disabled, <NA> is displayed. [Sequential = ID Non-Sequential = ID]
handles	The total number of handles currently open by the process. This number is the sum of the handles currently open by each thread in the process. [Sequential = LST Non-Sequential = SUM]
Interval	The desired interval for the data collection which may differ from the actual_interval value [Sequential = SUM Non-Sequential = ID]
job_name	The job name associated with the process. If no job name is associated with the process or if a job name collection has been disabled, this field will be blank.
nonp_poolMB	The number of megabytes (MB) in the nonpaged pool at the end of the sampling interval. The nonpaged pool is a system memory area where space is acquired by the operating system components as they accomplish their appointed tasks. Nonpaged pool pages cannot be paged out to the paging file, but instead remain in main memory as long as they are allocated. This statistic is not collected by default. [Sequential = AVG Non-Sequential = SUM]
nproc	The number of processes the process record represents. In a reduced record, it is the number of processes that were merged together to form a single process record. [Sequential = AVG Non-Sequential = SUM]
oproc	The number of ongoing processes at the end of the sampling interval [Sequential = LST Non-Sequential = SUM]

otherbytes	The number of bytes issued by the process to I/O operations during the sampling interval that are neither a read nor a write operation. An example of this type of operation would be a control function. I/O activity generated by the processes includes file, network, and device I/Os. [Sequential = SUM Non-Sequential = SUM]
otherbytes_t	The number of bytes issued by the process to I/O operations since the process started running that are neither a read nor a write operation. An example of this type of operation would be a control function. I/O activity generated by the processes includes file, network, and device I/Os. This statistic is not collected by default. [Sequential = LST Non-Sequential = SUM]
otherops	The number of I/O operations issued by the process during the sampling interval that are neither a read nor a write operation. An example of this type of operation would be a control function. I/O activity generated by the processes includes file, network, and device I/Os. [Sequential = SUM Non-Sequential = SUM]
otherops_t	The number of I/O operations issued by the process since the process started running that are neither a read nor a write operation. An example of this type of operation would be a control function. I/O activity generated by the processes includes file, network, and device I/Os. This statistic is not collected by default. [Sequential = LST Non-Sequential = SUM]
othread	The number of threads active in the process at the end of the interval. An instruction is the basic unit of execution in a processor and a thread is the object that instructs. Every running process has at least one thread. [Sequential = LST Non-Sequential = SUM]
p_poolMB	The number of megabytes (MB) in the paged pool at the end of the sampling interval. The paged pool is a system memory area where space is acquired by the operating system components as they accomplish their appointed tasks. Paged pool pages can be paged out to the paging file when not accessed by the system for sustained periods of time. This statistic is not collected by default. [Sequential = AVG Non-Sequential = SUM]
pagefaults	The number of page faults for the process during the sampling interval. A page fault occurs when a thread refers to a virtual memory page that is not in its working set in main memory. This will not cause the page to be fetched from disk if it is on the standby list and is already in main memory, or if it is in use by another process that shares the page. [Sequential = SUM Non-Sequential = SUM]
pagefaults_t	The number of page faults since the process started running. This statistic is not collected by default. [Sequential = LST Non-Sequential = SUM]

pagefileMB	The current number of megabytes (MB) the process has used in the paging files. Paging files store pages of memory used by the process that are not contained in other files. Paging files are shared by all of the processes. Lack of space in paging files can prevent other processes from allocating memory. [Sequential = AVG Non-Sequential = SUM]
pagefileMBpeak	The maximum number of megabytes (MB) the process has used in the paging files. This statistic is not collected by default. [Sequential = LST Non-Sequential = SUM]
pctcpu	The percentage of elapsed time that all of the threads of the process used the processor to execute instructions. An instruction is the basic unit of execution in a computer. A thread is the object that executes instructions. A process is the object created when a program is run. Code executed to handle certain hardware interrupts or trap conditions may be counted for the process. [Sequential = AVG Non-Sequential = SUM]
pid	The unique identifier of the process. The pid numbers are reused, so the number only identifies a process for the lifetime of that process. [Sequential = ID Non-Sequential = ID]
priority	The current base priority of the process. Threads within a process can raise and lower their base priority relative to the base priority of the process. If the process record represents more than one process, the priority is an average of the priority values of the constituent processes. [Sequential = AVG Non-Sequential = AVG]
privateMB	The current number of megabytes (MB) the process has allocated that cannot be shared with other processes. This statistic is not collected by default. [Sequential = AVG Non-Sequential = SUM]
privcpu	The number of seconds in the interval that the process threads have spent executing code in privileged mode. When a Microsoft Windows system service is called, the service often runs in privileged mode to gain access to system-private data. Such data is protected from access by threads executing in user mode. Calls to the system may be explicit or they may be implicit, such as when a page fault or an interrupt occurs. Unlike some early operating systems, Microsoft Windows uses process boundaries for subsystem protection in addition to the traditional protection of user and privileged modes. These subsystem processes provide additional protection. Therefore, some work done by Microsoft Windows on behalf of your application may appear in other subsystem processes in addition to the Privileged Time in your process. [Sequential = SUM Non-Sequential = SUM]
privcpu_t	The number of seconds that the process threads have spent executing code in privileged mode since the process started running. This statistic is not collected by default. [Sequential = LST Non-Sequential = SUM]

readbytes	The number of bytes read from I/O operations by the process during the sampling interval. I/O activity generated by the processes includes file, network, and device I/Os. [Sequential = SUM Non-Sequential = SUM]
readbytes_t	The number of bytes read from I/O operations by the process since the process started running. I/O activity generated by the processes includes file, network, and device I/Os. This statistic is not collected by default. [Sequential = LST Non-Sequential = SUM]
readops	The number of read I/O operations issued by the process during the sampling interval. I/O activity generated by the processes includes file, network, and device I/Os. [Sequential = SUM Non-Sequential = SUM]
readops_t	The number of read I/O operations issued by the process since the process started running. I/O activity generated by the processes includes file, network, and device I/Os. This statistic is not collected by default. [Sequential = LST Non-Sequential = SUM]
redname	The reduction name of the process record. If a process does not match any of the reduction definitions, then it is not reduced and the field will be blank. [Sequential = ID Non-Sequential = ID]
sample_end_time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
sproc	The number of processes that started in the sampling interval and were still active at the end of the interval [Sequential = SUM Non-Sequential = SUM]
sthread	The number of threads that the process started in the sampling interval. The value represents the difference in active threads from the previous interval. If more threads are active at the end of the current sampling interval than in the previous interval, the value will be nonzero. If the process started in the current sampling interval, the value will be equal to the number of active threads at the end of the interval. [Sequential = SUM Non-Sequential = SUM]
System	The name of the system where the data is collected. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
totcpu	The total CPU time in seconds used by the process record in the current interval. This number is the same as the sum of usercpu and privcpu. [Sequential = SUM Non-Sequential = SUM]

totcpu_t	The total CPU time in seconds used by the process record since it started. This number is the same as the sum of usercpu_t and privcpu_t. [Sequential = LST Non-Sequential = SUM]
user	The name of the user running the process. This information may not be available for all of the processes. [Sequential = ID Non-Sequential = ID]
usercpu	The number of seconds in the interval that the process threads have spent executing in user mode. Applications execute in user mode, as do subsystems, like the window manager and the graphics engine. Code executing in user mode cannot damage the integrity of the Microsoft Windows Executive, Kernel, and device drivers. Unlike some early operating systems, Microsoft Windows uses process boundaries for subsystem protection in addition to the traditional protection of user and privileged modes. These subsystem processes provide additional protection. Therefore, some work done by Microsoft Windows on behalf of your application may appear in other subsystem processes in addition to the Privileged Time in your process. [Sequential = SUM Non-Sequential = SUM]
usercpu_t	The number of seconds that the process threads have spent executing code in user mode since the process started running. This statistic is not collected by default. [Sequential = LST Non-Sequential = SUM]
virtualMB	The current size in megabytes (MB) of the virtual address space that the process is using. The use of virtual address space does not necessarily imply corresponding use of either disk or main memory pages. Virtual space is, however, finite and by using too much, the process may limit its ability to load libraries. [Sequential = AVG Non-Sequential = SUM]
virtualMBpeak	The maximum number of megabytes (MB) of virtual address space the process has used at any one time. This statistic is not collected by default. [Sequential = LST Non-Sequential = SUM]

Workload	The workload set and the workload associated with the process. When the Process-Workload Agent stores the process record, this field is blank. When process records are reported, the workload can be evaluated and is shown in the report. This field is available for reporting only when using TeamQuest Analyzer and TeamQuest tView. Workload evaluation takes place when data is retrieved from the database, based on workload sets defined in the database where the data is stored. Workload sets reported in the Workload field do not have to be active. For more information on workload evaluation, see the *TeamQuest Analyzer User Guide* or the *TeamQuest Performance Software Command Line Interfaces Reference Manual*. [Sequential = ID Non-Sequential = ID]
workload:*wlsname*	There is one field for each *wlsname* (Workload Set Name). The value for this field shows the name of the workload to which the process belongs. If a process belongs to none of the workloads, it will display the workload name “OTHER.” This field is available for reporting only when useing TeamQuest View or TeamQuest cView. [Sequential = ID Non-Sequential = ID]
writebytes	The number of bytes written to I/O operations by the process during the sampling interval. I/O activity generated by the processes includes file, network, and device I/Os. [Sequential = SUM Non-Sequential = SUM]
writebytes_t	The number of bytes written to I/O operations by the process since the process started running. I/O activity generated by the processes includes file, network, and device I/Os. This statistic is not collected by default. [Sequential = LST Non-Sequential = SUM]
writeops	The number of write I/O operations issued by the process during the sampling interval. I/O activity generated by the processes includes file, network, and device I/Os. [Sequential = SUM Non-Sequential = SUM]
writeops_t	The number of write I/O operations issued by the process since the process started running. I/O activity generated by the processes includes file, network, and device I/Os. This statistic is not collected by default. [Sequential = LST Non-Sequential = SUM]

wssMB	The size in megabytes (MB) of the working sets at the end of the interval. The working set is the set of memory pages recently touched by the thread in the process. If free memory in the computer is above a threshold, pages are left in the working set of a process even if they are not in use. When free memory falls below the threshold, pages are trimmed from working sets. If the pages are needed, they will be soft-faulted back into the working set before they leave main memory. [Sequential = AVG Non-Sequential = SUM]
wssMBpeak	The maximum number of megabytes (MB) in the working set of the process at any point in time. This statistic is not collected by default. [Sequential = LST Non-Sequential = SUM]

9.4. Hardware Inventory Statistics

The Process-Workload Agent (**tqwarp** or **tqw2kwarp**) retrieves hardware configuration information. The information is stored upon startup and once-a-day in the HINV.Summary, HINV.CPUModel, HINV.CPU Thread Speeds, HINV.Devices, HINV.FileSyste, and the HINV.FileSystemToDevice table files of the TeamQuest performance database. The information is also stored if the agent detects a change in configuration.

Note: *The storage of hardware inventory records depends on the Hardware Inventory setting in the configuration file of the Process-Workload Agent. For more information, see the section on configuring the Process-Workload Agent in the* TeamQuest Performance Software Administration Guide.

Table Field Hierarchy

Class:	HINV
Subclass:	Summary
IT Resource Name:	/TeamQuest/System/*systemname*
TeamQuest Table Name:	HINV.Summary
Open Table Name:	HINVSUM
Collection interval:	N/A
Default retention:	1 year
Table type:	State

Statistic Name	Description
core_multi_thread	The status or ability of the processor to support multiple independent threads. The field will contain <N/A> if the information is not available. [Non-Sequential = ID]
cores_per_chip	The number of cores or processors on an individual chip. The field will contain <N/A> if the information is not available. [Non-Sequential = ID]

cpu_chips	The number of CPU chips or sockets. The field will contain <N/A> if the information is not available. [Non-Sequential = ID]
cpu_count	The number of configured processors. The field will contain <N/A> if the information is not available. [Non-Sequential = ID]
cpu_speed	The speed of the processor in MHz or GHz [Non-Sequential = ID]
cpu_type	The basic instruction set architecture of the current system [Non-Sequential = ID]
logical_cpu_count	The number of logical processors [Non-Sequential = ID]
mem_size	The size of configured random access memory in kilobytes, where 1 kilobyte = 1,024 bytes [Non-Sequential = ID]
memory	The size of configured random access memory in megabytes, where 1 megabyte = 1,048,576 bytes [Non-Sequential = ID]
memory_size	The size of configured random access memory in megabytes or gigabytes [Non-Sequential = ID]
model	Name of the hardware implementation or platform [Non-Sequential = ID]
os_release	The name and level of this implementation of the operating system [Non-Sequential = ID]
pagesize	The size of a page of memory [Non-Sequential = ID]
partition_type	The partition type of the system. The value indicates the system hypervisor type, guest type, logical partition type, zone type, or logical domain type. If the system does not have a partition type, this field will be blank. [Non-Sequential = ID]
serial	The hardware-specific serial number of the physical machine [Non-Sequential = ID]
System	The name by which the system is known to a communication network or node name. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Non-Sequential = ID]
system_identifier	Information used to identify the system [Non-Sequential = ID]
system_type	The name of the operating system [Non-Sequential = ID]
Time	The timestamp of the data sample [Non-Sequential = LST]

timezone	The time zone where the data was collected [Non-Sequential = ID]
TQLevel	The level of TeamQuest Manager [Non-Sequential = ID]

The HINV.CPUModel table stores best-match, relative performance data about the system configuration. This table is created by the Hardware Inventory Agent (**tqhinv**) to map physical hardware to a CPU model that describes performance in relative terms. This table is not created for any virtualized system. It is populated for physical systems only. It is not populated for VMware guests, Hyper-V guests, Solaris logical domains (LDOMs), Solaris guest LDOMs, KVM guests, and Linux on POWER systems.

Table Field Hierarchy

Class:	HINV
Subclass:	CPUModel
IT Resource Name:	/TeamQuest/System/*systemname*
TeamQuest Table Name:	HINV.CPUModel
Open Table Name:	HINVCPUM
Collection interval:	N/A
Default retention:	1 year
Table type:	State

Statistic Name	Description
cpu_chips	The number of CPU chips or sockets [Non-Sequential = ID]
cpu_confidence	The percentage of confidence in the correctness of the CPU match based on model, frequency, and configuration (chips, cores, threads) [Non-Sequential = SUM]
cpu_cores	The number of CPU cores or processors on an individual CPU chip [Non-Sequential = ID]
cpu_name	The name of the selected CPU [Non-Sequential = ID]
cpu_relative_performance	The relative performance of the CPU on a common scale [Non-Sequential = ID]
cpu_speed	The speed of the processor in megahertz (MHz) or gigahertz (GHz) [Non-Sequential = ID]
cpu_threads	The number of CPU threads on an individual CPU core or processor [Non-Sequential = ID]
System	The name by which the system is known to a communication network or node name. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Non-Sequential = ID]
system_type	The name of the operating system [Non-Sequential = ID]

Time	The timestamp of the data sample [Non-Sequential = LST]
user_override	The user override status of the default TeamQuest generated CPU match. This field is not currently used and should appear as 0. [Non-Sequential = ID]

Table Field Hierarchy

Class:	HINV
Subclass:	CPU Thread Speeds
IT Resource Name:	/TeamQuest/System/*systemname*
TeamQuest Table Name:	HINV.CPU Thread Speeds
Open Table Name:	HINVCPUTHREADSPEEDS
Collection interval:	N/A
Default retention:	1 year
Table type:	State

Statistic Name	Description
speed_up_factor	The performance improvement when there are multiple active threads per core, compared to when there is only one active thread per core [Sequential = AVG Non-Sequential = ID]
System	The name by which the system is known to a communication network or node name. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
thread_number	The number of active threads [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = ID Non-Sequential = ID]

Table Field Hierarchy

Class:	HINV
Subclass:	Devices
IT Resource Name:	/TeamQuest/System/*systemname*
TeamQuest Table Name:	HINV.Devices
Open Table Name:	HINVDEVS
Collection interval:	N/A
Default retention:	1 year
Table type:	State

Statistic Name	Description
class	The device classification: controller, disk, or tape [Non-Sequential = ID]
controller	The device path indicator which defines a connection to another device [Non-Sequential = ID]
lun_id	The globally unique Logical Unit Number (LUN) identifier for Storage Area Network (SAN) based disk devices. This field is blank for non-SAN based disk devices, CD-ROM drives, tape drives, and so on. [Non-Sequential = ID]
name	The unique identifier for this device [Non-Sequential = ID]
name2	The alternate device name. The field may be blank. [Non-Sequential = ID]
product	The product identifier. This field may be blank. [Non-Sequential = ID]
revision	The revision level for this product. This field may be blank. [Non-Sequential = ID]
rpm	The speed at which the media spins. If an actual value cannot be obtained for the device, a default value of 7,200 is used. [Non-Sequential = ID]
sequence	The sequence number of the device [Non-Sequential = ID]
swap	A true or false statement indicating whether or not there is a swap file on the device [Non-Sequential = ID]
System	The name by which the system is known to a communication network or node. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Non-Sequential = ID]

Time	The timestamp of the data sample [Non-Sequential = ID]
vendor	The name of the device vendor. This field may be blank. [Non-Sequential = ID]

Table Field Hierarchy

Class:	HINV
Subclass:	FileSystem
IT Resource Name:	/TeamQuest/System/*systemname*
TeamQuest Table Name:	HINV.FileSystem
Open Table Name:	HINVFILESYS
Collection interval:	N/A
Default retention:	1 year
Table type:	State

Statistic Name	Description
BlkSize	The size of a block on the file system [Non-Sequential = ID]
Device	The logical disk containing the file system [Non-Sequential = ID]
Name	The unique identifier for the file system [Non-Sequential = ID]
Source	The source physical disk or logical volume of the file system. This field is always blank for this platform. [Non-Sequential = ID]
System	The name by which the system is known to a communication network or node name. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Non-Sequential = ID]
Time	The timestamp of the data sample [Non-Sequential = LST]
TotBlks	The total number of blocks on the file system [Non-Sequential = ID]
TotFiles	The maximum total number of files, as represented by inodes, possible on the file system. Some inodes may be used for entities other than visible files. [Non-Sequential = ID]
TotSize	The total amount of space on the file system in megabytes [Non-Sequential = ID]
Type	The type of the file system [Non-Sequential = ID]

Table Field Hierarchy

Class:	HINV
Subclass:	FileSystemToDevice
IT Resource Name:	/TeamQuest/System/*systemname*
TeamQuest Table Name:	HINV.FileSystemToDevice
Open Table Name:	HINVFSTODEV
Collection interval:	N/A
Default retention:	1 year
Table type:	State

Statistic Name	Description
Device	The name of the device [Non-Sequential = ID]
FileSystem	The name of the file system [Non-Sequential = ID]
System	The name by which the system is known to a communication network or node. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Non-Sequential = ID]
Time	The timestamp of the data sample [Non-Sequential = ID]

9.5. General Log Statistics

The General Log Agent (**tqglp**) is used to collect log messages generated by application programs. The General Log Agent stores the messages in the TeamQuest performance database for analysis. Examples include backup, security, database, and Web server applications.

Table Field Hierarchy

Class:	System
Subclass:	General Log
IT Resource Name:	/TeamQuest/System/*systemname*/General Log
TeamQuest Table Name:	System.General Log
Open Table Name:	SYSGENERALLOG
Collection interval:	N/A
Default retention:	4 days
Table type:	Event

Statistic Name	Description
Message	The message text [Non-Sequential = ID]
Sequence	The sequence number of the message in the sampling interval [Non-Sequential = ID]
System	The name of the system. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Non-Sequential = ID]
Time	The timestamp of the data sample [Non-Sequential = ID]
Type	The message type [Non-Sequential = ID]

9.6. TeamQuest Log Statistics

The following statistics are stored in the performance database tables by the TeamQuest Log Agent (**tqlog**). The collection interval and retention periods can be modified. For more information on modifying the collection interval and retention periods, see the *TeamQuest Performance Software Administration Guide*.

Table Field Hierarchy

Class:	Service
Subclass:	TeamQuest Log
IT Resource Name:	/TeamQuest/System/*systemname*/TeamQuest Log
TeamQuest Table Name:	Service.TeamQuest Log
Open Table Name:	SVCTQLOG
Collection interval:	N/A
Default retention:	1 day
Table type:	Event

Statistic Name	Description
Filename	The name of the TeamQuest log file that was the source of the message text [Non-Sequential = ID]
Message	The message text [Non-Sequential = ID]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Non-Sequential = ID]
Sequence	The sequence number of the message in the sampling interval [Non-Sequential = ID]
System	The name of the system. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Non-Sequential = ID]
Time	The timestamp of the data sample [Non-Sequential = ID]
Type	The log message type. This is always set to **tqlog**. [Non-Sequential = ID]

9.7. Windows Event Log Statistics

The Windows Event Log Agent (**tqw2kevent**) collects information on Microsoft Windows event log records.

Table Field Hierarchy

Class:	NT
Subclass:	Event
IT Resource Name:	/TeamQuest/System/*systemname*/WindowsEventLog
TeamQuest Table Name:	NT.Event
Open Table Name:	NTEVENT
Collection interval:	N/A
Default retention:	6 months
Table type:	Event

Statistic Name	Description
Category	A numeric categorization of the event. This is supplied by the source of the event. [Non-Sequential = ID]
Count	The number of events the record represents. This count is useful when event records are consolidated, but is usually one. [Non-Sequential = ID]
Data	The string representation of the binary data that accompanied the event. This field may be blank. [Non-Sequential = ID]
Event	The event identifier value as displayed by the Windows event viewer application [Non-Sequential = ID]
Event_Computer	The name of the computer that generated the event [Non-Sequential = ID]
Event_Time	The time when the event source generated the event [Non-Sequential = ID]
Event_Timestamp	The timestamp of when the event source generated the event [Non-Sequential = ID]
Log_File	The name of the Windows event log file [Non-Sequential = ID]
Message	The event message as it appears in the Windows event log [Non-Sequential = ID]
Sequence	A numeric sequence number that, along with the System and Time fields, uniquely identifies the event record [Non-Sequential = ID]
Source	The name of the source (application, service, driver, or subsystem) that generated the event [Non-Sequential = ID]

System	The name of the system where the agent collecting the event data is running. The System field, along with the Sequence and Time fields, uniquely identifies the event record. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Non-Sequential = ID]
Time	The timestamp of the data sample [Non-Sequential = ID]
Type	The type of the event [Non-Sequential = ID]
User	The user name of the logged-on user when the event occurred, if possible to determine [Non-Sequential = ID]

9.8. Windows Services Statistics

The Windows Services Agent (**tqw2kserv**) collects information on the services registered with the Windows service control manager.

Table Field Hierarchy

Class:	NT
Subclass:	Service
IT Resource Name:	/TeamQuest/System/*systemname*/Windows Services
TeamQuest Table Name:	NT.Service
Open Table Name:	NTSVC
Collection interval:	Based on the default aggregation set
Default retention:	3 days
Table type:	Performance

Statistic Name	Description
Caption	A one-line description of the service. It is also known as the external name of the service which is visible from the Windows Services control panel application. [Sequential = LST Non-Sequential = ID]
Count	The number of services the record represents. This count is useful when event records are consolidated, but is usually one. [Sequential = SUM Non-Sequential = SUM]
ExitCode	The Win32 error code defining any problems encountered in starting or stopping the service [Sequential = LST Non-Sequential = ID]
Interval	The expected collection interval that the agent is sampling [Sequential = SUM Non-Sequential = ID]

Name	The internal name of the service that uniquely identifies the service and provides an indication of the functionality that is managed. Name, along with the Time and System fields uniquely identifies the record. [Sequential = ID Non-Sequential = ID]
ProcessID	The process identifier of the service [Sequential = LST Non-Sequential = ID]
StartMode	The start mode for the service [Sequential = LST Non-Sequential = ID]
State	The current state of the service [Sequential = LST Non-Sequential = ID]
System	The name of the system where the agent collecting the data is running. The System field, along with the Name and Time fields, uniquely identifies the record. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]

9.9. Derived Statistics

Some products within TeamQuest Performance Software use derived statistics to display common statistics across different platforms. The derived statistics are inserted into the performance database when databases are created. In this section, a derived statistic is marked with an asterisk (*).

You can find information on the following derived statistics:

- TeamQuest Alert Derived Statistics
- TeamQuest On the Web Derived Statistics
- TeamQuest View Derived Statistics

9.9.1. TeamQuest Alert Derived Statistics

The derived statistics used by TeamQuest Alert include the following:

Parameter Hierarchy

Class:	Derived
Subclass:	TQAlert.Summary
Statistic Name:	
free_physical_mem*	The amount of physical memory available to processes in megabytes
free_virtual_mem*	The size of the virtual memory in megabytes currently on the zeroed, free, and standby lists. Zeroed and free memory is ready for use, with zeroed memory cleared to zeros. Standby memory is memory removed from a process' working set but is still available. This is an instantaneous count, not an average over the time interval.
paging_file_pct_free*	The percentage of all the page file instances that are free. See also NT.Process.pagefileMB.
pkt_errors*	The number of received and outbound packets for all network interfaces, which contain errors preventing the packets from being delivered
pkts_per_sec*	The number of packets are sent and received for all network interfaces
total_processes*	The total number of processes active on the system

9.9.2. TeamQuest On the Web Derived Statistics

The derived statistics used by TeamQuest On the Web include the following:

Parameter Hierarchy

Class:	Derived
Subclass:	TQWeb.Summary
Statistic Name:	
disk_xfers_per_sec*	The number of read and write operations for all of the disks
free_disk_space*	The unallocated space for all of the disk drives in megabytes, where 1 megabyte = 1,048,576 bytes
free_physical_mem*	The amount of physical memory available to processes in megabytes
free_virtual_mem*	The size of the virtual memory in megabytes currently on the zeroed, free, and standby lists. Zeroed and free memory is ready for use, with zeroed memory cleared to zeros. Standby memory is memory removed from a process' working set but is still available. This is an instantaneous count, not an average over the time interval.
paging_file_pct_free*	The percentage of all of the page file instances that are free
pct_disk_busy*	The percentage of elapsed time that all of the disk drives were busy servicing read or write requests
pct_priv_cpu*	The percentage of non-idle processor time spent in privileged mode. Privileged mode is a processing mode designed for operating system components and hardware-manipulating drivers. It allows direct access to hardware and all of the memory. The alternative, user mode, is a restricted processing mode designed for applications, environment subsystems, and integral subsystems. The operating system switches application threads to privileged mode to access operating system services. The percentage of privileged time includes time servicing interrupts and Deferred Procedure Calls (DPC). A high rate of privileged time might be attributable to a large number of interrupts generated by a failing device. This counter displays the average busy time as a percentage of the sample time.
pct_proc_cpu*	The percentage of time that the processor is executing a non-idle thread. This counter was designed as a primary indicator of processor activity. It is calculated by measuring the time that the processor spends executing the thread of the idle process in each sampling interval, and subtracting that value by 100% (each processor has an idle thread which consumes cycles when no other threads are ready to run). It can be viewed as the percentage of the sampling interval spent doing useful work. This counter displays the average percentage of busy time observed during the sampling interval.

pct_usr_cpu*	The percentage of non-idle processor time spent in user mode. User mode is a restricted processing mode designed for applications, environment subsystems, and integral subsystems. The alternative, privileged mode, is a processing mode designed for operating system components and hardware-manipulating drivers. It allows direct access to hardware and all of the memory. The operating system switches application threads to privileged mode to access operating system services. This counter displays the average busy time as a percentage of the sample time.
pkt_errors*	The number of received and outbound packets for all of the network interfaces that contain errors preventing the packets from being delivered
pkts_in_per_sec*	The number of packets received per second by all of the network interfaces
pkts_out_per_sec*	The number of packets sent per second by all of the network interfaces
pkts_per_sec*	The number of packets sent and received per second for all of the network interfaces
total_disk_space*	The allocated space for all of the disk drives in megabytes, where 1 megabyte = 1,048,576 bytes.

9.9.3. TeamQuest View Derived Statistics

The derived statistics used by TeamQuest View include the following:

Parameter Hierarchy

Class:	Derived
Subclass:	TQView.Summary
Statistic Name:	
Free Physical Memory (MB)*	The amount of physical memory available to processes in megabytes (MB) View Report: \report\windows\memory\physmem.rpt
Free Virtual Memory (MB)*	The amount of virtual memory available to processes in megabytes (MB) View Report: \report\windows\memory\virtmem.rpt
Total Physical Memory (MB)*	The amount of physical, random access in megabytes (MB) View Report: \report\windows\memory\physmem.rpt
Total Virtual Memory (MB)*	The amount of virtual memory that can be committed to all of the processes without enlarging the paging file in megabytes (MB) View Report: \report\windows\memory\virtmem.rpt

9.10. Optional System Activity Statistics

The system activity statistics are collected by the System Activity Agent (**tqbsp** or **tqw2kbsp**). By default, to conserve CPU time and disk space, the System Activity Agents collects only a subset of the available metrics on your system.

Some optional statistics that can be collected from Microsoft Exchange 2000, Microsoft Exchange 5.5, Microsoft Internet Information Server (IIS), and Microsoft SQL Server. These statistics are collected by the System Activity Agent directly from the Microsoft Windows registry.

To have the System Activity Agent collect these optional statistics, you will need to turn on the collection of the appropriate statistic in the configuration of the System Activity Agent. You do this through the TeamQuest Manager browser interface. For information on how to turn on data collection for individual statistics, see the *TeamQuest Performance Software Administration Guide*.

Note: *Some of the optional statistics available are user statistics. User statistics can only be collected if the TeamQuest Manager service is configured under that user. For example, if the TeamQuest Manager service is configured under the local system account, Microsoft Outlook statistics are not collected because Microsoft Outlook statistics require user authentication. However, if TeamQuest Manager is configured with a user account, Microsoft Outlook statistics are collected but other statistics that require a local system account are not collected.*

The statistics listed in the following subsections are the statistics reported in the default reports that are distributed with TeamQuest View. For more information on other available statistics, see the respective third-party documentation.

You can find information on the following optional system activity statistics:

- Microsoft Exchange 2000
- Microsoft Exchange 5.5
- Microsoft IIS Statistics
- Microsoft SQL Server

9.10.1. Microsoft Exchange 2000

The following statistics can be collected by the System Activity Agent from Microsoft Exchange 2000.

Parameter Hierarchy

Class:	MSExchangeIS
Subclass:	N/A
IT Resource Name:	/TeamQuest/System/*systemname*/MSExchange
TeamQuest Table Name:	MSExchangeIS
Open Table Name:	MSEXIS
Statistic Name:	
Active Connection Count	The number of connections that have shown some activity in the last 10 minutes [Sequential = LST Non-Sequential = SUM] View Report: \report\MicrosoftExchg\Release2000\ ISActiveConnectionAndUserCount.rpt
Active User Count	The number of user connections that have shown some activity in the last 10 minutes [Sequential = LST Non-Sequential = SUM] View Report: \report\MicrosoftExchg\Release2000\ ISActiveConnectionAndUserCount.rpt
Virus Scan Files Cleaned	The number of files that have been scanned for viruses and were cleaned [Sequential = LST Non-Sequential = SUM] View Report: \report\MicrosoftExchg\Release2000\ VirusScannedFilesCleanedAndQuarantined.rpt
Virus Scan Files Quarantined	The number of files that have been scanned for viruses and were quarantined [Sequential = LST Non-Sequential = SUM] View Report: \report\MicrosoftExchg\Release2000\ VirusScannedFilesCleanedAndQuarantined.rpt
Virus Scan Messages Cleaned/sec	The number of messages that have been scanned for viruses and were cleaned per second [Sequential = AVG Non-Sequential = SUM] View Report: \report\MicrosoftExchg\Release2000\ VirusScannedMsgsCleanedAndQuarantined.rpt

Virus Scan Messages Quarantined/sec	The number of messages that have been scanned for viruses and were quarantined per second [Sequential = AVG Non-Sequential = SUM] View Report: \report\MicrosoftExchg\Release2000\VirusScannedMsgsCleanedAndQuarantined.rpt
Class:	MSExchangeIS Mailbox
Subclass:	N/A
IT Resource Name:	/TeamQuest/System/*systemname*/MSExchange
TeamQuest Table Name:	MSExchangeIS Mailbox
Open Table Name:	MSEXISMAILBOX
Resource:	mailbox type1, mailbox type2, ...
Statistic Name:	
Average Local Delivery Time	The average time between the submission of a message and the delivery to all local recipients (recipients on the same server) for the last 10 messages [Sequential = LST Non-Sequential = AVG] View Report: \report\MicrosoftExchg\Release2000\ISMailboxAvgLocalDeliveryTime.rpt
Message Recipients Delivered/min	The number of messages that are delivered to recipients per minute [Sequential = AVG Non-Sequential = SUM] View Report: \report\MicrosoftExchg\Release2000\ISMailboxMsgsAndRecipientsDeliveredperMin.rpt
Messages Delivered/min	The number of messages that are delivered to all recipients per minute [Sequential = AVG Non-Sequential = SUM] View Report: \report\MicrosoftExchg\Release2000\ISMailboxMsgsAndRecipientsDeliveredperMin.rpt
Receive Queue Size	The number of messages in the private information stores receive queue [Sequential = LST Non-Sequential = SUM] View Report: \report\MicrosoftExchg\Release2000\ISMailboxSendAndReceiveQueueSize.rpt
Send Queue Size	The number of messages in the information stores send queue [Sequential = LST Non-Sequential = SUM] View Report: \report\MicrosoftExchg\Release2000\ISMailboxSendAndReceiveQueueSize.rpt

Class:	MSExchangeMTA Connections
Subclass:	N/A
IT Resource Name:	/TeamQuest/System/*systemname*/MSExchange
TeamQuest Table Name:	MSExchangeMTA Connections
Open Table Name:	MSEXMTACONNS
Resource:	connection type1, connection type2, ...
Statistic Name:	
Inbound Bytes Total	The total volume of message content received from this entity since the message transfer agent (MTA) initialization, measured in kilobytes [Sequential = LST Non-Sequential = SUM] View Report: \report\MicrosoftExchg\Release2000\ MTAConnectionsInboundAndOutboundTotalBytes.rpt
Outbound Bytes Total	The total volume of message content transmitted to this entity since the message transfer agent (MTA) initialization, measured in kilobytes [Sequential = LST Non-Sequential = SUM] View Report: \report\MicrosoftExchg\Release2000\ MTAConnectionsInboundAndOutboundTotalBytes.rpt

9.10.2. Microsoft Exchange 5.5

The following statistics can be collected by the System Activity Agent from Microsoft Exchange 5.5.

Parameter Hierarchy

Class:	MSExchangeIMC
Subclass:	N/A
IT Resource Name:	/TeamQuest/System/*systemname*/MSExchange
TeamQuest Table Name:	MSExchangeIMC
Open Table Name:	MSEXIMC
Statistic Name:	
Inbound Bytes/Hr	The number of bytes transferred per hour to the Microsoft Exchange Server [Sequential = LST Non-Sequential = SUM] View Report: \report\MicrosoftExchg\Release55\ IMCInboundAndOutboundBytesperHr.rpt
Inbound Messages/Hr	The number of messages transferred per hour to the Microsoft Exchange Server [Sequential = LST Non-Sequential = SUM] View Report: \report\MicrosoftExchg\Release55\ IMCInboundAndOutboundMsgsperHr.rpt
Outbound Bytes/Hr	The number of bytes transferred per hour to the Internet [Sequential = LST Non-Sequential = SUM] View Report: \report\MicrosoftExchg\Release55\ IMCInboundAndOutboundBytesperHr.rpt
Outbound Messages/Hr	The number of messages are transferred per hour to the Internet [Sequential = LST Non-Sequential = SUM] View Report: \report\MicrosoftExchg\Release55\ IMCInboundAndOutboundMsgsperHr.rpt
Total Messages Queued	The total number of messages waiting in the Internet mail service queues [Sequential = LST Non-Sequential = SUM] View Report: \report\MicrosoftExchg\Release55\ TotalRecipientsAndMsgsQueued.rpt
Total Recipients Queued	The total number of recipients in the Internet mail service queues [Sequential = LST Non-Sequential = SUM] View Report: \report\MicrosoftExchg\Release55\ TotalRecipientsAndMsgsQueued.rpt

Class:	MSExchangeIS Private
Subclass:	N/A
IT Resource Name:	/TeamQuest/System/*systemname*/MSExchange
TeamQuest Table Name:	MSExchangeIS Private
Open Table Name:	MSEXISPRIVATE
Statistic Name:	
Folder Opens/sec	The number of requests to open folders submitted per second to the information stores [Sequential = AVG Non-Sequential = SUM] View Report: \report\MicrosoftExchg\Release55\ MsgsAndFoldersOpenedperSec.rpt
Message Opens/sec	The number of requests to open messages submitted per second to the information stores [Sequential = AVG Non-Sequential = SUM] View Report: \report\MicrosoftExchg\Release55\ MsgsAndFoldersOpenedperSec.rpt
Messages Sent/min	The number of messages sent per minute to the other storage providers using the message transfer agent (MTA) [Sequential = AVG Non-Sequential = SUM] View Report: \report\MicrosoftExchg\Release55\ MsgsSentAndSubmittedperMinute.rpt
Messages Submitted/min	The number of messages submitted per minute by clients [Sequential = AVG Non-Sequential = SUM] View Report: \report\MicrosoftExchg\Release55\ MsgsSentAndSubmittedperMinute.rpt
Receive Queue Size	The number of messages in the private information stores receive queue [Sequential = LST Non-Sequential = SUM] View Report: \report\MicrosoftExchg\Release55\ SendAndReceiveQueueSize.rpt
Send Queue Size	The number of messages in the private information stores send queue [Sequential = LST Non-Sequential = SUM] View Report: \report\MicrosoftExchg\Release55\ SendAndReceiveQueueSize.rpt

Class:	MSExchangeMTA
Subclass:	N/A
IT Resource Name:	/TeamQuest/System/*systemname*/MSExchange
TeamQuest Table Name:	MSExchangeMTA
Open Table Name:	MSEXMTA
Statistic Name:	
Disk File Reads/sec	The number of disk file read operations per second [Sequential = AVG Non-Sequential = SUM] View Report: \report\MicrosoftExchg\Release55\ MTADiskWritesAndReadsperSec.rpt
Disk File Writes/sec	The number of disk file write operations per second [Sequential = AVG Non-Sequential = SUM] View Report: \report\MicrosoftExchg\Release55\ MTADiskWritesAndReadsperSec.rpt

9.10.3. Microsoft IIS Statistics

The following statistics can be collected by the System Activity Agent from the Microsoft Internet Information Server (IIS).

Parameter Hierarchy

Class:	Active Server Pages
Subclass:	N/A
IT Resource Name:	/TeamQuest/System/*systemname*/IIS
TeamQuest Table Name:	Active Server Pages
Open Table Name:	ACTIVESERVPGS
Statistic Name:	
Sessions Total	The total number of sessions since the service was started [Sequential = LST Non-Sequential = SUM] View Report: \report\MicrosoftIIS\ ActServerPgsTotalSessions.rpt
Transactions Total	The total number of transactions since the service was started [Sequential = LST Non-Sequential = SUM] View Report: \report\MicrosoftIIS\ ActServerPgsTotalTrans.rpt

Class:	FTP Service
Subclass:	N/A
IT Resource Name:	/TeamQuest/System/*systemname*/IIS
TeamQuest Table Name:	FTP Service
Open Table Name:	FTPSVC
Resource:	ftp service1, ftp service2, ...
Statistic Name:	
Total Connection Attempts (all instances)	The number of connection attempts (from all instances) that have been made to the FTP service [Sequential = LST Non-Sequential = SUM] View Report: \report\MicrosoftIIS\FTPConnAtmpts.rpt
Total Files Sent	The number of files sent by the FTP service since startup [Sequential = LST Non-Sequential = SUM] View Report: \report\MicrosoftIIS\FTPFilesSent.rpt

Class:	Internet Information Services Global
Subclass:	N/A
IT Resource Name:	/TeamQuest/System/*systemname*/IIS
TeamQuest Table Name:	Internet Information Services Global
Open Table Name:	INTERNETINFORMATIONS
Statistic Name:	
File Cache Flushes	The number of file cache flushes since server startup [Sequential = LST Non-Sequential = SUM] View Report: \report\MicrosoftIIS\ IISGlobalFileCacheFlushes.rpt
File Cache Hits %	The ratio of file cache hits to total cache requests [Sequential = AVG Non-Sequential = AVG] View Report: \report\MicrosoftIIS\ IISGlobalFileCacheHitPercent.rpt

Class:	Web Service
Subclass:	N/A
IT Resource Name:	/TeamQuest/System/*systemname*/IIS
TeamQuest Table Name:	Web Service
Open Table Name:	WEBSVC
Resource:	web service1, web service2, ...
Statistic Name:	
Bytes Total/sec	The sum of Bytes sent/sec and Bytes received/sec. This is the total number of bytes transferred by the Web service per second. [Sequential = AVG Non-Sequential = SUM] View Report: \report\MicrosoftIIS\ WebServiceBytesPerSec.rpt
Maximum Connections	The maximum number of simultaneous connections established with the Web service [Sequential = MAX Non-Sequential = MAX] View Report: \report\MicrosoftIIS\ WebServiceMaxConn.rpt
Maximum ISAPI Extension Requests	The maximum number of simultaneous connections established with the Web service [Sequential = MAX Non-Sequential = MAX] View Report: \report\MicrosoftIIS\ WebServiceMaxISAPIExtensionReqs.rpt
Total Anonymous Users	The total number of users who established an anonymous connection with the Web service (counted since service startup) [Sequential = LST Non-Sequential = SUM] View Report: \report\MicrosoftIIS\ WebServiceAnonymousUsers.rpt
Total Connection Attempts (all instances)	The number of connections that have been attempted using the Web service (counted since service startup) [Sequential = LST Non-Sequential = SUM] View Report: \report\MicrosoftIIS\ WebServiceConnAtmpts.rpt
Total Not Found Errors	The number of requests that could not be satisfied by the server because the requested document could not be found. These are generally reported as an HTTP 404 error code to the client. [Sequential = LST Non-Sequential = SUM] View Report: \report\MicrosoftIIS\ WebServiceNotFoundErrors.rpt

9.10.4. Microsoft SQL Server

The following statistics can be collected by the System Activity Agent from the Microsoft SQL Server software and are created by a default SQL Server instance.

A named SQL Server instance has the Class name based on the SQL Server instance name. For example, a named instance of “SQL5” shows the “Buffer Manager” object as MSSQL$SQL5.Buffer Manager.

The IT Resource name for the named SQL Server instance is also based on the SQL Server instance name. For our example, the IT Resource name would be /TeamQuest/System/systemname/SQL Server/SQL5.

Parameter Hierarchy

Class:	SQLServer:Access Methods
Subclass:	N/A
IT Resource Name:	/TeamQuest/System/*systemname*/SQL Server/SQL
TeamQuest Table Name:	SQLServer:Access Methods
Open Table Name:	SQLSVRACCESSMETHODS
Statistic Name:	
Page Splits/sec	The number of page splits per second occurring as the result of index pages overflowing [Sequential = AVG Non-Sequential = SUM] View Report: \report\SQLServer\SQL7\PageSplitsperSec.rpt
Table Lock Escalations/sec	The number of times locks on a table were escalated per second [Sequential = AVG Non-Sequential = SUM] View Report: \report\SQLServer\ TableLockEscalationsperSec.rpt
Workfiles Created/sec	The number of workfiles created in the last second [Sequential = AVG Non-Sequential = SUM] View Report: \report\SQLServer\ WorkFilesAndWorkTablesCreatedperSec.rpt
Worktables Created/sec	The number of worktables created in the last second [Sequential = AVG Non-Sequential = SUM] View Report: \report\SQLServer\ WorkFilesAndWorkTablesCreatedperSec.rpt

Class:	SQLServer:Buffer Manager
Subclass:	N/A
IT Resource Name:	/TeamQuest/System/*systemname*/SQL Server/SQL
TeamQuest Table Name:	SQLServer:Buffer Manager
Open Table Name:	SQLSVRBUFFMGR
Statistic Name:	
Buffer Cache Hit Ratio	The percentage of pages that were found in the buffer cache without having to incur a read from disk [Sequential = AVG Non-Sequential = AVG] View Report: \report\SQLServer\SQL7\ BufferCacheHitRatio.rpt
Page Requests/sec	The number of requests for buffer page per second [Sequential = AVG Non-Sequential = SUM] View Report: \report\SQLServer\SQL7\PageReqsperSec.rpt

Class:	SQLServer:Databases
Subclass:	N/A
IT Resource Name:	/TeamQuest/System/*systemname*/SQL Server/SQL
TeamQuest Table Name:	SQLServer:Databases
Open Table Name:	SQLSVRDBS
Resource:	database1, database2, ...
Statistic Name:	
Repl. Trans. Rate	The replication transaction rate (per second) [Sequential = AVG Non-Sequential = SUM] View Report: \report\SQLServer\ ReplicationTransperSec.rpt

Class:	SQLServer:General Statistics
Subclass:	N/A
IT Resource Name:	/TeamQuest/System/*systemname*/SQL Server/SQL
TeamQuest Table Name:	SQLServer:General Statistics
Open Table Name:	SQLSVRGENERALSTATS
Statistic Name:	
Logins/sec	The total number of logins started per second [Sequential = AVG Non-Sequential = SUM] View Report: \report\SQLServer\ UserLogins-LogoutsperSec.rpt
Logouts/sec	The total number of logouts started per second [Sequential = AVG Non-Sequential = SUM] View Report: \report\SQLServer\ UserLogins-LogoutsperSec.rpt

Class:	SQLServer:Latches
Subclass:	N/A
IT Resource Name:	/TeamQuest/System/*systemname*/SQL Server/SQL
TeamQuest Table Name:	SQLServer:Latches
Open Table Name:	SQLSVRLATCHES
Statistic Name:	
Latch Waits/sec	The number of latch requests per second that could not be granted immediately and had to wait before being granted [Sequential = AVG Non-Sequential = SUM] View Report: \report\SQLServer\ SQLLatchWaitsperSec.rpt
Total Latch Wait Time (ms)	The total time in milliseconds (ms) that latch requests had to wait in the last second [Sequential = AVG Non-Sequential = SUM] View Report: \report\SQLServer\ SQLTotalLatchWaitTime.rpt

Class:	SQLServer:Locks
Subclass:	N/A
IT Resource Name:	/TeamQuest/System/*systemname*/SQL Server/SQL
TeamQuest Table Name:	SQLServer:Locks
Open Table Name:	SQLSVRLOCKS
Resource:	lock type1, lock type2, ...
Statistic Name:	
Lock Waits/sec	The number of lock requests per second that could not be satisfied immediately and required the caller to wait before being granted the lock [Sequential = AVG Non-Sequential = SUM] View Report: \report\SQLServer\ TableLockWaitsperSec.rpt

Class:	SQLServer:SQL Statistics
Subclass:	N/A
IT Resource Name:	/TeamQuest/System/*systemname*/SQL Server/SQL
TeamQuest Table Name:	SQLServer:SQL Statistics
Open Table Name:	SQLSVRSQLSTATS
Statistic Name:	
SQL Compilations/sec	The number of SQL compilations per second [Sequential = AVG Non-Sequential = SUM] View Report: \report\SQLServer\ SQLCompileAndRecompileperSec.rpt
SQL Re-Compilations/sec	The number of SQL re-compilations per second [Sequential = AVG Non-Sequential = SUM] View Report: \report\SQLServer\ SQLCompileAndRecompileperSec.rpt

Section 10
Network Applications

The Network Application Agent (**tqnpp**) passively monitors TCP/IP based applications (for example, web applications). It uses port mirroring on a local area network (LAN) switch to passively monitor TCP/IP traffic. The agent aggregates the monitored packets and calculates server and network response times, utilization, and throughput statistics for active applications. Optionally, the agent can calculate transaction rates and response times using an integrated set of heuristics.

This section contains a listing of the statistics collected by the agent:

- Performance Statistics (see 10.1)
- Client Statistics (see 10.2)
- Port Statistics (see 10.3)

Note: *At the end of each statistic description, you will see a notation in brackets indicating the method that is used for data consolidation (for example,* [Sequential = SUM Non-Sequential = SUM]). *Sequential means that the field is consolidated over time. Non-Sequential means that the field is consolidated within a specified time interval.*

The following notations are used:

AVG = Average
DIV = Weight
FST = First
ID = Identifier
LST = Last
MAX = Maximum
MIN = Minimum
NON = None or no method was used
SUM = Summation

If you are using TeamQuest View to view aggregation set data, the sequential method is used for data consolidation.

Because derived statistics are not stored in the performance database, the data consolidation method is not shown in the description of a derived statistic.

10.1. Performance Statistics

The Network Applications Agent (**tqnpp**) collects and stores data into the default aggregation set of the performance database. The statistics are classified by a hierarchy of key names. A statistic marked with an asterisk (*) is a derived statistic.

Parameter Hierarchy

Class:	Network Application
Subclass:	Agent
IT Resource Name:	/TeamQuest/Network/Traffic/*systemname*
TeamQuest Table Name:	Network Application.Agent
Open Table Name:	NETAPPAGENT
Statistic Name:	
packet limit	Indicates whether or not the packet limit was reached [Sequential = LST Non-Sequential = LST]
packets dropped	The number of packets dropped during the sample interval. This value is not restricted by the list of ports for the agent. [Sequential = SUM Non-Sequential = SUM]
packets received	The number of packets received during the sample interval. This value is not restricted by the list of ports for the agent. [Sequential = SUM Non-Sequential = SUM]
packets recorded	The number of packets recorded for the sample interval [Sequential = SUM Non-Sequential = SUM]
port total	The number of ports being monitored [Sequential = SUM Non-Sequential = SUM]
processing limit	Indicates whether or not the processing time limit was reached [Sequential = LST Non-Sequential = LST]
processing time	The elapsed time in seconds to collect, process, and store the data [Sequential = SUM Non-Sequential = SUM]

Class:	Network Application
Subclass:	by Port
IT Resource Name:	/TeamQuest/Network/Traffic/*systemname*
TeamQuest Table Name:	Network Application.by Port
Open Table Name:	NETAPPBYPORT
Resource:	port0, port1, port2, ...
Statistic Name:	
active clients	The number of active clients for the port [Sequential = AVG Non-Sequential = SUM] View Report: /report/network/application/port/connection.rpt
connections	The number of new connections for the port [Sequential = SUM Non-Sequential = SUM] View Report: /report/network/application/port/connection.rpt
data segments/s*	The number of input and output data segments per second for the port
in Mbytes/s	The number of input bytes in megabytes per second for the port [Sequential = AVG Non-Sequential = SUM] View Report: /report/network/application/port/transfers.rpt
in packets/s	The number of input packets per second for the port [Sequential = AVG Non-Sequential = SUM] View Report: /report/network/application/port/packets.rpt
Mbytes/s*	The number of input and output bytes in megabytes per second for the port View Report: /report/network/application/port/sum-xfers.rpt
network time	The average amount of time it took a packet to traverse the network for the port [Sequential = AVG Non-Sequential = SUM] View Report: /report/network/application/port/response.rpt
out Mbytes/s	The number of output bytes in megabytes per second for the port [Sequential = AVG Non-Sequential = SUM] View Report: /report/network/application/port/transfers.rpt
out packets/s	The number of output packets per second for the port [Sequential = AVG Non-Sequential = SUM] View Report: /report/network/application/port/packets.rpt
packets/s*	The number of input and output packets per second for the port View Report: /report/network/application/port/sum-pkts.rpt

reaction time	The average amount of time for the initial response to a request for the port [Sequential = AVG Non-Sequential = SUM] View Report: /report/network/application/port/reaction.rpt
requests/s	The number of requests per second for the port [Sequential = AVG Non-Sequential = SUM]
response time*	The average amount of time for a request for the port View Report: /report/network/application/port/sum-resp.rpt
responses/s	The number of responses per second for the port [Sequential = AVG Non-Sequential = SUM]
server time	The average amount of time the server took to process a request for the port [Sequential = AVG Non-Sequential = SUM] View Report: /report/network/application/port/response.rpt
terminations	The number of terminated connections for the port [Sequential = SUM Non-Sequential = SUM] View Report: /report/network/application/port/connection.rpt
transactions/s	The number of transactions per second for the port [Sequential = AVG Non-Sequential = SUM]

Class:	Network Application
Subclass:	Summary
IT Resource Name:	/TeamQuest/Network/Traffic/*systemname*
TeamQuest Table Name:	Network Application.Summary
Open Table Name:	NETAPPSUM
Statistic Name:	
active clients	The number of active clients during the sample interval [Sequential = AVG Non-Sequential = AVG] View Report: /report/network/application/summary/connection.rpt
active ports	The number of ports that had activity during the sample interval [Sequential = AVG Non-Sequential = AVG] View Report: /report/network/application/summary/connection.rpt
connections	The number of new connections [Sequential = SUM Non-Sequential = SUM] View Report: /report/network/application/summary/connection.rpt
data segments/s*	The number of input and output data segments per second

in Mbytes/s	The number of input bytes in megabytes per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/network/application/summary/transfers.rpt
in packets/s	The number of input packets per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/network/application/summary/packets.rpt
Mbytes/s*	The number of input and output bytes in megabytes per second View Report: /report/network/application/summary/sum-xfers.rpt
network time	The average amount of time it took a packet to traverse the network [Sequential = AVG Non-Sequential = SUM] View Report: /report/network/application/summary/response.rpt
out Mbytes/s	The number of output bytes in megabytes per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/network/application/summary/transfers.rpt
out packets/s	The number of output packets per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/network/application/summary/packets.rpt
packets/s*	The number of input and output packets per second View Report: /report/network/application/summary/sum-pkts.rpt
reaction time	The average amount of time for the initial response to a request [Sequential = AVG Non-Sequential = SUM] View Report: /report/network/application/summary/reaction.rpt
requests/s	The number of requests per second [Sequential = AVG Non-Sequential = SUM]
response time*	The average amount of time for a request View Report: /report/network/application/summary/sum-resp.rpt
responses/s	The number of responses per second [Sequential = AVG Non-Sequential = SUM]
server time	The average amount of time the server took to process a request [Sequential = AVG Non-Sequential = SUM] View Report: /report/network/application/summary/response.rpt
terminations	The number of terminated connections [Sequential = SUM Non-Sequential = SUM] View Report: /report/network/application/summary/connection.rpt

Table Field Hierarchy

Class:	TQ
Subclass:	Agent Interval
IT Resource Name:	/TeamQuest/System/*systemname*
TeamQuest Table Name:	TQ.AgentInterval
Open Table Name:	AGENTINTERVAL
Collection interval:	Based on the collection period
Default retentions:	8 hours at collection period interval 8 days at 10-minute intervals 35 days at 1-hour intervals 400 days at 8-hour intervals
Table type:	Performance
Derived tables using fields from this table:	N/A

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = ID]
Agent	The name of the agent that is collecting data. This field is limited to 52 characters. Any agent name longer than 52 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Instance	The instance name of the agent that is collecting data. This field is limited to 52 characters. Any instance name longer than 52 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = ID]
PID	The process identifier of the agent instance that is collecting data [Sequential = ID Non-Sequential = ID]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
System	The name of the system where the data is collected. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]

10.2. Client Statistics

The Network Application Agent stores detailed client information in the Network Application:Client table in the TeamQuest performance database. The values of the statistics represent a summary of all of the activity for each client system that had a conversation with the configured system.

Note: *This data is available only when the Client Table setting is configured to ON.*

Table Field Hierarchy

Class:	Network Application
Subclass:	Client
IT Resource Name:	/TeamQuest/Network/Traffic/*systemname*
TeamQuest Table Name:	Network Application.Client
Open Table Name:	NETAPPCLI
Collection interval:	60 seconds (default)
Default retention:	1 day
Table type:	Performance

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = ID]
Client	The client system name [Sequential = ID Non-Sequential = ID]
Connections	The number of new connections for the client [Sequential = SUM Non-Sequential = SUM]
Data Segments	The number of input and output data segments for the client [Sequential = SUM Non-Sequential = SUM]
Interval	The expected data sampling interval in seconds [Sequential = SUM Non-Sequential = ID]
Mbytes	The number of input and output bytes in megabytes for the client [Sequential = SUM Non-Sequential = SUM]
Mbytes In	The number of input bytes in megabytes for the client [Sequential = SUM Non-Sequential = SUM]
Mbytes Out	The number output bytes in megabytes for the client [Sequential = SUM Non-Sequential = SUM]
Network Time	The average amount of time it took a packet to traverse the network for the client [Sequential = AVG Non-Sequential = AVG]

Packets	The number of input and output packets for the client [Sequential = SUM Non-Sequential = SUM]
Packets In	The number of input packets for the client [Sequential = SUM Non-Sequential = SUM]
Packets Out	The number of output packets for the client [Sequential = SUM Non-Sequential = SUM]
Ports	This statistic is not available. The value is displayed as <N/A>.
Reaction Time	The average amount of time for the initial response to a request for the client [Sequential = AVG Non-Sequential = AVG]
Requests	The number of requests to the client [Sequential = SUM Non-Sequential = SUM]
Responses	The number of responses for the client [Sequential = SUM Non-Sequential = SUM]
Server Time	The average amount of time the server took to process a request for the client [Sequential = AVG Non-Sequential = AVG]
System	The server system name. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Terminations	The number of terminated connections for the client [Sequential = SUM Non-Sequential = SUM]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
Transaction Time	The average transaction response time for the client. This statistic will be set to <N/A> if the Record Transactions setting is set to OFF. [Sequential = AVG Non-Sequential = AVG]
Transactions	The number of transactions for the client. This statistic will be set to <N/A> if the Record Transactions setting is set to OFF. [Sequential = SUM Non-Sequential = SUM]

10.3. Port Statistics

The Network Application Agent stores detailed port information in the Network Application:Port table in the TeamQuest performance database. The values of the statistics represent a summary of all of the activity for each port system for the configured system.

Table Field Hierarchy

Class:	Network Application
Subclass:	Port
IT Resource Name:	/TeamQuest/Network/Traffic/*systemname*
TeamQuest Table Name:	Network Application.Port
Open Table Name:	NETAPPPORT
Collection interval:	60 seconds (default)
Default retention:	1 day
Table type:	Performance

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = ID]
Clients	The number of active clients for the port [Sequential = SUM Non-Sequential = SUM]
Connections	The number of new connections for the port [Sequential = SUM Non-Sequential = SUM]
Data Segments	The number of input and output data segments for the port [Sequential = SUM Non-Sequential = SUM]
Interval	The expected data sampling interval [Sequential = SUM Non-Sequential = ID]
Mbytes	The number of input and output bytes in megabytes for the port [Sequential = SUM Non-Sequential = SUM]
Mbytes In	The number of input bytes in megabytes for the port [Sequential = SUM Non-Sequential = SUM]
Mbytes Out	The number output bytes in megabytes for the port [Sequential = SUM Non-Sequential = SUM]
Network Time	The average amount of time it took a packet to traverse the network for the port [Sequential = AVG Non-Sequential = AVG]
Packets	The number of input and output packets for the port [Sequential = SUM Non-Sequential = SUM]
Packets In	The number of input packets for the port [Sequential = SUM Non-Sequential = SUM]

Packets Out	The number of output packets for the port [Sequential = SUM Non-Sequential = SUM]
Port	The port name [Sequential = ID Non-Sequential = ID]
Reaction Time	The average amount of time for the initial response to a request for the port [Sequential = AVG Non-Sequential = AVG]
Requests	The number of requests for the port [Sequential = SUM Non-Sequential = SUM]
Responses	The number of responses for the port [Sequential = SUM Non-Sequential = SUM]
Server Time	The average amount of time the server took to process a request for the port [Sequential = AVG Non-Sequential = AVG]
System	The server system name. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Terminations	The number of terminated connections for the port [Sequential = SUM Non-Sequential = SUM]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
Transaction Time	The average transaction response time for the port. This statistic will be set to <N/A> if the Record Transactions setting is set to OFF. [Sequential = AVG Non-Sequential = AVG]
Transactions	The number of transactions for the port. This statistic will be set to <N/A> if the Record Transactions setting is set to OFF. [Sequential = SUM Non-Sequential = SUM]

Section 11
Network Devices

The Network Device Agent (**tqndp**) monitors Simple Network Management Protocol (SNMP) enabled devices for performance data. Those devices include, but are not limited to, switches and routers. The agent collects utilization, throughput, and error-related performance data.

This section contains a listing of the statistics collected by the agent:

- Summary Statistics (see 11.1)
- Interface Statistics (see 11.2)

Note: *At the end of each statistic description, you will see a notation in brackets indicating the method that is used for data consolidation (for example,* [Sequential = SUM Non-Sequential = SUM]). *Sequential means that the field is consolidated over time. Non-Sequential means that the field is consolidated within a specified time interval.*

The following notations are used:

AVG = Average
DIV = Weight
FST = First
ID = Identifier
LST = Last
MAX = Maximum
MIN = Minimum
NON = None or no method was used
SUM = Summation

If you are using TeamQuest View to view aggregation set data, the sequential method is used for data consolidation.

Because derived statistics are not stored in the performance database, the data consolidation method is not shown in the description of a derived statistic.

11.1. Summary Statistics

The Network Device Agent (**tqndp**) collects and stores data into the default aggregation set of the performance database. The statistics are classified by a hierarchy of key names. The values of the following statistics represent a summary of all the activity for each configured network device. A statistic marked with an asterisk (*) is a derived statistic.

Parameter Hierarchy

Class:	Network Device
Subclass:	Summary
IT Resource Name:	/TeamQuest/Network/Devices/*systemname*
TeamQuest Table Name:	Network Device.Summary
Open Table Name:	NETDEVSUM
Statistic Name:	
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = ID]
avgBusy1	The 1-minute exponentially-decayed moving average of the CPU busy percentage. This statistic is available only for selected Cisco devices. [Sequential = AVG Non-Sequential = SUM] View Report: /report/network/device/cisco-cpu.rpt
avgBusy5	The 5-minute exponentially-decayed moving average of the CPU busy percentage. This statistic is available only for selected Cisco devices. [Sequential = AVG Non-Sequential = SUM] View Report: /report/network/device/cisco-cpu.rpt
cpmCPUTotal1min	The overall percentage of CPU busy in the last 1-minute sampling interval [Sequential = LST Non-Sequential = LST] View Report: /report/network/device/cisco-cpu.rpt
cpmCPUTotal1minRev	The overall percentage of CPU busy in the last 1-minute sampling interval [Sequential = LST Non-Sequential = LST] View Report: /report/network/device/cisco-cpu.rpt
cpmCPUTotal5min	The overall percentage of CPU busy in the last 5-minute sampling interval [Sequential = LST Non-Sequential = LST] View Report: /report/network/device/cisco-cpu.rpt

cpmCPUTotal5minRev	The overall percentage of CPU busy in the last 5-minute sampling interval [Sequential = LST Non-Sequential = LST] View Report: /report/network/device/cisco-cpu.rpt
discards/s*	The number of input and output discards per second
errors/s*	The number of input and output errors per second
in discards/s*	The number of input discards per second
in errors*	The number of input errors per second
in Kbytes/s*	The number of input bytes per second in kilobytes
in packets/s*	The number of input packets per second
Kbytes/s*	The number of input and output bytes per second in kilobytes
out discards/s*	The number of output discards per second
out errors/s*	The number of output errors per second
out Kbytes/s*	The number of output bytes per second in kilobytes
out packets/s*	The number of output packets per second
packets/s*	The number of input and output packets per second View Report: /report/network/device/sum-pkts.rpt
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]

Table Field Hierarchy

Class:	TQ
Subclass:	Agent Interval
IT Resource Name:	/TeamQuest/System/*systemname*
TeamQuest Table Name:	TQ.AgentInterval
Open Table Name:	AGENTINTERVAL
Collection interval:	Based on the collection period
Default retentions:	8 hours at collection period interval 8 days at 10-minute intervals 35 days at 1-hour intervals 400 days at 8-hour intervals
Table type:	Performance
Derived tables using fields from this table:	N/A

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = ID]
Agent	The name of the agent that is collecting data. This field is limited to 52 characters. Any agent name longer than 52 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Instance	The instance name of the agent that is collecting data. This field is limited to 52 characters. Any instance name longer than 52 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = ID]
PID	The process identifier of the agent instance that is collecting data [Sequential = ID Non-Sequential = ID]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
System	The name of the system where the data is collected. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]

11.2. Interface Statistics

The Network Device Agent (**tqndp**) collects and stores data into the default aggregation set of the performance database. The statistics are classified by a hierarchy of key names. The values of the following statistics represent a summary of all the activity for each interface of the configured network device. A statistic marked with an asterisk (*) is a derived statistic.

Parameter Hierarchy

Class:	Network Device
Subclass:	by Interface
IT Resource Name:	/TeamQuest/Network/Devices/*systemname*
TeamQuest Table Name:	Network Device.by Interface
Open Table Name:	NETDEVBYINTERFACE
Resource:	interface0, interface1, interface2, ...
Statistic Name:	
discards/s*	The number of input and output discards per second
errors/s*	The number of input and output errors per second
ifspeed	An estimate of the interface's current bandwidth in bits per second. For interfaces that do not vary in bandwidth or for those where no accurate estimation can be made, this value may represent the nominal bandwidth. [Sequential = AVG Non-Sequential = SUM]
in bcpackets/s	The number of packets addressed to a broadcast address at this sub-layer [Sequential = AVG Non-Sequential = SUM]
in discards/s	The number of input discards per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/network/device/discards.rpt
in errors	The number of input errors per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/network/device/errors.rpt
in Kbytes/s	The number of input bytes per second in kilobytes [Sequential = AVG Non-Sequential = SUM] View Report: /report/network/device/transfers.rpt
in mcpackets/s	The number of packets addressed to a multicast address at this sub-layer. For a MAC layer protocol, this includes the Group and Functional addresses. [Sequential = AVG Non-Sequential = SUM]
in nupackets/s	The number of input non-unicast packets per second. This field contains the sum of mcpackets and bcpackets if the interface supports bcpackets and mcpackets. [Sequential = AVG Non-Sequential = SUM]

in packets/s*	The number of input packets per second View Report: /report/network/device/packets.rpt
in upackets/s	The number of input unicast packets per second [Sequential = AVG Non-Sequential = SUM]
Kbytes/s*	The number of input and output bytes per second in kilobytes View Report: /report/network/device/sum-xfers.rpt
out bcpackets/s	The total number of packets that higher-level protocols requested to be transmitted and that were addressed to a broadcast address at this sub-layer, including the packets that were discarded or not sent [Sequential = AVG Non-Sequential = SUM] View Report: /report/network/device/sum-pkts.rpt
out discards/s	The number of output discards per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/network/device/discards.rpt
out errors/s	The number of output errors per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/network/device/errors.rpt
out Kbytes/s	The number of output bytes per second in kilobytes [Sequential = AVG Non-Sequential = SUM] View Report: /report/network/device/transfers.rpt
out mcpackets/s	The total number of packets that higher-level protocols requested to be transmitted and that were addressed to a multicast address at this sub-layer, including the packets that were discarded or not sent. For a MAC layer protocol, this includes Group and Functional addresses. [Sequential = AVG Non-Sequential = SUM] View Report: /report/network/device/sum-pkts.rpt
out nupackets/s	The number of output non-unicast packets per second. This field contains the sum of mcpackets and bcpackets if the interface supports bcpackets and mcpackets. [Sequential = AVG Non-Sequential = SUM]
out packets/s*	The number of output packets per second View Report: /report/network/device/packets.rpt
out upackets/s	The number of output unicast packets per second [Sequential = AVG Non-Sequential = SUM]
packets/s*	The number of input and output packets per second

Section 12
Oracle Database Server

The Oracle Data Agent (**tqorap**) collects information on Oracle instances. The agent obtains instance summary data pertaining to memory, disk I/O, system global area (SGA), network, rollback segments, block contention, and latches. Detailed metrics about sessions, datafiles, rollback segments, library cache, row cache, block contention, latches, system wait events, session wait events, top SQL cursors, and instance configuration information are also stored in the performance database.

The Oracle Alarm Agent (**tqoraalm**) monitors conditions for Oracle instances and Oracle listeners, and generates alarms when appropriate. The agent observes alarm conditions for the Oracle instance status, Oracle listener status, errors detected in the alert.log file, locks held, and database object capacity.

This section contains a listing of the statistics collected by the agents:

- Alert Log Alarm Statistics (see 12.1)
- Block Contention Wait Statistics (see 12.2)
- Datafile Capacity Statistics (see 12.3)
- Datafile I/O Statistics (see 12.4)
- Instance Alarm Statistics (see 12.5)
- Instance Data Statistics (see 12.6)
- Latch Statistics (see 12.7)
- Library Cache Statistics (see 12.8)
- Listener Alarm Statistics (see 12.9)
- Lock Alarm Statistics (see 12.10)
- Rollback Segment Statistics (see 12.11)
- Row Cache Statistics (see 12.12)
- Segment Alarm Statistics (see 12.13)
- Session Statistics (see 12.14)
- Session Wait Statistics (see 12.15)
- System Parameters Statistics (see 12.16)
- System Statistics (see 12.17)
- System Wait Event Statistics (see 12.18)
- Top SQL Cursors Statistics (see 12.19)

Note: *At the end of each statistic description, you will see a notation in brackets indicating the method that is used for data consolidation (for example,* [Sequential = SUM Non-Sequential = SUM]). *Sequential means that the field is consolidated over time. Non-Sequential means that the field is consolidated within a specified time interval.*

The following notations are used:

AVG = Average
DIV = Weight
FST = First
ID = Identifier
LST = Last
MAX = Maximum
MIN = Minimum
NON = None or no method was used
SUM = Summation

If you are using TeamQuest View to view aggregation set data, the sequential method is used for data consolidation.

Because derived statistics are not stored in the performance database, the data consolidation method is not shown in the description of a derived statistic.

12.1. Alert Log Alarm Statistics

The Oracle.Alarm_AlertLog table stores alarm information about the error codes within the alert.log file.

Table Field Hierarchy

Class:	Oracle
Subclass:	Alarm_AlertLog
IT Resource Name:	/TeamQuest/System/*systemname*/Oracle/*instancename*
TeamQuest Table Name:	Oracle.Alarm_AlertLog
Open Table Name:	ORAALARMALERTLOG
Collection interval:	N/A
Default retention:	30 days
Table type:	Event

Statistic Name	Description
Alarm_ID	The user-defined alarm identifier assigned to the alarm [Non-Sequential = ID]
error_code	The error code encountered in the alert.log file [Non-Sequential = ID]
Instance	The name of the instance from which the data is obtained. This field is limited to 16 characters. [Non-Sequential = ID]
Match_ID	A tab-delimited concatenation of the time consolidation fields for the record. This is a hidden field and is for internal use only. [Non-Sequential = ID]
Sequence	A sequential number assigned to the alarm for uniqueness [Non-Sequential = ID]
Severity	The severity of the alarm (Normal, Warning, Minor, Major, or Critical) [Non-Sequential = ID]
System	The name of the system where the data is collected. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Non-Sequential = ID]
Time	The timestamp of the data sample [Non-Sequential = ID]

12.2. Block Contention Wait Statistics

The Oracle.Waitstat table stores detailed information about block contention within the Oracle data.

Table Field Hierarchy

Class:	Oracle
Subclass:	Waitstat
IT Resource Name:	/TeamQuest/System/*systemname*/Oracle/*instancename*
TeamQuest Table Name:	Oracle.Waitstat
Open Table Name:	ORAWAITSTAT
Collection interval:	60 seconds (default)
Default retention:	1 day
Table type:	Performance

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = ID]
avg_waittime	The average amount of time per wait by the operation for the class of block during the interval. The value is always zero when the Oracle timed_statistics initialization parameter is set to FALSE. [Sequential = AVG Non-Sequential = AVG]
class	The class of block [Sequential = ID Non-Sequential = ID]
count	The number of waits by the operation for the class of block during the interval [Sequential = SUM Non-Sequential = SUM]
count_t	The total number of waits by the operation for the class of block since the instance started [Sequential = LST Non-Sequential = SUM]
Instance	The name of the instance from which the data is obtained. This field is limited to 16 characters. [Sequential = ID Non-Sequential = ID]
Interval	The expected data sampling interval [Sequential = SUM Non-Sequential = ID]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]

System	The name of the system where the data is collected. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
waittime	The amount of wait time in seconds by the operation for the class of block during the interval. The value is always zero when the Oracle timed_statistics initialization parameter is set to FALSE. [Sequential = SUM Non-Sequential = SUM]
waittime_t	The total amount of wait time in seconds for the waits by the operation for the class of block since the instance started. The value is always zero when the Oracle timed_statistics initialization parameter is set to FALSE. [Sequential = LST Non-Sequential = SUM]

12.3. Datafile Capacity Statistics

The Oracle.Datafile_Capacity table stores detailed capacity information about the datafiles used by the Oracle data.

Table Field Hierarchy

Class:	Oracle
Subclass:	Datafile_Capacity
IT Resource Name:	/TeamQuest/System/*systemname*/Oracle/*instancename*
TeamQuest Table Name:	Oracle.Datafile_Capacity
Open Table Name:	ORADATAFILECAPACITY
Collection interval:	10 minutes (default)
Default retention:	10 days
Table type:	Performance

Statistic Name	**Description**
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = ID]
avg_frag	The average size in blocks of a free extent in the datafile [Sequential = AVG Non-Sequential = AVG]
create_MB	The size in megabytes (MB) of the datafile when it was initially created [Sequential = LST Non-Sequential = SUM]

file_id	The file identification number [Sequential = ID Non-Sequential = ID]
filename	The name of the datafile. Up to 256 characters are displayed. [Sequential = ID Non-Sequential = ID]
fragments	The number of free extents in the datafile [Sequential = SUM Non-Sequential = SUM]
free_blks	The current amount of free space in blocks within the datafile [Sequential = LST Non-Sequential = SUM]
free_MB	The current amount of free space in megabytes (MB) within the datafile [Sequential = LST Non-Sequential = SUM]
Instance	The name of the instance from which the data is obtained. This field is limited to 16 characters. [Sequential = ID Non-Sequential = ID]
Interval	The expected data sampling interval [Sequential = SUM Non-Sequential = ID]
max_frag	The size in blocks of the largest free extent in the datafile [Sequential = MAX Non-Sequential = MAX]
min_frag	The size in blocks of the smallest free extent in the datafile [Sequential = MIN Non-Sequential = MIN]
pct_free	The percentage of the datafile that is free [Sequential = LST Non-Sequential = AVG]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
status	The status of the datafile [Sequential = ID Non-Sequential = ID]
System	The name of the system where the data is collected. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
tablespace_name	The name of the tablespace to which the file belongs [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
total_blks	The current size in blocks of the datafile. The value will be zero if the file is inaccessible. [Sequential = LST Non-Sequential = SUM]
total_MB	The current size in megabytes of the datafile. The value will be zero (0) if the file is inaccessible. [Sequential = LST Non-Sequential = SUM]

12.4. Datafile I/O Statistics

The Oracle.Datafile_IO table stores detailed I/O information about the datafiles used by the Oracle data.

Table Field Hierarchy

Class:	Oracle
Subclass:	Datafile_IO
IT Resource Name:	/TeamQuest/System/*systemname*/Oracle/*instancename*
TeamQuest Table Name:	Oracle.Datafile_IO
Open Table Name:	ORADATAFILEIO
Collection interval:	1 minute (default)
Default retention:	1 day
Table type:	Performance

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = ID]
avg_readtime	The average amount of time in seconds spent doing a read from the datafile during the interval. This value is zero when the Oracle timed_statistics initialization parameter is set to FALSE. [Sequential = AVG Non-Sequential = AVG]
avg_writetime	The average amount of time in seconds spent doing a write to the datafile during the interval. This value is zero when the Oracle timed_statistics initialization parameter is set to FALSE. [Sequential = AVG Non-Sequential = AVG]
file_id	The file identification number [Sequential = ID Non-Sequential = ID]
filename	The name of the datafile. Up to 256 characters are displayed. [Sequential = ID Non-Sequential = ID]
Instance	The name of the instance from which the data is obtained. This field is limited to 16 characters. [Sequential = ID Non-Sequential = ID]
Interval	The expected data sampling interval [Sequential = SUM Non-Sequential = ID]
phys_blk_rds	The number of physical blocks read from the datafile during the interval. The value reflects requests to the operating system, which may not directly correspond to a physical block read from the disk on which the datafile resides. [Sequential = SUM Non-Sequential = SUM]

phys_blk_rds_t	The total number of physical blocks read from the datafile since the instance was started. The value reflects requests to the operating system and may not directly correspond to a physical block read from the disk on which the datafile resides. [Sequential = LST Non-Sequential = SUM]
phys_blk_wrts	The number of physical blocks written to the datafile during the interval. The value reflects requests to the operating system, which may not directly correspond to a physical block written to the disk on which the datafile resides. [Sequential = SUM Non-Sequential = SUM]
phys_blk_wrts_t	The total number of physical blocks written to the datafile since the instance was started. The value reflects requests to the operating system, which may not directly correspond to a physical block written to the disk on which the datafile resides. [Sequential = LST Non-Sequential = SUM]
phys_rds	The number of physical reads from the datafile during the interval. The value reflects requests to the operating system, which may not directly correspond to a physical read from the disk on which the datafile resides. [Sequential = SUM Non-Sequential = SUM]
phys_rds_t	The total number of physical reads from the datafile since the instance was started. The value reflects requests to the operating system, which may not directly correspond to a physical read from the disk on which the datafile resides. [Sequential = LST Non-Sequential = SUM]
phys_wrts	The number of physical writes to the datafile during the interval. The value reflects requests to the operating system, which may not directly correspond to a physical write to the disk on which the datafile resides. [Sequential = SUM Non-Sequential = SUM]
phys_wrts_t	The total number of physical writes to the datafile since the instance was started. The value reflects requests to the operating system, which may not directly correspond to a physical write to the disk on which the datafile resides. [Sequential = LST Non-Sequential = SUM]
readtime	The amount of time in seconds spent doing reads from the datafile during the interval. This value is zero when the Oracle timed_statistics initialization parameter is set to FALSE. [Sequential = SUM Non-Sequential = SUM]
readtime_t	The total amount of time in seconds spent doing reads from the datafile since the instance started. This value is zero when the Oracle timed_statistics initialization parameter is set to FALSE. [Sequential = LST Non-Sequential = SUM]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
status	The status of the datafile [Sequential = ID Non-Sequential = ID]

System	The name of the system where the data is collected. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
tablespace_name	The name of the tablespace to which the file belongs [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
writetime	The amount of time in seconds spent doing writes to the datafile during the interval. This value is zero when the Oracle timed_statistics initialization parameter is set to FALSE. [Sequential = SUM Non-Sequential = SUM]
writetime_t	The total amount of time in seconds spent doing writes to the datafile since the instance started. This value is zero when the Oracle timed_statistics initialization parameter is set to FALSE. [Sequential = LST Non-Sequential = SUM]

12.5. Instance Alarm Statistics

The Oracle.Alarm_Instance table stores alarm information about the status of Oracle instances.

Table Field Hierarchy

Class:	Oracle
Subclass:	Alarm_Instance
IT Resource Name:	/TeamQuest/System/*systemname*/Oracle/*instancename*
TeamQuest Table Name:	Oracle.Alarm_Instance
Open Table Name:	ORAALARMINSTANCE
Collection interval:	60 seconds (default)
Default retention:	30 days
Table type:	Performance

Statistic Name	**Description**
Alarm_ID	The user-defined alarm identifier assigned to the alarm [Sequential = ID Non-Sequential = ID]
Instance	The name of the instance from which the data is obtained. This field is limited to 16 characters. [Sequential = ID Non-Sequential = ID]
Interval	The expected data sampling interval [Sequential = SUM Non-Sequential = ID]
Match_ID	A tab-delimited concatenation of the time consolidation fields for the record. This is a hidden field and is for internal use only. [Sequential = ID Non-Sequential = ID]

Severity	The severity of the alarm (Normal, Warning, Minor, Major, or Critical) [Sequential = LST Non-Sequential = ID]
status	The status of the instance (Up or Down) [Sequential = LST Non-Sequential = ID]
System	The name of the system where the data is collected. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]

12.6. Instance Data Statistics

This subsection contains a list of the Oracle statistics collected by the Oracle Data Agent (**tqorap**). A statistic marked with an asterisk (*) is a derived statistic.

Parameter Hierarchy

Class:	Oracle
Subclass:	DBWR
IT Resource Name:	/TeamQuest/System/*systemname*/Oracle/*instancename*
TeamQuest Table Name:	Oracle.DBWR
Open Table Name:	ORADBWR
Resource:	instance1, instance2, ...
Statistic Name:	
BuffersScanned	This statistic is not available for the Oracle Database Server. The value is reported as <N/A>. [Sequential = SUM Non-Sequential = SUM]
Chkpoints	The number of times the database writer (DBWR) was asked to scan the cache and write all blocks marked for a checkpoint or the end of recovery. This statistic is always larger than background checkpoints completed. [Sequential = SUM Non-Sequential = SUM]
CrossInstancewrites	This statistic is not available for the Oracle Database Server. The value is reported as <N/A>. [Sequential = SUM Non-Sequential = SUM]
Freebuffersfound	This statistic is not available for the Oracle Database Server. The value is reported as <N/A>. [Sequential = SUM Non-Sequential = SUM]
LruScans	The number of times that the database writer (DBWR) scans the least recently used (LRU) queue looking for buffers to write. This count includes scans to fill a batch being written for another purpose (such as a checkpoint). [Sequential = SUM Non-Sequential = SUM]

MakeFreeRequests	The number of requests to the database writer (DBWR) to make some free buffers for the least recently used (LRU). This statistic is not available with Oracle 11.2 and later. [Sequential = SUM Non-Sequential = SUM]
RevisitedWriteBuffer	The number of times that the database writer (DBWR) tried to save a buffer for writing and found that it was already in the write batch. This statistic measures the amount of useless work that the DBWR had to do in trying to fill the batch. Many sources contribute to a write batch. If the same buffer from different sources is considered for adding to the write batch, then all but the first attempt will be useless because the buffer is already marked as being written. [Sequential = SUM Non-Sequential = SUM]
SummedScanDepth	This statistic is not available for the Oracle Database Server. The value is reported as <N/A>. [Sequential = SUM Non-Sequential = SUM]
TransTableWrites	The number of rollback segment headers written by the database writer (DBWR). This statistic indicates how many hot buffers were written, causing a user process to wait while the write completed. [Sequential = SUM Non-Sequential = SUM]
UndoBlockWrites	The number of rollback segment blocks written by the database writer (DBWR) [Sequential = SUM Non-Sequential = SUM]

Class:	Oracle
Subclass:	Disk
IT Resource Name:	/TeamQuest/System/*systemname*/Oracle/*instancename*
TeamQuest Table Name:	Oracle.Disk
Open Table Name:	ORADISK
Resource:	instance1, instance2, ...
Statistic Name:	
AvgDiskFree	The average size of allocated disk space not being used in bytes during the interval [Sequential = AVG Non-Sequential = SUM]
DiskAllocated	The size of allocated disk space in bytes [Sequential = LST Non-Sequential = SUM]
DiskFree	The size of allocated disk space not being used in bytes [Sequential = LST Non-Sequential = SUM]
FreeDiskSpace MB*	The amount of allocated disk space that is not being used in megabytes (MB) View Report: /report/oracle/DiskUsage.rpt
MaxDiskFree	The maximum size of allocated disk space not being used in bytes during the interval [Sequential = MAX Non-Sequential = SUM]

PhysicalBlockReads	The number of physical blocks read. The value reflects requests to the operating system, which may not directly correspond to a physical block read from a disk. [Sequential = SUM Non-Sequential = SUM]
PhysicalBlockWrites	The number of physical blocks written. The value reflects requests to the operating system, which may not directly correspond to a physical block written to a disk. [Sequential = SUM Non-Sequential = SUM]
PhysicalReads	The number of physical reads. The value reflects requests to the operating system, which may not directly correspond to a physical read to a disk. [Sequential = SUM Non-Sequential = SUM]
PhysicalReadsDirect	The number of reads directly from disk, bypassing the buffer cache. For example, in high bandwidth, data-intensive operations such as parallel query, reads of disk blocks bypass the buffer cache to maximize transfer rates and to prevent the premature aging of shared data blocks resident in the buffer cache. [Sequential = SUM Non-Sequential = SUM]
PhysicalReadsDirect(LOB)	The number of large object reads directly from disk, bypassing the buffer cache [Sequential = SUM Non-Sequential = SUM]
PhysicalWrites	The number of physical writes. The value reflects requests to the operating system, which may not directly correspond to a physical write to a disk. [Sequential = SUM Non-Sequential = SUM]
PhysicalWritesDirect	The number of writes directly to disk, bypassing the buffer cache (as in a direct load operation) [Sequential = SUM Non-Sequential = SUM]
PhysicalWritesDirect(LOB)	The number of large object writes directly to the disk, bypassing the buffer cache [Sequential = SUM Non-Sequential = SUM]
PhysicalWritesNon Checkpoint	The number of times a buffer is written for reasons other than advancement of the checkpoint. Used as a metric for determining the I/O overhead imposed by setting the FAST_START_IO_TARGET parameter to limit recovery I/Os. Essentially this statistic measures the number of writes that would have occurred had there been no checkpointing. Subtracting this value from physical writes gives the extra I/O for checkpointing. [Sequential = SUM Non-Sequential = SUM]

Pinned_Buffers_Inspected	The number of times a user process, when scanning the tail of the replacement list looking for a buffer to reuse, encountered a cold buffer that was pinned or had a waiter that was about to pin it. This occurrence is uncommon, because a cold buffer should not be pinned very often. [Sequential = SUM Non-Sequential = SUM]
TotalDiskSpace MB*	The amount of disk space allocated in megabytes (MB) View Report: /report/oracle/DiskUsage.rpt

Class:	Oracle
Subclass:	Enqueue
IT Resource Name:	/TeamQuest/System/*systemname*/Oracle/*instancename*
TeamQuest Table Name:	Oracle.Enqueue
Open Table Name:	ORAENQ
Resource:	instance1, instance2, ...
Statistic Name:	
Conversions	The total number of conversions of the state of table or row lock [Sequential = SUM Non-Sequential = SUM]
Deadlocks	The total number of deadlocks between table or row locks in different sessions [Sequential = SUM Non-Sequential = SUM]
Releases	The total number of table or row locks released [Sequential = SUM Non-Sequential = SUM]
Requests	The total number of table or row locks acquired [Sequential = SUM Non-Sequential = SUM]
Timeouts	The total number of table and row locks (acquired and converted) that timed out before completion [Sequential = SUM Non-Sequential = SUM]
Waits	The total number of waits that occurred during an enqueue convert or get because the enqueue get was deferred [Sequential = SUM Non-Sequential = SUM]

Class:	Oracle
Subclass:	GlobalCache
IT Resource Name:	/TeamQuest/System/*systemname*/Oracle/*instancename*
TeamQuest Table Name:	Oracle.GlobalCache
Open Table Name:	ORAGLOBALCACHE
Resource:	instance1, instance2, ...
Statistic Name:	
BlocksCorrupt	This statistic is not available for the Oracle Database Server. The value is reported as <N/A>. [Sequential = SUM Non-Sequential = SUM]
Converts	This statistic is not available for the Oracle Database Server. The value is reported as <N/A>. [Sequential = SUM Non-Sequential = SUM]
ConvertTime	This statistic is not available for the Oracle Database Server. The value is reported as <N/A>. [Sequential = SUM Non-Sequential = SUM]
ConvertTimeouts	This statistic is not available for the Oracle Database Server. The value is reported as <N/A>. [Sequential = SUM Non-Sequential = SUM]
CrBlockBuildTime	This statistic is not available for the Oracle Database Server. The value is reported as <N/A>. [Sequential = SUM Non-Sequential = SUM]
CrBlockFlushTime	This statistic is not available for the Oracle Database Server. The value is reported as <N/A>. [Sequential = SUM Non-Sequential = SUM]
CrBlockRecvTime	This statistic is not available for the Oracle Database Server. The value is reported as <N/A>. [Sequential = SUM Non-Sequential = SUM]
CrBlockSendTime	This statistic is not available for the Oracle Database Server. The value is reported as <N/A>. [Sequential = SUM Non-Sequential = SUM]
CrBlocksReceived	This statistic is not available for the Oracle Database Server. The value is reported as <N/A>. [Sequential = SUM Non-Sequential = SUM]
CrBlocksServed	This statistic is not available for the Oracle Database Server. The value is reported as <N/A>. [Sequential = SUM Non-Sequential = SUM]
Defers	This statistic is not available for the Oracle Database Server. The value is reported as <N/A>. [Sequential = SUM Non-Sequential = SUM]
FreelistWaits	This statistic is not available for the Oracle Database Server. The value is reported as <N/A>. [Sequential = SUM Non-Sequential = SUM]

Gets	This statistic is not available for the Oracle Database Server. The value is reported as <N/A>. [Sequential = SUM Non-Sequential = SUM]
GetTime	This statistic is not available for the Oracle Database Server. The value is reported as <N/A>. [Sequential = SUM Non-Sequential = SUM]
PrepareFailures	This statistic is not available for the Oracle Database Server. The value is reported as <N/A>. [Sequential = SUM Non-Sequential = SUM]

Class:	Oracle
Subclass:	GlobalLock
IT Resource Name:	/TeamQuest/System/*systemname*/Oracle/*instancename*
TeamQuest Table Name:	Oracle.GlobalLock
Open Table Name:	ORAGLOBALLOCK
Resource:	instance1, instance2, ...
Statistic Name:	
Async_Converts	This statistic is not available for the Oracle Database Server. The value is reported as <N/A>. [Sequential = SUM Non-Sequential = SUM]
Async_Gets	This statistic is not available for the Oracle Database Server. The value is reported as <N/A>. [Sequential = SUM Non-Sequential = SUM]
ConvertTime	This statistic is not available for the Oracle Database Server. The value is reported as <N/A>. [Sequential = SUM Non-Sequential = SUM]
GetTime	This statistic is not available for the Oracle Database Server. The value is reported as <N/A>. [Sequential = SUM Non-Sequential = SUM]
Releases	This statistic is not available for the Oracle Database Server. The value is reported as <N/A>. [Sequential = SUM Non-Sequential = SUM]
SyncConverts	This statistic is not available for the Oracle Database Server. The value is reported as <N/A>. [Sequential = SUM Non-Sequential = SUM]
SyncGets	This statistic is not available for the Oracle Database Server. The value is reported as <N/A>. [Sequential = SUM Non-Sequential = SUM]

Class:	Oracle
Subclass:	Latch Summary
IT Resource Name:	/TeamQuest/System/*systemname*/Oracle/*instancename*
TeamQuest Table Name:	Oracle.Latch Summary
Open Table Name:	ORALATCHSUM
Resource:	instance1, instance2, ...
Statistic Name:	
LatchGets	The number of times a latch was obtained with a wait [Sequential = SUM Non-Sequential = SUM]
LatchImmediateGets	The number of times a latch was obtained without a wait [Sequential = SUM Non-Sequential = SUM]
LatchImmediateMisses	The number of times a latch failed to be obtained without a wait [Sequential = SUM Non-Sequential = SUM]
LatchMisses	The number of times a latch was obtained with a wait but failed on the first try [Sequential = SUM Non-Sequential = SUM]

Class:	Oracle
Subclass:	Library
IT Resource Name:	/TeamQuest/System/*systemname*/Oracle/*instancename*
TeamQuest Table Name:	Oracle.Library
Open Table Name:	ORALIB
Resource:	instance1, instance2, ...
Statistic Name:	
CacheGets	The number of lock requests for library cache objects [Sequential = SUM Non-Sequential = SUM]
CacheGetHits	The number of requested objects that were already allocated in the library cache [Sequential = SUM Non-Sequential = SUM]
CachePins	The number of pin requests for the library cache objects [Sequential = SUM Non-Sequential = SUM]
CachePinHits	The number of pin requested objects that were already allocated in the library cache [Sequential = SUM Non-Sequential = SUM]
Reloads	The number of pin requests for library cache objects that require reloading [Sequential = SUM Non-Sequential = SUM]

Class:	Oracle
Subclass:	Memory
IT Resource Name:	/TeamQuest/System/*systemname*/Oracle/*instancename*
TeamQuest Table Name:	Oracle.Memory
Open Table Name:	ORAMEM
Resource:	instance1, instance2, ...
Statistic Name:	
AvgSessionMemory	The average amount of session memory allocated in bytes during the interval [Sequential = AVG Non-Sequential = SUM]
AvgSgaFreeMemory	The average amount of system global area (SGA) memory not being used in bytes during the interval [Sequential = AVG Non-Sequential = SUM]
MaxSgaFreeMemory	The maximum amount of SGA memory not being used in bytes during the interval [Sequential = MAX Non-Sequential = MAX]
SessionMaxMemory	The maximum amount of session memory allocated for existing sessions in bytes [Sequential = LST Non-Sequential = SUM]
SessionMax Memory MB*	The maximum amount of session memory allocated for existing sessions in megabytes (MB) View Report: /report/oracle/SessionMem.rpt
SessionMemory	The amount of session memory allocated in bytes [Sequential = LST Non-Sequential = SUM]
SessionMemory MB*	The amount of session memory allocated in megabytes (MB) View Report: /report/oracle/SessionMem.rpt
SgaFreeMemory	The amount of SGA memory not being used in bytes [Sequential = LST Non-Sequential = SUM]
SgaFreeMemory MB*	The amount of SGA memory not being used in megabytes (MB) View Report: /report/oracle/SgaMem.rpt
SgaTotalMemory	The size of SGA memory in bytes [Sequential = LST Non-Sequential = SUM]
SgaTotalMemory MB*	The size of SGA memory in megabytes (MB) View Report: /report/oracle/SgaMem.rpt

Class:	Oracle
Subclass:	Network
IT Resource Name:	/TeamQuest/System/*systemname*/Oracle/*instancename*
TeamQuest Table Name:	Oracle.Network
Open Table Name:	ORANET
Resource:	instance1, instance2, ...
Statistic Name:	
BckgrndChkpnt Completed	The number of checkpoints completed by the background process. This statistic is incremented when the background process successfully advances the thread checkpoint. [Sequential = SUM Non-Sequential = SUM]
BckgrndChkpntStarted	The number of checkpoints started by the background process. This statistic can be larger than background checkpoints completed if a new checkpoint overrides an incomplete checkpoint or if a checkpoint is currently under way. This statistic includes only checkpoints of the redo thread. [Sequential = SUM Non-Sequential = SUM]
BckgrndTimeouts	The number of timeouts by the background process [Sequential = SUM Non-Sequential = SUM]
BranchNodeSplits	The number of times an index branch block was split because of the insertion of an additional value [Sequential = SUM Non-Sequential = SUM]
BufferIsNotPinnedCnt	The number of times a buffer was free when visited. This statistic is useful only for internal debugging purposes. [Sequential = SUM Non-Sequential = SUM]
BufferIsPinnedCnt	The number of times a buffer was pinned when visited. This statistic is useful only for internal debugging purposes. [Sequential = SUM Non-Sequential = SUM]
ClientBytesReceived	The number of bytes received from a client using Oracle Networking [Sequential = SUM Non-Sequential = SUM]
ClientBytesReceived/s*	The number of bytes per second received from a client using Oracle Networking View Report: /report/oracle/NetTransfers.rpt
ClientBytesSent	The number of bytes sent to a client using Oracle Networking [Sequential = SUM Non-Sequential = SUM]
ClientBytesSent/s*	The number of bytes per second sent to a client using Oracle Networking View Report: /report/oracle/NetTransfer.rpt
ClientRoundtrips	The number of Oracle Networking messages sent to and received from the client [Sequential = SUM Non-Sequential = SUM]

ClientRoundtrips/s*	The number of Oracle Networking messages per second sent to and received from the client View Report: /report/oracle/NetRoundtrips.rpt
DblinkBytesReceived	The number of bytes received from a database link using Oracle Networking [Sequential = SUM Non-Sequential = SUM]
DblinkBytesReceived/s*	The number of bytes per second received from a database link using Oracle Networking View Report: /report/oracle/NetTransfer.rpt
DblinkBytesSent	The number of bytes sent to a database link using Oracle Networking [Sequential = SUM Non-Sequential = SUM]
DblinkBytesSent/s*	The number of bytes per second sent to a database link using Oracle Networking View Report: /report/oracle/NetTransfers.rpt
DblinkRoundtrips	The number of Oracle Networking messages sent over and received from a database link [Sequential = SUM Non-Sequential = SUM]
DblinkRoundtrips/s*	The number Oracle Networking messages per second sent over and received from a database link View Report: /report/oracle/NetRoundtrips.rpt
UnnecessaryclnupSCN	This statistic is not available for the Oracle Database Server. The value is reported as <N/A>. [Sequential = SUM Non-Sequential = SUM]

Class:	Oracle
Subclass:	ParallelOps
IT Resource Name:	/TeamQuest/System/*systemname*/Oracle/*instancename*
TeamQuest Table Name:	Oracle.ParallelOps
Open Table Name:	ORAPARALLELOPS
Resource:	instance1, instance2, ...
Statistic Name:	
Downgraded1to25pct	The number of times parallel execution was requested and the degree of parallelism was reduced because of insufficient parallel execution servers [Sequential = SUM Non-Sequential = SUM]
Downgraded25to50pct	The number of times parallel execution was requested and the degree of parallelism was reduced because of insufficient parallel execution servers [Sequential = SUM Non-Sequential = SUM]

Downgraded50to75pct	The number of times parallel execution was requested and the degree of parallelism was reduced because of insufficient parallel execution servers [Sequential = SUM Non-Sequential = SUM]
Downgraded75to99pct	The number of times parallel execution was requested and the degree of parallelism was reduced because of insufficient parallel execution servers [Sequential = SUM Non-Sequential = SUM]
DowngradedtoSerial	The number of times parallel execution was requested but execution was serial because of insufficient parallel execution servers [Sequential = SUM Non-Sequential = SUM]
NotDowngraded	The number of times parallel execution was executed at the requested degree of parallelism [Sequential = SUM Non-Sequential = SUM]

Note: *A statistic marked with an asterisk (*) is a derived statistic and therefore is only available for viewing in TeamQuest Analyzer:*

Class:	Oracle
Subclass:	Ratio
IT Resource Name:	/TeamQuest/System/*systemname*/Oracle/*instancename*
Resource:	instance1, instance2, ...
Statistic Name:	
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = ID]
BlockChangesPer Transaction	The amount of data manipulation language (DML) work performed by each transaction View Report: /report/oracle/BlockRate.rpt
BlockGetRate	The rate at which the application system references the database View Report: /report/oracle/BlockRate.rpt
CacheHitRatio	The buffer cache hit ratio View Report: /report/oracle/BufferCache.rpt
CallRate	The work demand rate being placed on the instance from all work sources View Report: /report/oracle/CallRate.rpt

ChangedBlockRatio	The balance between queries and data manipulation language (DML) View Report: /report/oracle/BlockRate.rpt
ConsistentChangeRatio	The extent to which applications are having to exercise the read consistency mechanism
ConsistentChanges*	The number of consistent get operations that cannot accept the block in its current state [Sequential = SUM Non-Sequential = SUM]
ConsistentGets*	The number of requests to the buffer manager to locate a database block as part of a consistent-read operation [Sequential = SUM Non-Sequential = SUM]
ContinuedRowRatio	The percentage of total rows retrieved that were continued rows View Report: /report/oracle/RowRatio.rpt
DbBlockChanges*	The number of database blocks in memory that created a “dirty block” [Sequential = SUM Non-Sequential = SUM]
DbBlockGets*	The number of requests to the buffer manager for a database block regardless of read consistency [Sequential = SUM Non-Sequential = SUM]
DiskSorts*	The number of sorts that allocated work space on disk [Sequential = SUM Non-Sequential = SUM]
MemorySorts*	The number of sorts that did not require allocation of work space on disk [Sequential = SUM Non-Sequential = SUM]
ParseCount*	The number of parse calls received from connected applications and recursive calls [Sequential = SUM Non-Sequential = SUM]
PhysicalBlockReads	The number of physical blocks read. The value reflects requests to the operating system, which may not directly correspond to a physical block read from a disk. [Sequential = SUM Non-Sequential = SUM]
PhysicalBlockReads/s	The number of physical blocks read per second View Report: /report/oracle/PhysBlockIO.rpt
PhysicalBlockWrites	The number of physical blocks written. The value reflects requests to the operating system, which may not directly correspond to a physical block written to a disk. [Sequential = SUM Non-Sequential = SUM]
PhysicalBlockWrites/s	The number of physical blocks written per second View Report: /report/oracle/PhysBlockIO.rpt

PhysicalReads	The number of physical reads. The value reflects requests to the operating system, which may not directly correspond to a physical read from a disk. [Sequential = SUM Non-Sequential = SUM]
PhysicalReads/s	The number of physical reads per second View Report: /report/oracle/PhysIO.rpt
PhysicalReadsDirect	The number of reads directly from disk, bypassing the buffer cache. For example, in high bandwidth, data-intensive operations such as parallel query, reads of disk blocks bypass the buffer cache to maximize transfer rates and to prevent the premature aging of shared data blocks resident in the buffer cache. [Sequential = SUM Non-Sequential = SUM]
PhysicalReadsDirect(LOB)	The number of large object writes directly from disk, bypassing the buffer cache [Sequential = SUM Non-Sequential = SUM]
PhysicalWrites	The number of physical writes. The value reflects requests to the operating system, which may not directly correspond to a physical write to a disk. [Sequential = SUM Non-Sequential = SUM]
PhysicalWrites/s	The number of physical writes per second View Report: /report/oracle/PhysIO.rpt
RecursiveCalls*	The number of recursive calls [Sequential = SUM Non-Sequential = SUM]
RecursiveToUserCallRatio	The ratio of recursive calls to user calls View Report: /report/oracle/CallRate.rpt
RedoEntries*	The number of times redo entries were copied into the redo log buffer [Sequential = SUM Non-Sequential = SUM]
RedoLogSpaceRequests*	The number of times a server process had to wait to acquire an entry in the redo log buffer [Sequential = SUM Non-Sequential = SUM]
RedoLogSpaceWaitRatio	The measure of redo log buffer memory allocation
Resource	The name of the Oracle Agent Instance [Sequential = ID Non-Sequential = ID]
RowSourceRatio	The percentage of total rows retrieved from full table scans View Report: /report/oracle/RowRatio.rpt
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
SortOverFlowRatio	The number of sorts that are using temporary segments View Report: /report/oracle/SortOverflow.rpt

System	The name of the system where the data is collected. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
TableFetchByRowid*	The number of rows fetched using a ROWID [Sequential = SUM Non-Sequential = SUM]
TableFetchContinuedRow*	The number of rows fetched that span more than one database block [Sequential = SUM Non-Sequential = SUM]
TableScanRowsGotten*	The number of rows processed during a scan operation [Sequential = SUM Non-Sequential = SUM]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
TransactionRate	The measure of application work View Report: /report/oracle/TransRate.rpt
UserCallRate	The measure of work being posed by client applications View Report: /report/oracle/CallRate.rpt
UserCalls*	The number of user calls (parse, execute, fetch) [Sequential = SUM Non-Sequential = SUM]
UserCallsPerParse	The measure of how well the application is managing context areas View Report: /report/oracle/CallRate.rpt
UserCommits*	The number of database transactions that were committed [Sequential = SUM Non-Sequential = SUM]
UserRollBackRatio	The rate at which application transactions are failing View Report: /report/oracle/Rollback.rpt
UserRollbacks*	The number of database transactions that were rolled back [Sequential = SUM Non-Sequential = SUM]

Class:	Oracle
Subclass:	Rollback Summary
IT Resource Name:	/TeamQuest/System/*systemname*/Oracle/*instancename*
TeamQuest Table Name:	Oracle.Rollback Summary
Open Table Name:	ORAROLLSUM
Resource:	instance1, instance2, ...
Statistic Name:	
RollGets	The number of rollback header gets [Sequential = SUM Non-Sequential = SUM]
RollWaits	The number of rollback header waits [Sequential = SUM Non-Sequential = SUM]
RollWrites	The number of bytes written to rollback segments [Sequential = SUM Non-Sequential = SUM]
RsSize	The size in bytes of the rollback segments [Sequential = LST Non-Sequential = SUM]

Class:	Oracle
Subclass:	Row
IT Resource Name:	/TeamQuest/System/*systemname*/Oracle/*instancename*
TeamQuest Table Name:	Oracle.Row
Open Table Name:	ORAROW
Resource:	instance1, instance2, ...
Statistic Name:	
RowCount	The total number of entries in the dictionary cache [Sequential = SUM Non-Sequential = SUM]
RowGets	The number of data requests for objects in the cache dictionary [Sequential = SUM Non-Sequential = SUM]
RowGetMisses	The number of data requests for objects in the dictionary cache that result in cache misses [Sequential = SUM Non-Sequential = SUM]
RowScans	The number of scan requests for objects in the cache [Sequential = SUM Non-Sequential = SUM]
RowScanMisses	The number of scan requests for objects in the dictionary cache that resulted in a cache miss [Sequential = SUM Non-Sequential = SUM]

Class:	Oracle
Subclass:	Session Summary
IT Resource Name:	/TeamQuest/System/*systemname*/Oracle/*instancename*
TeamQuest Table Name:	Oracle.Session Summary
Open Table Name:	ORASESSIONSUM
Resource:	instance1, instance2, ...
Statistic Name:	
ConnectTime	The connect time for the session in seconds [Sequential = SUM Non-Sequential = SUM]
CursorCacheCount	The total number of cursors cached. This statistic is incremented only if SESSION_CACHED_CURSORS > 0. [Sequential = LST Non-Sequential = SUM]
CursorCacheHits	The number of hits in the session cursor cache. A hit means that the SQL statement did not have to be reparsed. Subtract this statistic from parse count (total) to determine the real number of parses that occurred. [Sequential = SUM Non-Sequential = SUM]
LogicalReads	The sum of db block gets plus consistent gets [Sequential = SUM Non-Sequential = SUM]
PgaMemory	The current program global area (PGA) size for the session [Sequential = LST Non-Sequential = SUM]
PgaMemoryMax	The peak program global area (PGA) size for the session [Sequential = MAX Non-Sequential = MAX]
StoredProcedure Space	The amount of memory the session is using for stored procedures [Sequential = LST Non-Sequential = SUM]
UgaMemory	The current user global area (UGA) size for the session [Sequential = LST Non-Sequential = SUM]
UgaMemoryMax	The peak user global area (UGA) size for the session [Sequential = MAX Non-Sequential = MAX]

Class:	Oracle
Subclass:	System
IT Resource Name:	/TeamQuest/System/*systemname*/Oracle/*instancename*
TeamQuest Table Name:	Oracle.System
Open Table Name:	ORASYS
Resource:	instance1, instance2, ...
Statistic Name:	
AvgLogons	The average number of logons during the interval [Sequential = AVG Non-Sequential = SUM]
AvgProcesses	The average number of processes during the interval [Sequential = AVG Non-Sequential = SUM]

AvgSessions	The average number of sessions during the interval [Sequential = AVG Non-Sequential = SUM]
BgProcesses	The number of background processes [Sequential = LST Non-Sequential = SUM]
CachedCommitSCN	The number of times the system change number (SCN) of a commit operation was cached for fast retrieval by other Oracle tasks. This statistic is useful only for internal debugging purposes. [Sequential = SUM Non-Sequential = SUM]
CallsToGetSnapshotKCMGSS	The number of times a snapshot system change number (SCN) was allocated. The SCN is allocated at the start of a transaction. [Sequential = SUM Non-Sequential = SUM]
CallsToKCMGAS	The number of calls to routine kcmgas to get a new system change number (SCN) [Sequential = SUM Non-Sequential = SUM]
CallsToKCMGCS	The number of calls to routine kcmgcs to get a current system change number (SCN) [Sequential = SUM Non-Sequential = SUM]
CallsToKCMGRS	The number of calls to routine kcmgrs to get a recent system change number (SCN) [Sequential = SUM Non-Sequential = SUM]
ChangeWriteTime	The elapsed redo write time for changes made to CURRENT blocks in seconds. The value is always zero when the Oracle timed_statistics initialization parameter is set to FALSE. [Sequential = SUM Non-Sequential = SUM]
CleanoutsAndRollbacks	The number of consistent gets that require both block rollbacks and block cleanouts [Sequential = SUM Non-Sequential = SUM]
CleanoutsOnly	The number of consistent gets that require only block cleanouts, no rollbacks [Sequential = SUM Non-Sequential = SUM]
ClusterKeyScanGets	The number of blocks obtained in a cluster scan [Sequential = SUM Non-Sequential = SUM]
ClusterKeyScans	The number of cluster scans that were started [Sequential = SUM Non-Sequential = SUM]
ColdRecycleReads	The number of buffers that were read through the least recently used end of the recycle cache with fast aging strategy [Sequential = SUM Non-Sequential = SUM]
CommitClnoutFailuresBlkLost	The number of times Oracle attempted a cleanout at commit but could not find the correct block due to forced write, replacement, or switch CURRENT [Sequential = SUM Non-Sequential = SUM]
CommitClnoutFailuresBuffer	The number of times Oracle attempted a cleanout at commit, but the buffer was currently being written [Sequential = SUM Non-Sequential = SUM]

CommitClnoutFailuresCallBack	The number of times the cleanout callback function returns FALSE [Sequential = SUM Non-Sequential = SUM]
CommitClnoutFailures Cannotpin	The total number of times a commit cleanout was performed but failed because the block could not be pinned [Sequential = SUM Non-Sequential = SUM]
CommitClnoutFailuresHotbkup	The number of times Oracle attempted block cleanout at commit during hot backup. The image of the block needs to be logged before the buffer can be made dirty. [Sequential = SUM Non-Sequential = SUM]
CommitClnoutFailuresWrite	The number of times a cleanout block at commit was performed but the writes to the database had been temporarily disabled [Sequential = SUM Non-Sequential = SUM]
CommitClnouts	The total number of times the cleanout block of a commit function was performed [Sequential = SUM Non-Sequential = SUM]
CommitClnoutsCompleted	The number of times the cleanout block of a commit function completed successfully [Sequential = SUM Non-Sequential = SUM]
CommitSCNcached	The number of times the system change number of a commit function was cached [Sequential = SUM Non-Sequential = SUM]
ConsistentChanges	The number of consistent get operations that cannot accept the block in its current state [Sequential = SUM Non-Sequential = SUM]
ConsistentGets	The number of requests to the buffer manager to locate a database block as part of a consistent-read operation [Sequential = SUM Non-Sequential = SUM]
CpuUsed	The amount of CPU time in centiseconds (1/100th of a second) used by the Oracle instance. The value is always zero when the Oracle timed_statistics initialization parameter is set to FALSE. [Sequential = SUM Non-Sequential = SUM] View Report: /report/oracle/CpuUsed.rpt
CpuUsed (seconds)	The amount of CPU time in seconds used by the Oracle instance. The value is always zero when the Oracle timed_statistics initialization parameter is set to FALSE. [Sequential = SUM Non-Sequential = SUM]
CrBlocksCreated	The number of CURRENT blocks cloned to create consistent-read (CR) blocks. The most common reason for cloning is that the buffer is held in a incompatible mode. [Sequential = SUM Non-Sequential = SUM]
CurrentBlksConvForCR	The number of CURRENT blocks converted to CR state [Sequential = SUM Non-Sequential = SUM]

CursorAuthentications	The number of privilege checks conducted during execution of an operation [Sequential = SUM Non-Sequential = SUM]
DataBlksConsistentReads	The number of undo records applied to data blocks that have been rolled back for consistent-read (CR) purposes [Sequential = SUM Non-Sequential = SUM]
DbBlockChanges	The number of database blocks in memory that created a “dirty block” [Sequential = SUM Non-Sequential = SUM]
DbBlockGets	The number of requests to the buffer manager for a database block regardless of read consistency [Sequential = SUM Non-Sequential = SUM]
DDLStmntsParallel	The number of data definition language (DDL) statements that were executed in parallel [Sequential = SUM Non-Sequential = SUM]
DeferredBlkCleanout	The number of times cleanout records are deferred within the data buffer [Sequential = SUM Non-Sequential = SUM]
DFOTreesParallel	The number of times a serial execution plan was converted to a parallel plan [Sequential = SUM Non-Sequential = SUM]
DirtyBuffersInspected	The number of dirty buffers found by the user process while it is looking for a buffer to reuse [Sequential = SUM Non-Sequential = SUM]
DiskSorts	The number of sorts that allocated work space on disk [Sequential = SUM Non-Sequential = SUM]
DMLStmtsParallel	The number of data manipulation language (DML) statements that were executed in parallel [Sequential = SUM Non-Sequential = SUM]
ExchangeDeadlocks	The number of times a process detected a potential deadlock when exchanging two buffers and raised an internal, restartable error. Index scans are the only operations that perform exchanges. [Sequential = SUM Non-Sequential = SUM]
ExecuteCount	The total number of calls (user and recursive) that executed SQL statements [Sequential = SUM Non-Sequential = SUM]
FreeBufferInspected	The number of buffers skipped over from the end of a least recently used (LRU) queue to find a reusable buffer. The difference between this statistic and the DirtyBuffersInspected statistic that could not be used because the buffer had a user, a waiter, or were being read or written, or because the buffers were busy or needed to be written after rapid aging out. [Sequential = SUM Non-Sequential = SUM]

FreeBufferRequested	The number of times a reusable buffer or a free buffer was requested to create or load a block [Sequential = SUM Non-Sequential = SUM]
HotBuffersToHeadLRU	The number of times Oracle moves a hot buffer to the head of its replacement list to keep it from being reused once the buffer has reached the tail of its replacement list [Sequential = SUM Non-Sequential = SUM]
ImmediateCRBlkClnout	The number of times cleanout records are applied immediately during consistent-read requests [Sequential = SUM Non-Sequential = SUM]
ImmediateCurrBlkClnout	The number of times cleanout records are applied immediately during current gets. Compare this statistic with deferred (CURRENT) block cleanout applications. [Sequential = SUM Non-Sequential = SUM]
IndexFastFullscanDirRead	The number of fast full scans initiated using direct read [Sequential = SUM Non-Sequential = SUM]
IndexFastFullscanFull	The number of fast full scans initiated for full segments [Sequential = SUM Non-Sequential = SUM]
IndexFastFullscanRowid	The number of fast full scans initiated with row-id endpoints specified [Sequential = SUM Non-Sequential = SUM]
InstanceRecoveryFreezeCnt	The number of times the database is frozen during instance recovery. This statistic is not available with Oracle 11.2 and later. [Sequential = SUM Non-Sequential = SUM]
KCMCCSCalledGet	This statistic is not available for the Oracle Database Server. The value is reported as <N/A>. [Sequential = SUM Non-Sequential = SUM]
KCMGSSWaitedForBatching	This statistic is not available for the Oracle Database Server. The value is reported as <N/A>. [Sequential = SUM Non-Sequential = SUM]
LeafNodeSplits	The number of times an index leaf node was split because of the insertion of an additional value [Sequential = SUM Non-Sequential = SUM]
Logons	The number of current logons [Sequential = LST Non-Sequential = SUM]
LogonsCumulative	The total number of logons since the instance started. This statistic is useful only in V$SYSSTAT. It gives an instance overview of all processes that logged on. [Sequential = SUM Non-Sequential = SUM]
MaxLogons	The maximum number of logons during the interval [Sequential = MAX Non-Sequential = SUM]
MaxProcesses	The maximum number of processes during the interval [Sequential = MAX Non-Sequential = SUM]
MaxSessions	The maximum number of sessions during the interval [Sequential = MAX Non-Sequential = SUM]

MemorySorts	The number of sorts that did not require allocation of work space on disk [Sequential = SUM Non-Sequential = SUM]
MessagesReceived	The number of messages received between background processes [Sequential = SUM Non-Sequential = SUM]
MessagesSent	The number of messages sent between background processes [Sequential = SUM Non-Sequential = SUM]
NativeHashExecute	The number of hash operations performed using native arithmetic rather than Oracle NUMBERs [Sequential = SUM Non-Sequential = SUM]
NativeHashFail	The number of hash operations performed using native arithmetic that failed, requiring the hash operation to be performed with Oracle NUMBERs [Sequential = SUM Non-Sequential = SUM]
NoBufferToKeepPinCnt	The number of times a visit to a buffer was attempted, but the buffer was not found where expected. This statistic is useful only for internal debugging purposes. [Sequential = SUM Non-Sequential = SUM]
NoWorkConsistentReadgets	The number of consistent gets that require neither block cleanouts nor rollbacks [Sequential = SUM Non-Sequential = SUM]
Objects	The number of database objects [Sequential = LST Non-Sequential = SUM]
OpenCursors	The number of open cursors [Sequential = LST Non-Sequential = SUM] View Report: /report/oracle/Cursor.rpt
OpenCursorsCumulative	The total number of cursors opened since the instance started [Sequential = LST Non-Sequential = SUM]
OpensCacheReplacement	This statistic is not available for the Oracle Database Server. The value is reported as <N/A>. [Sequential = SUM Non-Sequential = SUM]
OpensOfReplacedFiles	This statistic is not available for the Oracle Database Server. The value is reported as <N/A>. [Sequential = SUM Non-Sequential = SUM]
ParseCount	The number of parse calls received from connected applications and recursive calls [Sequential = SUM Non-Sequential = SUM]
ParseCountFailures	The number of parses that failed to parse [Sequential = SUM Non-Sequential = SUM]
ParseCountHard	The total number of parse calls (real parses). A hard parse is a very expensive operation in terms of memory use, because it requires Oracle to allocate a workheap and other memory structures and then build a parse tree. [Sequential = SUM Non-Sequential = SUM]

ParseTimeCpu	The total CPU time used for parsing (hard and soft) in seconds. The value is always zero when the Oracle timed_statistics initialization parameter is set to FALSE. [Sequential = SUM Non-Sequential = SUM]
ParseTimeElapsed	The total elapsed time for parsing in seconds. Subtract parse time cpu from this statistic to determine the total waiting time for parse resources. The value is always zero when the Oracle timed_statistics initialization parameter is set to FALSE. [Sequential = SUM Non-Sequential = SUM]
PctProcessCapacity*	The percentage of process capacity currently used View Report: /report/oracle/PctConnections.rpt
PctSessionsCapacity*	The percentage of session capacity currently used View Report: /report/oracle/PctConnections.rpt
PrefetchedBlocks	This statistic is not available for the Oracle Database Server. The value is reported as <N/A>. [Sequential = SUM Non-Sequential = SUM]
PrefetchedBlocksAgedout	The number of contiguous and noncontiguous blocks that were prefetched but aged out before use [Sequential = SUM Non-Sequential = SUM]
Processes	The number of current active processes [Sequential = LST Non-Sequential = SUM] View Report: /report/oracle/Processes.rpt
ProcessesLimit	The maximum number of operating system user processes that can simultaneously connect to the Oracle instance [Sequential = LST Non-Sequential = SUM] View Report: /report/oracle/Processes.rpt
ProcessLastNonidleTime	The last time this process was executed. The value is always zero when the Oracle timed_statistics initialization parameter is set to FALSE. [Sequential = LST Non-Sequential = SUM]
PXlocalmsgrecvd	The number of local messages received for parallel execution within the instance local to the current session [Sequential = SUM Non-Sequential = SUM]
PXlocalmsgsent	The number of local messages sent for parallel execution within the instance local to the current session [Sequential = SUM Non-Sequential = SUM]
PXremotemsgrecvd	The number of remote messages received for parallel execution within the instance local to the current session [Sequential = SUM Non-Sequential = SUM]
PXRemotemsgsent	The number of remote messages sent for parallel execution within the instance local to the current session [Sequential = SUM Non-Sequential = SUM]

QueriesParallelized	The number of SELECT statements executed in parallel [Sequential = SUM Non-Sequential = SUM]
RecoveryArrayReads	The number of reads performed during recovery [Sequential = SUM Non-Sequential = SUM]
RecoveryArrayReadTime	The elapsed time of I/O in seconds during recovery [Sequential = SUM Non-Sequential = SUM]
RecoveryBlocksRead	The number of blocks read during recovery [Sequential = SUM Non-Sequential = SUM]
RecursiveCalls	The number of recursive calls [Sequential = SUM Non-Sequential = SUM]
RecursiveCpuUsage	The total CPU time in seconds used by non-user calls (recursive calls). Subtract this value from CPU used by the session to determine how much CPU time was used by the user calls. [Sequential = SUM Non-Sequential = SUM]
RedoBlocksWritten	The total number of redo blocks written. This statistic divided by redo writes equals number of blocks per write. [Sequential = SUM Non-Sequential = SUM]
RedoBufferAllocationRetries	The total number of retries necessary to allocate space in the redo buffer. Retries are needed either because the redo writer has fallen behind or because an event such as a log switch is occurring. [Sequential = SUM Non-Sequential = SUM]
RedoEntries	The number of times redo entries were copied into the redo log buffer [Sequential = SUM Non-Sequential = SUM]
RedoLogSpaceRequests	The number of times a server process had to wait to acquire an entry in the redo log buffer [Sequential = SUM Non-Sequential = SUM]
RedoLogSpaceWaitTime	The total elapsed waiting time for redo log space requests in seconds [Sequential = SUM Non-Sequential = SUM]
RedoLogSwitchInterrupts	This statistic is not available for the Oracle Database Server. The value is reported as <N/A>. [Sequential = SUM Non-Sequential = SUM]
RedoOrderingMarks	The number of times a system change number (SCN) was allocated to force a redo record to have a higher SCN than a record generated in another thread using the same block [Sequential = SUM Non-Sequential = SUM]
RedoSize	The total amount of redo generated in bytes [Sequential = SUM Non-Sequential = SUM]
RedoSyncTime	The elapsed time of all redo sync write calls in seconds. The value is always zero when the Oracle timed_statistics initialization parameter is set to FALSE. [Sequential = SUM Non-Sequential = SUM]

RedoSyncWrites	The number of times a change being applied to the log buffer must be written out to disk due to a commit. The log buffer is a circular buffer that the log writer (LGWR) periodically flushes. Usually, redo that is generated and copied into the log buffer does not need to be flushed out to disk immediately. [Sequential = SUM Non-Sequential = SUM]
RedoWastage	The number of bytes wasted because redo blocks needed to be written before they are completely full. Early writing may be needed to commit transactions, to be able to write a database buffer, or to switch logs. [Sequential = SUM Non-Sequential = SUM]
RedoWriterLatchingTime	The elapsed time in seconds needed by the log writer (LWGR) to obtain and release each copy latch. This statistic is not available with Oracle 11.2 and later. [Sequential = SUM Non-Sequential = SUM]
RedoWrites	The total number of writes by the log writer (LGWR) to the redo log files. Redo blocks written divided by this statistic equals the number of blocks per write. [Sequential = SUM Non-Sequential = SUM]
RedoWriteTime	The total elapsed time of the write from the redo log buffer to the current redo log file in seconds. The value is always zero when the Oracle timed_statistics initialization parameter is set to FALSE. [Sequential = SUM Non-Sequential = SUM]
RemoteInstanceUndoBlkWrites	This statistic is not available for the Oracle Database Server. The value is reported as <N/A>. [Sequential = SUM Non-Sequential = SUM]
RemoteInstanceUndoHdrWrites	This statistic is not available for the Oracle Database Server. The value is reported as <N/A>. [Sequential = SUM Non-Sequential = SUM]
Resource	The name of the Oracle Agent Instance [Sequential = ID Non-Sequential = ID]
RollbackChangesUndo	The number of undo records applied to user-requested rollback changes (not consistent-read rollbacks) [Sequential = SUM Non-Sequential = SUM]
RollbacksOnly	The number of consistent gets that require only block rollbacks, no block cleanouts [Sequential = SUM Non-Sequential = SUM]
RowsFetchedViaCallback	The rows fetched using callback. This statistic is useful primarily for internal debugging purposes. [Sequential = SUM Non-Sequential = SUM]
RowSorts	The total number of rows sorted [Sequential = SUM Non-Sequential = SUM]
SerializableAborts	The number of times an SQL statement in a serializable isolation level had to abort [Sequential = SUM Non-Sequential = SUM]

Sessions	The number of current sessions [Sequential = LST Non-Sequential = SUM] View Report: /report/oracle/Sessions.rpt
SessionsLimit	The maximum number of user and system sessions allowed for the Oracle instance [Sequential = LST Non-Sequential = SUM] View Report: /report/oracle/Sessions.rpt
SummedDirtyQueueLength	The sum of the dirty least recently used (LRU) queue length after every write request. Divide by write requests to get the average queue length after write completion. [Sequential = SUM Non-Sequential = SUM]
SwitchCurrToNewBuffer	The number of times the CURRENT block moved to a different buffer, leaving a consistent-read (CR) block in the original buffer [Sequential = SUM Non-Sequential = SUM]
TableFetchByRowid	The number of rows fetched using a ROWID [Sequential = SUM Non-Sequential = SUM]
TableFetchContinuedRow	The number of rows fetched that span more than one database block [Sequential = SUM Non-Sequential = SUM]
TableScanBlocksGotten	The number of blocks encountered during a scan operation, in which each row is retrieved sequentially by Oracle [Sequential = SUM Non-Sequential = SUM]
TableScanRowsGotten	The number of rows processed during a scan operation [Sequential = SUM Non-Sequential = SUM]
TableScansCachePart	The number of range scans performed on tables that have the CACHE option enabled [Sequential = SUM Non-Sequential = SUM]
TableScansDirectRead	The number of table scans performed with direct read (bypassing the buffer cache) [Sequential = SUM Non-Sequential = SUM]
TableScansLong	The number of table scans for long tables [Sequential = SUM Non-Sequential = SUM]
TableScansRowidRanges	During parallel query, the number of table scans conducted with specified ROWID ranges [Sequential = SUM Non-Sequential = SUM]
TableScansShort	The number of table scans for short tables [Sequential = SUM Non-Sequential = SUM]
TotalFileOpens	This statistic is not available for the Oracle Database Server. The value is reported as <N/A>. [Sequential = SUM Non-Sequential = SUM]
TransactionRollbacks	The number of transactions being successfully rolled back [Sequential = SUM Non-Sequential = SUM]

TransactionTblReadRollbacks	The number of times rollback segment headers are rolled back to create consistent-read (CR) blocks [Sequential = SUM Non-Sequential = SUM]
TransactionTblReadUndo	The number of undo records applied to transaction tables that have been rolled back for consistent-read (CR) purposes [Sequential = SUM Non-Sequential = SUM]
UserCalls	The number of user calls (parse, execute, fetch) [Sequential = SUM Non-Sequential = SUM]
UserCommits	The number of database transactions that were committed [Sequential = SUM Non-Sequential = SUM]
UserRollbacks	The number of database transactions that were rolled back [Sequential = SUM Non-Sequential = SUM]
WriteClonesBackground	The number of times a background process clones a CURRENT buffer that is being written. The clone becomes the new, accessible CURRENT buffer, leaving the original buffer (now the clone) to complete writing. [Sequential = SUM Non-Sequential = SUM]
WriteClonesForeground	The number of times a foreground process clones a CURRENT buffer that is being written. The clone becomes the new, accessible CURRENT buffer, leaving the original buffer (now the clone) to complete writing. [Sequential = SUM Non-Sequential = SUM]

Class:	Oracle
Subclass:	Wait
IT Resource Name:	/TeamQuest/System/*systemname*/Oracle/*instancename*
TeamQuest Table Name:	Oracle.Wait
Open Table Name:	ORAWAIT
Resource:	instance1, instance2, ...
Statistic Name:	
SystemUndoBlock	The number of waits for buffers containing blocks from the SYSTEM rollback segment [Sequential = SUM Non-Sequential = SUM]
SystemUndoHeader	The number of waits for buffers containing header blocks from the SYSTEM rollback segment [Sequential = SUM Non-Sequential = SUM]
UndoBlock	The number of waits for buffers containing blocks other than those from the SYSTEM rollback segment [Sequential = SUM Non-Sequential = SUM]
UndoHeader	The number of waits for buffers containing header blocks other than those from the SYSTEM rollback segment [Sequential = SUM Non-Sequential = SUM]

Class:	Oracle
Subclass:	N/A
IT Resource Name:	/TeamQuest/System/*systemname*/Oracle/*instancename*
TeamQuest Table Name:	Oracle
Open Table Name:	ORA
Resource:	instance1, instance2, ...
Statistic Name:	
Etime	The seconds elapsed between two data samples of the Oracle Data Agent [Sequential = SUM Non-Sequential = SUM]
tqorap_end_time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
tqorap_interval	The seconds elapsed between the end of data collection for the previous sample and the end of data collection for the current sample [Sequential = SUM Non-Sequential = ID]

12.7. Latch Statistics

The Oracle.Latch table stores detailed information about latches within the Oracle data.

Table Field Hierarchy

Class:	Oracle
Subclass:	Latch
IT Resource Name:	/TeamQuest/System/*systemname*/Oracle/*instancename*
TeamQuest Table Name:	Oracle.Latch
Open Table Name:	ORALATCH
Collection interval:	60 seconds (default)
Default retention:	1 day
Table type:	Performance

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = ID]
gets	The number of times the latch was obtained with a wait during the interval [Sequential = SUM Non-Sequential = SUM]
gets_t	The total number of times the latch was obtained with a wait since the instance started [Sequential = LST Non-Sequential = SUM]
imm_gets	The number of times the latch was obtained without a wait during the interval [Sequential = SUM Non-Sequential = SUM]
imm_gets_t	The total number of times the latch was obtained without a wait since the instance started [Sequential = LST Non-Sequential = SUM]
imm_miss_ratio	The ratio of imm_misses to imm_gets during the interval [Sequential = AVG Non-Sequential = AVG]
imm_misses	The number of times the latch failed during the interval [Sequential = SUM Non-Sequential = SUM]
imm_misses_t	The total number of times the latch failed to be obtained without a wait since the instance started [Sequential = LST Non-Sequential = SUM]
Instance	The name of the instance from which the data is obtained. This field is limited to 16 characters. [Sequential = ID Non-Sequential = ID]
Interval	The expected data sampling interval [Sequential = SUM Non-Sequential = ID]

level_num	The latch level number [Sequential = ID Non-Sequential = ID]
miss_ratio	The ratio of misses to gets during the interval [Sequential = AVG Non-Sequential = AVG]
misses	The number of times the latch was obtained with a wait but failed on the first try during the interval [Sequential = SUM Non-Sequential = SUM]
misses_t	The total number of times the latch was obtained with a wait but failed on the first try since the instance started [Sequential = LST Non-Sequential = SUM]
name	The name of the latch [Sequential = ID Non-Sequential = ID]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
sleeps	The number of sleeps that occurred when trying to obtain the latch with a wait during the interval [Sequential = SUM Non-Sequential = SUM]
sleeps_t	The total number of sleeps that occurred when trying to obtain the latch with a wait since the instance started [Sequential = LST Non-Sequential = SUM]
spin_gets	The number of gets that missed on the first try but succeeded on spin during the interval [Sequential = SUM Non-Sequential = SUM]
spin_gets_t	The total number of gets that missed on the first try but succeeded on spin since the instance started [Sequential = LST Non-Sequential = SUM]
System	The name of the system where the data is collected. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
waiters_woken	The number of times a wait for the latch was awakened during the interval [Sequential = SUM Non-Sequential = SUM]
waiters_woken_t	The total number of times a wait for the latch was awakened since the instance started [Sequential = LST Non-Sequential = SUM]

waits_holding_latch	The number of waits for the latch that held a different latch during the interval [Sequential = SUM Non-Sequential = SUM]
waits_holding_latch_t	The total number of waits for the latch that held a different latch since the instance started [Sequential = LST Non-Sequential = SUM]

12.8. Library Cache Statistics

The Oracle.LibraryCache table stores detailed information about the library cache of the Oracle data.

Table Field Hierarchy

Class:	Oracle
Subclass:	LibraryCache
IT Resource Name:	/TeamQuest/System/*systemname*/Oracle/*instancename*
TeamQuest Table Name:	Oracle.LibraryCache
Open Table Name:	ORALIBCACHE
Collection interval:	60 seconds (default)
Default retention:	1 day
Table type:	Performance

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = ID]
get_hit_ratio	The ratio of get hits to gets during the interval [Sequential = AVG Non-Sequential = AVG]
get_hits	The number of times a handle of an object for the namespace was found in memory during the interval [Sequential = SUM Non-Sequential = SUM]
get_hits_t	The total number of times a handle of an object for the namespace was found in memory since the instance started [Sequential = LST Non-Sequential = SUM]
gets	The number of times a lock request was performed by objects of the namespace during the interval [Sequential = SUM Non-Sequential = SUM]
gets_t	The total number of times a lock request was performed by objects of the namespace since the instance started [Sequential = LST Non-Sequential = SUM]

Instance	The name of the instance from which the data is obtained. This field is limited to 16 characters. [Sequential = ID Non-Sequential = ID]
Interval	The expected data sampling interval [Sequential = SUM Non-Sequential = ID]
invalidations	The number of times an object of the namespace was marked invalid during the interval [Sequential = SUM Non-Sequential = SUM]
invalidations_t	The total number of times an object of the namespace was marked invalid since the instance started [Sequential = LST Non-Sequential = SUM]
namespace	The library cache namespace [Sequential = ID Non-Sequential = ID]
pin_hit_ratio	The ratio of pin hits during the interval [Sequential = AVG Non-Sequential = AVG]
pin_hits	The number of times all of the metadata pieces for the given object of the namespace were found in memory during the interval [Sequential = SUM Non-Sequential = SUM]
pin_hits_t	The total number of times all of the metadata pieces for the given object of the namespace were found in memory since the instance started [Sequential = LST Non-Sequential = SUM]
pins	The number of times a pin was requested by objects of the namespace during the interval [Sequential = SUM Non-Sequential = SUM]
pins_t	The total number of times a pin was requested by objects of the namespace since the instance started [Sequential = LST Non-Sequential = SUM]
reloads	The number of reloads performed during a pin request by objects of the namespace during the interval [Sequential = SUM Non-Sequential = SUM]
reloads_t	The total number of reloads performed during a pin request by objects of the namespace since the instance started [Sequential = LST Non-Sequential = SUM]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
System	The name of the system where the data is collected. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]

12.9. Listener Alarm Statistics

The Oracle.Alarm_Listener table stores alarm information about the status of Oracle listeners.

Table Field Hierarchy

Class:	Oracle
Subclass:	Alarm_Listener
IT Resource Name:	/TeamQuest/System/*systemname*/Oracle
TeamQuest Table Name:	Oracle.Alarm_Listener
Open Table Name:	ORAALARMLISTENER
Collection interval:	60 seconds (default)
Default retention:	30 days
Table type:	Performance

Statistic Name	Description
Alarm_ID	The user-defined alarm identifier assigned to the alarm [Sequential = ID Non-Sequential = ID]
Interval	The expected data sampling interval [Sequential = SUM Non-Sequential = ID]
Listener	The name of the listener from which the data is obtained. Up to 23 characters are displayed. [Sequential = ID Non-Sequential = ID]
Match_ID	A tab-delimited concatenation of the time consolidation fields for the record. This is a hidden field and is for internal use only. [Sequential = ID Non-Sequential = ID]
Severity	The severity of the alarm (Normal, Warning, Minor, Major, or Critical) [Sequential = LST Non-Sequential = ID]
status	The status of the instance (Up or Down) [Sequential = LST Non-Sequential = ID]
System	The name of the system where the data is collected. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]

12.10. Lock Alarm Statistics

The Oracle.Alarm_Lock table stores alarm information about locks within an Oracle instance.

Table Field Hierarchy

Class:	Oracle
Subclass:	Alarm_Lock
IT Resource Name:	/TeamQuest/System/*systemname*/Oracle/*instancename*
TeamQuest Table Name:	Oracle.Alarm_Lock
Open Table Name:	ORAALARMLOCK
Collection interval:	60 seconds (default)
Default retention:	30 days
Table type:	Performance

Statistic Name	Description
Alarm_ID	The user-defined alarm identifier assigned to the alarm [Sequential = ID Non-Sequential = ID]
block_status	Specifies if the lock is blocking another lock (yes or no) [Sequential = LST Non-Sequential = ID]
curr_lock_mode	The current lock mode [Sequential = LST Non-Sequential = ID]
id1	The first part of the type-specific lock identifier [Sequential = ID Non-Sequential = ID]
id2	The second part of the type-specific lock identifier [Sequential = ID Non-Sequential = ID]
Instance	The name of the instance from which the data is obtained. This field is limited to 16 characters. [Sequential = ID Non-Sequential = ID]
Interval	The expected data sampling interval [Sequential = SUM Non-Sequential = ID]
lock_time	The amount of time in seconds that the lock has been in its current mode [Sequential = LST Non-Sequential = SUM]
Match_ID	A tab-delimited concatenation of the time consolidation fields for the record. This is a hidden field and is for internal use only. [Sequential = ID Non-Sequential = ID]
owner	The database user that owns the lock [Sequential = ID Non-Sequential = ID]
req_lock_mode	The requested lock mode [Sequential = LST Non-Sequential = ID]
serial_num	The session serial number for the owner of the lock [Sequential = ID Non-Sequential = ID]

Severity	The severity of the alarm (Normal, Warning, Minor, Major, or Critical) [Sequential = LST Non-Sequential = ID]
sid	The session identifier for the owner of the lock [Sequential = ID Non-Sequential = ID]
System	The name of the system where the data is collected. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
type	The type of lock [Sequential = ID Non-Sequential = ID]

12.11. Rollback Segment Statistics

The Oracle.Rollback table stores detailed information about the rollback segments used by the Oracle data.

Table Field Hierarchy

Class:	Oracle
Subclass:	Rollback
IT Resource Name:	/TeamQuest/System/*systemname*/Oracle/*instancename*
TeamQuest Table Name:	Oracle.Rollback
Open Table Name:	ORAROLL
Collection interval:	60 seconds (default)
Default retention:	1 day
Table type:	Performance

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = ID]
extends	The number of times the rollback segment extended during the interval [Sequential = SUM Non-Sequential = SUM]
extends_t	The total number of times the rollback segment extended since the instance started [Sequential = LST Non-Sequential = SUM]
extents	The current number of extents in the rollback segment [Sequential = LST Non-Sequential = SUM]

gets	The number of header gets for the rollback segment during the interval [Sequential = SUM Non-Sequential = SUM]
gets_t	The total number of header gets for the rollback segment since the instance started [Sequential = LST Non-Sequential = SUM]
hwmsize	The maximum size in megabytes of the rollback segment since the instance started [Sequential = MAX Non-Sequential = SUM]
Instance	The name of the instance from which the data is obtained. This field is limited to 16 characters. [Sequential = ID Non-Sequential = ID]
Interval	The expected data sampling interval [Sequential = SUM Non-Sequential = ID]
name	The name of the rollbacks segment [Sequential = ID Non-Sequential = ID]
optsize	The optimal size in megabytes of the rollback segment [Sequential = LST Non-Sequential = SUM]
rssize	The current size in megabytes of the rollback segment [Sequential = LST Non-Sequential = SUM]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
shrinks	The number of times the size of the rollback segment decreased during the interval [Sequential = SUM Non-Sequential = SUM]
shrinks_t	The total number of times the size of the rollback segment decreased since the instance started [Sequential = LST Non-Sequential = SUM]
status	The status of the rollback segment [Sequential = ID Non-Sequential = ID]
System	The name of the system where the data is collected. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
usn	The rollback segment number [Sequential = ID Non-Sequential = ID]
waits	The number of header waits for the rollback segment during the interval [Sequential = SUM Non-Sequential = SUM]
waits_t	The total number of header waits for the rollback segment since the instance started [Sequential = LST Non-Sequential = SUM]

wraps	The number of times the rollback segment wrapped during the interval [Sequential = SUM Non-Sequential = SUM]
wraps_t	The total number of times the rollback segment wrapped since the instance started [Sequential = LST Non-Sequential = SUM]
writes	The number of kilobytes written to the rollback segment during the interval [Sequential = SUM Non-Sequential = SUM]
writes_t	The total number of kilobytes written to the rollback segment since the instance started [Sequential = LST Non-Sequential = SUM]
xacts	The current number of active transactions for the rollback segment [Sequential = LST Non-Sequential = SUM]

12.12. Row Cache Statistics

The Oracle.RowCache table stores detailed information about the row cache of the Oracle data.

Table Field Hierarchy

Class:	Oracle
Subclass:	RowCache
IT Resource Name:	/TeamQuest/System/*systemname*/Oracle/*instancename*
TeamQuest Table Name:	Oracle.RowCache
Open Table Name:	ORAROWCACHE
Collection interval:	60 seconds (default)
Default retention:	1 day
Table type:	Performance

Statistic Name	**Description**
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = ID]
cache_num	The row cache identifier number [Sequential = ID Non-Sequential = ID]
count	The total number of entries in the cache for the interval [Sequential = LST Non-Sequential = SUM]
fixed	The number of fixed entries in the cache for the interval [Sequential = LST Non-Sequential = SUM]
flushes	The number of flushes to disk during the interval [Sequential = SUM Non-Sequential = SUM]

flushes_t	The total number of flushes to disk since the instance started [Sequential = LST Non-Sequential = SUM]
get_miss_ratio	The ratio of get_misses to gets during the interval [Sequential = AVG Non-Sequential = AVG]
get_misses	The number of requests for objects in the cache that resulted in cache misses during the interval [Sequential = SUM Non-Sequential = SUM]
get_misses_t	The total number of requests for objects in the cache that resulted in cache misses since the instance started [Sequential = LST Non-Sequential = SUM]
gets	The number of data requests for objects in the cache during the interval [Sequential = SUM Non-Sequential = SUM]
gets_t	The total number of data requests for objects in the cache since the instance started [Sequential = LST Non-Sequential = SUM]
Instance	The name of the instance from which the data is obtained. This field is limited to 16 characters. [Sequential = ID Non-Sequential = ID]
Interval	The expected data sampling interval [Sequential = SUM Non-Sequential = ID]
modifications	The number of inserts, updates, or deletions for objects in the cache during the interval [Sequential = SUM Non-Sequential = SUM]
modifications_t	The total number of inserts, updates, or deletions for objects in the cache since the instance started [Sequential = LST Non-Sequential = SUM]
parameter	The name of the initialization parameter that determines the number of entries in the data dictionary cache [Sequential = ID Non-Sequential = ID]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
scan_miss_ratio	The ratio of scan_misses to scans during the interval [Sequential = AVG Non-Sequential = AVG]
scan_misses	The number of scan requests for objects in the cache that resulted in cache misses during the interval [Sequential = SUM Non-Sequential = SUM]
scan_misses_t	The total number of scan requests for objects in the cache that resulted in cache misses since the instance started [Sequential = LST Non-Sequential = SUM]
scans	The number of scan requests for objects in the cache during the interval [Sequential = SUM Non-Sequential = SUM]

scans_t	The total number of scan requests for objects in the cache since the instance started [Sequential = LST Non-Sequential = SUM]
sub_num	The subordinate set number [Sequential = ID Non-Sequential = ID]
System	The name of the system where the data is collected. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
type	The parent or subordinate row cache type [Sequential = ID Non-Sequential = ID]
usage	The number of cache entries that contain valid data for the interval [Sequential = LST Non-Sequential = SUM]

12.13. Segment Alarm Statistics

The Oracle.Alarm_Segment table stores alarm information about segments within an Oracle database.

Table Field Hierarchy

Class:	Oracle
Subclass:	Alarm_Segment
IT Resource Name:	/TeamQuest/System/*systemname*/Oracle/*instancename*
TeamQuest Table Name:	Oracle.Alarm_Segment
Open Table Name:	ORAALARMSEGMENT
Collection interval:	60 seconds (default)
Default retention:	30 days
Table type:	Performance

Statistic Name	Description
Alarm_ID	The user-defined alarm identifier assigned to the alarm [Sequential = ID Non-Sequential = ID]
can_extend	Specifies if there is enough space for another extent to be allocated for the segment within the tablespace (yes or no) [Sequential = LST Non-Sequential = ID]
extents	The number of extents currently used by the segment [Sequential = LST Non-Sequential = SUM]
extents_avail	The number of extents below the maximum that may be allocated for the segment. This is the value of the max_extents field minus the value of the extents field. [Sequential = LST Non-Sequential = SUM]

Instance	The name of the instance from which the data is obtained. This field is limited to 16 characters. [Sequential = ID Non-Sequential = ID]
Interval	The expected data sampling interval [Sequential = SUM Non-Sequential = ID]
Match_ID	A tab-delimited concatenation of the time consolidation fields for the record. This is a hidden field and is for internal use only. [Sequential = ID Non-Sequential = ID]
max_extents	The maximum number of extents allowed for the segment [Sequential = LST Non-Sequential = SUM]
max_free_extent	The size in megabytes of the largest free extent within the tablespace that contains the segment [Sequential = LST Non-Sequential = MAX]
next_extent	The size in megabytes of the next extent to be allocated for the segment [Sequential = LST Non-Sequential = SUM]
owner	The database users that owns the segment [Sequential = ID Non-Sequential = ID]
segment_name	The name of the segment [Sequential = ID Non-Sequential = ID]
segment_type	The type of segment [Sequential = ID Non-Sequential = ID]
Severity	The severity of the alarm (Normal, Warning, Minor, Major, or Critical) [Sequential = LST Non-Sequential = ID]
System	The name of the system where the data is collected. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
tablespace_name	The name of the tablespace in which the segment resides [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]

12.14. Session Statistics

The Oracle.Session table stores detailed information about current sessions for the Oracle data.

Table Field Hierarchy

Class:	Oracle
Subclass:	Session
IT Resource Name:	/TeamQuest/System/*systemname*/Oracle/*instancename*
TeamQuest Table Name:	Oracle.Session
Open Table Name:	ORASESSION
Collection interval:	60 seconds (default)
Default retention:	1 day
Table type:	Performance

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = ID]
avg_waittime	The average amount of time in seconds spent waiting by the session during the interval. The value is always zero when the Oracle timed_statistics initialization parameter is set to FALSE. [Sequential = AVG Non-Sequential = AVG]
block_gets	The number of database block gets performed by the session during the interval. The sum of this value with the cons_gets value is a measure of logical reads. [Sequential = SUM Non-Sequential = SUM]
block_gets_t	The total number of database block gets performed by the session since it began. The sum of this value with the cons_gets_t value is a measure of logical reads. [Sequential = LST Non-Sequential = SUM]
clnt_pid	The operating system process identifier for the client program using the session [Sequential = ID Non-Sequential = ID]
clnt_program	The operating system name for the client program using the session [Sequential = ID Non-Sequential = ID]
clnt_system	The name of the system on which the client program using the session is running [Sequential = ID Non-Sequential = ID]
clnt_term	The operating system terminal name for the client program using the session [Sequential = ID Non-Sequential = ID]

clnt_user	The operating system user name for the client program using the session [Sequential = ID Non-Sequential = ID]
cons_gets	The number of consistent gets performed by the session during the interval. The sum of this value with the block_gets value is a measure of logical reads. [Sequential = SUM Non-Sequential = SUM]
cons_gets_t	The total number of consistent gets performed by the session since it began. The sum of this value with the block_gets_t value is a measure of logical reads. [Sequential = LST Non-Sequential = SUM]
cpu_used	The number of CPU seconds used by the session over the interval. The value is always zero when the Oracle timed_statistics initialization parameter is set to FALSE. [Sequential = SUM Non-Sequential = SUM]
cpu_used_t	The total number of CPU seconds used by the session since it began. The value is always zero when the Oracle timed_statistics initialization parameter is set to FALSE. [Sequential = LST Non-Sequential = SUM]
Instance	The name of the instance from which the data is obtained. This field is limited to 16 characters. [Sequential = ID Non-Sequential = ID]
Interval	The expected data sampling interval [Sequential = SUM Non-Sequential = ID]
logon_time	The logon time of the session [Sequential = FST Non-Sequential = ID]
ora_pid	The Oracle process identifier for the Oracle process related to the session [Sequential = ID Non-Sequential = ID]
ora_user	The Oracle user name that is using the session [Sequential = ID Non-Sequential = ID]
parse_cnt	The number of parse calls made by the session during the interval [Sequential = SUM Non-Sequential = SUM]
parse_cnt_t	The total number of parse calls made by the session since it began [Sequential = LST Non-Sequential = SUM]
pga_mem	The current size in kilobytes of the program global area (PGA) for the session [Sequential = LST Non-Sequential = SUM]
phys_rds	The number of physical reads performed by the session during the interval. The value reflects requests to the operating system, which may not directly correspond to a physical read from a disk. [Sequential = SUM Non-Sequential = SUM]
phys_rds_t	The total number of physical reads performed by the session since it began. The value reflects requests to the operating system, which may not directly correspond to a physical read from a disk. [Sequential = LST Non-Sequential = SUM]

phys_wrts	The number of physical writes performed by the session during the interval. The value reflects requests to the operating system and may not directly correspond to a physical write to a disk. [Sequential = SUM Non-Sequential = SUM]
phys_wrts_t	The total number of physical writes performed by the session since it began. The value reflects requests to the operating system and may not directly correspond to a physical write to a disk. [Sequential = LST Non-Sequential = SUM]
rec_calls	The number of recursive calls made by the session during the interval. Recursive calls are a measure of internal work done by the Oracle instance while performing requests from a user. [Sequential = SUM Non-Sequential = SUM]
rec_calls_t	The total number of recursive calls made by the session since it began. Recursive calls are a measure of internal work done by the Oracle instance while performing requests from a user. [Sequential = LST Non-Sequential = SUM]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
serial_num	The session serial number [Sequential = ID Non-Sequential = ID]
server	The server type for the session [Sequential = ID Non-Sequential = ID]
sid	The session identifier [Sequential = ID Non-Sequential = ID]
sql_addr	The address of the SQL cursor currently being used by the session [Sequential = ID Non-Sequential = ID]
sql_hash_value	The value that is used with sql_addr to uniquely identify the SQL cursor currently being used by the session [Sequential = ID Non-Sequential = ID]
sql_text	The first 64 characters of text for the SQL cursor currently being used by the session [Sequential = ID Non-Sequential = ID]
srvr_pid	The operating system process identifier for the Oracle process related to the session [Sequential = ID Non-Sequential = ID]
srvr_program	The operating system name for the Oracle process related to the session [Sequential = ID Non-Sequential = ID]
srvr_term	The operating system terminal name for the Oracle process related to the session [Sequential = ID Non-Sequential = ID]
srvr_user	The operating system user name for the Oracle process related to the session [Sequential = ID Non-Sequential = ID]

status	The status of the session [Sequential = ID Non-Sequential = ID]
System	The name of the system where the data is collected. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
timeouts	The number of timeouts by the session during the interval [Sequential = SUM Non-Sequential = SUM]
timouts_t	The total number of timeouts by the session since it began. [Sequential = LST Non-Sequential = SUM]
type	The session type [Sequential = ID Non-Sequential = ID]
uga_mem	The current size in kilobytes of the user global area (UGA) for the session [Sequential = LST Non-Sequential = SUM]
usr_calls	The number of user calls made by the session during the interval. User calls are incremented whenever a parse, execute, or fetch is performed by the user. [Sequential = SUM Non-Sequential = SUM]
usr_calls_t	The total number of user calls made by the session since it began. User calls are incremented whenever a parse, execute, or fetch is performed by the user. [Sequential = LST Non-Sequential = SUM]
usr_commits	The number of user commits performed by the session during the interval. User commits can be used to approximate a user transaction rate. [Sequential = SUM Non-Sequential = SUM]
usr_commits_t	The total number of user commits performed by the session since it began. User commits can be used to approximate a user transaction rate. [Sequential = LST Non-Sequential = SUM]
waits	The number of waits by the session during the interval [Sequential = SUM Non-Sequential = SUM]
waits_t	The total number of waits by the session since it began [Sequential = LST Non-Sequential = SUM]
waittime	The amount of time in seconds spent waiting by the session during the interval. This value is zero when the Oracle timed_statistics initialization parameter is set to FALSE. [Sequential = SUM Non-Sequential = SUM]
waittime_t	The total amount of time in seconds spent waiting by the session since it began. This value is zero when the Oracle timed_statistics initialization parameter is set to FALSE. [Sequential = LST Non-Sequential = SUM]

12.15. Session Wait Statistics

The Oracle.SessionWait table stores detailed information about current wait events by the session. The information is retrieved from the v$session_event view within Oracle.

Table Field Hierarchy

Class:	Oracle
Subclass:	SessionWait
IT Resource Name:	/TeamQuest/System/*systemname*/Oracle/*instancename*
TeamQuest Table Name:	Oracle.Session Wait
Open Table Name:	ORASESSIONWAIT
Collection interval:	60 seconds (default)
Default retention:	1 day
Table type:	Performance

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = ID]
avg_waittime	The average amount of time in seconds spent waiting for the event by the session during the interval. This value is zero when the Oracle timed_statistics initialization parameter is set to FALSE. [Sequential = AVG Non-Sequential = AVG]
event	The name of the wait event [Sequential = ID Non-Sequential = ID]
Instance	The name of the instance from which the data is obtained. This field is limited to 16 characters. [Sequential = ID Non-Sequential = ID]
Interval	The expected data sampling interval [Sequential = SUM Non-Sequential = ID]
logon_time	The logon time of the session [Sequential = FST Non-Sequential = ID]
ora_user	The Oracle user name the session is using [Sequential = ID Non-Sequential = ID]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
serial_num	The session serial number [Sequential = ID Non-Sequential = ID]
sid	The session identifier [Sequential = ID Non-Sequential = ID]

System	The name of the system where the data is collected. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
timeouts	The number of timeouts for the event by the session during the interval [Sequential = SUM Non-Sequential = SUM]
timeouts_t	The total number of timeouts for the event by the session since it began [Sequential = LST Non-Sequential = SUM]
waits	The number of waits for the event by the session during the interval [Sequential = SUM Non-Sequential = SUM]
waits_t	The total number of waits for the event by the session since it began [Sequential = LST Non-Sequential = SUM]
waittime	The amount of time in seconds spent waiting for the event by the session during the interval. This value is zero when the Oracle timed_statistics initialization parameter is set to FALSE. [Sequential = SUM Non-Sequential = SUM]
waittime_t	The total amount of time in seconds spent waiting for the event since the session began. This value is zero when the Oracle timed_statistics initialization parameter is set to FALSE. [Sequential = LST Non-Sequential = SUM]

12.16. System Parameters Statistics

The Oracle.SystemParameters table shows detailed information about the system parameters for an Oracle instance. The data is obtained from the v$system_parameter.

Table Field Hierarchy

Class:	Oracle
Subclass:	SystemParameters
IT Resource Name:	/TeamQuest/System/*systemname*/Oracle/*instancename*
TeamQuest Table Name:	Oracle.SystemParameters
Open Table Name:	ORASYSPARAMETERS
Collection interval:	N/A
Default retention:	6 months
Table type:	Event

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = ID]
description	The descriptive text about the parameter [Sequential = ID Non-Sequential = ID]
Instance	The name of the instance from which the data is obtained. This field is limited to 16 characters. [Sequential = ID Non-Sequential = ID]
Interval	The expected data sampling interval [Sequential = SUM Non-Sequential = ID]
isadjusted	Indicates that the rdbms adjusted the input value to a more suitable value. (For example, the parameter value should be prime, but the user input is a nonprime number, so the rdbms adjusted the value to the next prime number.) [Sequential = ID Non-Sequential = ID]
isdefault	Indicates the value assigned to the parameter is the default [Sequential = ID Non-Sequential = ID]
ismodified	Indicates how the parameter was modified. If an ALTER SESSION operation was performed, the value is MODIFIED. If an ALTER SYSTEM operation was performed (which causes all the values for the currently logged-in session to be modified), the value is SYS_MODIFIED. [Sequential = ID Non-Sequential = ID]
isses_modifiable	Indicates whether the parameter can be modified by ALTER SESSION [Sequential = ID Non-Sequential = ID]

issys_modifiable	Indicates whether the parameter can be modified by ALTER SYSTEM [Sequential = ID Non-Sequential = ID]
name	The parameter name [Sequential = ID Non-Sequential = ID]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
System	The name of the system where the data is collected. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
type	The parameter type. It can be one of the following: 1 = Boolean 2 = string 3 = integer [Sequential = ID Non-Sequential = ID]
value	The value assigned to the parameter [Sequential = ID Non-Sequential = ID]

12.17. System Statistics

The Oracle.SystemStats table shows detailed information about the system statistics that Oracle provides. The data is obtained from the v$sysstat view. Most of the statistics in this table are also stored as aggregate values with the exception of the statistics that have a class type of 16, which is OS data. If a statistic in this table is a time field, the values are represented in seconds.

Table Field Hierarchy

Class:	Oracle
Subclass:	SystemStats
IT Resource Name:	/TeamQuest/System/*systemname*/Oracle/*instancename*
TeamQuest Table Name:	Oracle.SystemStats
Open Table Name:	ORASYSSTATS
Collection interval:	N/A
Default retention:	1 day
Table type:	Performance

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = ID]
class	A number representing a statistic class. The class numbers are defined as follows: 1 = User 2 = Redo 4 = Enqueue 8 = Cache 16 = OS 32 = Parallel Server 64 = SQL 128 = Debug [Sequential = ID Non-Sequential = ID]
Instance	The name of the instance from which the data is obtained. This field is limited to 16 characters. [Sequential = ID Non-Sequential = ID]
Interval	The expected data sampling interval [Sequential = SUM Non-Sequential = ID]
name	The name of the statistic [Sequential = ID Non-Sequential = ID]

Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
statnum	The statistic number. For a list of all the available statistics and a description of what each statistic collects, see the appropriate Oracle manual. [Sequential = ID Non-Sequential = ID]
System	The name of the system where the data is collected. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
value	The difference between the statistic value during the interval [Sequential = SUM Non-Sequential = SUM]
value_t	The total number of the value [Sequential = LST Non-Sequential = SUM]

12.18. System Wait Event Statistics

The Oracle.SystemWait table stores detailed information about waits for system events within the Oracle data.

Table Field Hierarchy

Class:	Oracle
Subclass:	SystemWait
IT Resource Name:	/TeamQuest/System/*systemname*/Oracle/*instancename*
TeamQuest Table Name:	Oracle.SystemWait
Open Table Name:	ORASYSWAIT
Collection interval:	60 seconds (default)
Default retention:	1 day
Table type:	Performance

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = ID]
avg_waittime	The average amount of time in seconds spent waiting for the event during the interval. The value is always zero when the Oracle timed_statistics initialization parameter is set to FALSE. [Sequential = AVG Non-Sequential = AVG]

event	The name of the wait event [Sequential = ID Non-Sequential = ID]
Instance	The name of the instance from which the data is obtained. This field is limited to 16 characters. [Sequential = ID Non-Sequential = ID]
Interval	The expected data sampling interval [Sequential = SUM Non-Sequential = ID]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
System	The name of the system where the data is collected. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
timeouts	The number of timeouts for the event during the interval [Sequential = SUM Non-Sequential = SUM]
timeouts_t	The total number of timeouts for the event since the instance started [Sequential = LST Non-Sequential = SUM]
waits	The number of waits for the event during the interval [Sequential = SUM Non-Sequential = SUM]
waits_t	The total number of waits for the event since the instance started [Sequential = LST Non-Sequential = SUM]
waittime	The amount of time in seconds spent waiting for the event during the interval. This value is zero when the Oracle timed_statistics initialization parameter is set to FALSE. [Sequential = SUM Non-Sequential = SUM]
waittime_t	The amount of time in seconds spent waiting for the event since the instance started. This value is zero when the Oracle timed_statistics initialization parameter is set to FALSE. [Sequential = LST Non-Sequential = SUM]

12.19. Top SQL Cursors Statistics

The Oracle.TopSQL table stores snapshots of the top SQL Cursors for a given sample. This allows you to pinpoint possible query problems that result in poor performance on the system. You can select the number of rows returned and the criteria used for returning those rows. The information is obtained from the v$sql view within Oracle. For more information on configuring the collection of top SQL cursor statistics, see the section on configuring an Oracle Agent in the *TeamQuest Performance Software Administration Guide*.

Table Field Hierarchy

Class:	Oracle
Subclass:	TopSQL
IT Resource Name:	/TeamQuest/System/*systemname*/Oracle/*instancename*
TeamQuest Table Name:	Oracle.TopSQL
Open Table Name:	ORATOPSQL
Collection interval:	24 hours (default)
Default retention:	30 days
Table type:	Performance

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = ID]
buffer_gets	The number of buffer gets for the cursor during the interval [Sequential = SUM Non-Sequential = SUM]
buffer_gets_t	The total number of buffer gets for the cursor since it was present in the library cache [Sequential = LST Non-Sequential = SUM]
cpu_time	The CPU time in seconds used by the cursor for parsing, executing, or fetching during the interval [Sequential = SUM Non-Sequential = SUM]
cpu_time_t	The total CPU time in seconds used by the cursor for parsing, executing, or fetching since it was present in the library cache [Sequential = LST Non-Sequential = SUM]
disk_reads	The number of disk reads for the cursor during the interval [Sequential = SUM Non-Sequential = SUM]
disk_reads_t	The total number of disk reads for the cursor since it was present in the library cache [Sequential = LST Non-Sequential = SUM]
elapsed_time	The elapsed time in seconds used by the cursor for parsing, executing, or fetching during the interval [Sequential = SUM Non-Sequential = SUM]

elapsed_time_t	The total elapsed time in seconds used by the cursor for parsing, executing, or fetching since it was present in the library cache [Sequential = LST Non-Sequential = SUM]
executions	The number of executions that took place on the object during the interval [Sequential = SUM Non-Sequential = SUM]
executions_t	The total number of executions that took place on the object since it was present in the library cache [Sequential = LST Non-Sequential = SUM]
first_load_time	The timestamp of the parent creation time [Sequential = FST Non-Sequential = ID]
Instance	The name of the instance from which the data is obtained. This field is limited to 16 characters. [Sequential = ID Non-Sequential = ID]
Interval	The expected data sampling interval [Sequential = SUM Non-Sequential = ID]
invalidations	The number of times the cursor has been invalidated during the interval [Sequential = SUM Non-Sequential = SUM]
invalidations_t	The total number of times the cursor has been invalidated since it was present in the library cache [Sequential = LST Non-Sequential = SUM]
loaded_versions	The number of child and parent cursors with a loaded context heap for the library cache entry [Sequential = LST Non-Sequential = SUM]
loads	The number of times the object was loaded or reloaded during the interval [Sequential = SUM Non-Sequential = SUM]
loads_t	The total number of times the object was loaded or reloaded since it was present in the library cache [Sequential = LST Non-Sequential = SUM]
module	The name of the module that was executing at the time the SQL statement was first parsed as set by calling dbms_applications_info.set_module [Sequential = ID Non-Sequential = ID]
optimizer_mode	The mode under which the SQL statement is executed [Sequential = ID Non-Sequential = ID]
parse_calls	The number of parse calls for the cursor during the interval [Sequential = SUM Non-Sequential = SUM]
parse_calls_t	The total number of parse calls for the cursor since it was present in the library cache [Sequential = LST Non-Sequential = SUM]
parsing_user_id	The user id of the user who originally built the cursor [Sequential = ID Non-Sequential = ID]

persistent_mem_KB	The fixed amount of memory in kilobytes (KB) used during the lifetime of the cursor [Sequential = LST Non-Sequential = SUM]
rows_processed	The number of rows the parsed SQL statement returned during the interval [Sequential = SUM Non-Sequential = SUM]
rows_processed_t	The total number of rows the parsed SQL statement returned since it was present in the library cache [Sequential = LST Non-Sequential = SUM]
runtime_mem_KB	The fixed amount of memory in kilobytes (KB) required during the execution of the cursor [Sequential = LST Non-Sequential = SUM]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
sharable_mem_KB	The amount of shared memory in kilobytes (KB) used by the cursor [Sequential = LST Non-Sequential = SUM]
sorts	The number of sort operations that was done for the cursor during the interval [Sequential = SUM Non-Sequential = SUM]
sorts_t	The total number of sort operations that was done for the cursor since it was present in the library cache [Sequential = LST Non-Sequential = SUM]
sql_address	The address of the handle to the parent for the cursor [Sequential = ID Non-Sequential = ID]
sql_hash_value	The hash value of the parent statement in the library cache [Sequential = ID Non-Sequential = ID]
sql_text	The SQL text for the current cursor [Sequential = ID Non-Sequential = ID]
System	The name of the system where the data is collected. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
version_count	The number of cursors that are present in the library cache for this sql_address and sql_hash_value [Sequential = LST Non-Sequential = SUM]

Section 13
Oracle Solaris Systems

Statistics for Oracle Solaris systems are collected by the TeamQuest collection agents.

This section contains a listing of the statistics collected for the system:

- System Activity Statistics (see 13.1)
- Disk Space Statistics (see 13.2)
- Network Statistics (see 13.3)
- Workload Statistics (see 13.4)
- Process Statistics (see 13.5)
- Project Statistics (see 13.6)
- Hardware Inventory Statistics (see 13.7)
- System Log Statistics (see 13.8)
- General Log Statistics (see 13.9)
- TeamQuest Log Statistics (see 13.10)
- Derived Statistics (see 13.11)
- Zone Statistics (see 13.12)
- Processor Set Statistics (see 13.13)
- Resource Pool Statistics (see 13.14)

Note: *At the end of each statistic description, you will see a notation in brackets indicating the method that is used for data consolidation (for example,* [Sequential = SUM Non-Sequential = SUM]). *Sequential means that the field is consolidated over time. Non-Sequential means that the field is consolidated within a specified time interval.*

The following notations are used:

AVG = Average
DIV =Weight
FST = First
ID = Identifier
LST = Last
MAX = Maximum
MIN = Minimum
NON = None or no method was used
SUM = Summation

If you are using TeamQuest View to view aggregation set data, the sequential method is used for data consolidation.

Because derived statistics are not stored in the performance database, the data consolidation method is not shown in the description of a derived statistic.

13.1. System Activity Statistics

The System Activity Agent (**tqbsp**) is used to collect a wide variety of important system statistics. Major resources monitored by this agent include processors, memory, disks, and the operating system kernel.

Notes:

- *Two naming conventions are available for Block Device resources. By default, the resource names are in the form of c0t0d0s0 for local disks, rmt/0 for tapes, and server:/export for NFS Client mount points. If you would like to use the alternate names that are in the form of sd0 for disks, st0 for tapes, or nfs0 for NFS, change the Descriptive Disk Names setting in the System Activity Agent configuration file to OFF.*
- *By default, performance data on disk partitions is not stored. To collect performance data on disk partitions, change the Disk Partitions setting in the System Activity Agent configuration file to ON.*
- *By default, performance data NFS client mount point is not stored. To collect data on NFS client mount point, change the NFS Mounts setting in the System Activity Agent Configuration file to ON.*
- *For information on how to change the System Activity Agent configuration settings using TeamQuest Manager, see the* TeamQuest Performance Software Administration Guide.

Special Processing When Using Sequential Consolidation Method

Special processing occurs when certain records in the Block Device.by Device table are consolidated using the Sequential consolidation method. The following formulas are used to calculate the %busy, Actual_Interval, and record_count statistic values:

%busy

The %busy field uses a new consolidation method that uses the following formula to produce the consolidated %busy value:

$$\text{consolidated \%busy} = \text{\%busy} * \text{record_count} * \text{Actual_Interval}$$

At the end of the aggregation processing step after multiple records have been combined together to produce a single consolidated record, the %busy field contains the consolidated %busy value.

An additional processing step is performed using the following formula to produce a final %busy value that is stored into the consolidated record:

$$\text{\%busy} = \frac{\text{consolidated \%busy}}{\text{record_count} * \text{Interval}}$$

Note: The record_count field value used in the above formula must have already been generated using the record_count formula.

Block Device.by Device table records that have been stored by previous levels of TeamQuest collection agents do not contain the record_count field. For these records, a value of 1 is assumed for the record_count value.

Actual_Interval

For consolidated records (both reduced and not reduced), the Actual_Interval field should contain the Interval value at the end of the aggregation processing step.

record_count

The record_count field value is updated at the end of the aggregation processing step using the following formula:

$$\text{record_count} = \frac{(\Sigma(\text{record_count} * \text{Actual_Interval})) + (\text{Interval} - \Sigma\text{Actual_Interval})}{\text{Interval}}$$

The first part of the numerator is a summation of the record_count value multiplied by the Actual_Interval value across all of the consolidated records. This value should exist in the record_count field at the end of the aggregation processing step since the record_count field is weighted by Actual_Interval.

The Actual_Interval value used in the second part of the numerator is a summation of all the Actual_Interval values of the consolidated records. This value should exist in the Actual_Interval field at the end of the aggregation processing step since Actual_Interval is a summation.

The Interval value in the formula is the time range in seconds that the final consolidated record represents. For example, if 5-minute records are generated, the Interval value is calculated as 5 multiplied by 60.

Parameter Hierarchy

Class:	Block Device
Subclass:	by Device
IT Resource Name:	/TeamQuest/System/*systemname*/Disk
TeamQuest Table Name:	Block Device.by Device
Open Table Name:	BLKDEVBYDEVICE
Resource:	disk0, disk1, ...
Statistic Name:	
%busy	The percentage of time this device was servicing a transfer request [Sequential = AVG Non-Sequential = AVG] View Report: /report/hp-ux/sys-act/io/dsk-util.rpt
actq_avwait*	The average run queue wait time in milliseconds
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = ID]
avgresp*	The average response time of an I/O on a device. Calculated as avwait + avserv

avque	The average number of requests outstanding [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/sys-act/io/dsk-q.rpt
avserv	The average time in milliseconds to service each transfer request (includes seek, rotation latency, and data transfer times) for the device [Sequential = AVG Non-Sequential = AVG] View Report: /report/hp-ux/sys-act/io/dsk-time.rpt
avwait	The average time in milliseconds that transfer requests are idle in the queue while the queue is occupied [Sequential = AVG Non-Sequential = AVG] View Report: /report/hp-ux/sys-act/io/dsk-time.rpt
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = ID]
IO_intensity*	The activity of an I/O device. This is the product of the I/O response time in milliseconds and the I/O transfer rate in I/Os per second. This is proportional to the average queue length (the number of I/O requests waiting or in progress at the I/O device).
Kbytes/s	The rate at which data is transferred in kilobytes per second [Sequential = AVG Non-Sequential = SUM] View Reports: /report/hp-ux/sys-act/io/dsk-xfer.rpt /report/hp-ux/sys-act/io/top-dsk.rpt
record_count	The number of collected records represented by the record written to the database. For nonreduced records, this value is 1. For reduced records, this value is the number of records that are combined into a single database record. [Sequential = AVG Non-Sequential = SUM]
reduction_name	The name of reduction rule [Sequential = ID Non-Sequential = ID]
reduction_source	The source of the reduction record. For reduction records with agent sources, this value is A. For reduction records with harvest sources, this value is H. [Sequential = ID Non-Sequential = ID]
transfers/s	The number of physical transfers to and from the disk per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/hp-ux/sys-act/io/dsk-xfer.rpt
waitq_avwait*	The average wait queue wait time in milliseconds

Class:	Block Device
Subclass:	Summary
IT Resource Name:	/TeamQuest/System/*systemname*/Disk
TeamQuest Table Name:	Block Device.Summary
Open Table Name:	BLKDEVSUM
Statistic Name:	
transfers/s	The number of physical transfers to and from all of the devices per second [Sequential = AVG Non-Sequential = SUM]

Class:	CPU
Subclass:	by Processor
IT Resource Name:	/TeamQuest/System/*systemname*/CPU
TeamQuest Table Name:	CPU.by Processor
Open Table Name:	CPUBYPROC
Resource:	cpu0, cpu1, ...
Statistic Name:	
%idle	The percentage of CPU time spent idle for the CPU [Sequential = AVG Non-Sequential = AVG] View Reports: /report/solaris/sys-act/cpu/mpstat.rpt /report/solaris/sys-act/cpu/per-cpu.rpt
%sys	The percentage of CPU time spent in system mode for the CPU [Sequential = AVG Non-Sequential = AVG] View Reports: /report/solaris/sys-act/cpu/mpstat.rpt /report/solaris/sys-act/cpu/per-cpu.rpt
%usr	The percentage of CPU time spent in user mode for the CPU [Sequential = AVG Non-Sequential = AVG] View Reports: /report/solaris/sys-act/cpu/mpstat.rpt /report/solaris/sys-act/cpu/per-cpu.rpt
%wio	The percentage of CPU time spent idle while some process is waiting for I/O completion for the CPU. For Solaris level 10 and later, this statistic is no longer available and will appear as 0. %wio is reported as part of the %idle statistic. [Sequential = AVG Non-Sequential = AVG] View Reports: /report/solaris/sys-act/cpu/mpstat.rpt /report/solaris/sys-act/cpu/per-cpu.rpt
csw/s	The number of process switches per second for the CPU [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/sys-act/cpu/mpstat.rpt

icsw/s	The number of involuntary context switches per second for the CPU [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/sys-act/cpu/mpstat.rpt
intr/s	The number of interrupts per second for the CPU [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/sys-act/cpu/mpstat.rpt
ithr/s	The number of interrupts as threads (not counting clock interrupts) per second for the CPU [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/sys-act/cpu/mpstat.rpt
migr/s	The number of thread migrations (to another CPU) per second for the CPU [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/sys-act/cpu/mpstat.rpt
minf/s	The number of minor page faults per second for the CPU [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/sys-act/cpu/mpstat.rpt
mjf/s	The number of major page faults per second for the CPU [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/sys-act/cpu/mpstat.rpt
smtx/s	The number of spins on mutexes (lock not acquired on first try) per second for the CPU [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/sys-act/cpu/mpstat.rpt
srw/s	The number of spins on reader/writer locks (lock not acquired on first try) per second for the CPU [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/sys-act/cpu/mpstat.rpt
syscl/s	The number of system calls per second for the CPU [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/sys-act/cpu/mpstat.rpt
xcal/s	The number of inter-processor cross calls per second for the CPU [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/sys-act/cpu/mpstat.rpt

Table Field Hierarchy

Class:	CPU
Subclass:	RelativePerformance
IT Resource Name:	/TeamQuest/System/*systemname*/CPU
TeamQuest Table Name:	CPU.RelativePerformance
Open Table Name:	CPURELPERF
Collection interval:	1 minute
Default retentions:	1 month
Table type:	Performance
Derived tables using fields from this table:	N/A

Statistic Name	Type	Description
Actual_Interval	Long	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = ID]
cpu_relative_performance	Real	The relative performance of the CPU on a common scale [Sequential = AVG Non-Sequential = SUM]
Interval	Long	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = ID]
rel_unused	Real	The amount of CPU resources not used based on a common, relative scale [Sequential = AVG Non-Sequential = SUM]
rel_used	Real	The amount of CPU resources used based on a common, relative scale [Sequential = AVG Non-Sequential = SUM]
System	String	The name of the system where the data is collected. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	Integer	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]

Class:	CPU
Subclass:	Summary
IT Resource Name:	/TeamQuest/System/*systemname*/CPU
TeamQuest Table Name:	CPU.Summary
Open Table Name:	CPUSUM
Statistic Name:	
%busy	The percentage of time the CPU was not idle [Sequential = AVG Non-Sequential = AVG]
%idle	The percentage of total CPU time spent idle while no processes are waiting for I/O completion [Sequential = AVG Non-Sequential = AVG] View Report: /report/solaris/sys-act/cpu/cpu-util.rpt
%sys	The percentage of total CPU time spent in system mode [Sequential = AVG Non-Sequential = AVG] View Reports: /report/solaris/rules/cpu_mutex.rpt /report/solaris/sys-act/cpu/cpu-util.rpt
%usr	The percentage of total CPU time spent in user mode [Sequential = AVG Non-Sequential = AVG] View Report: /report/solaris/sys-act/cpu/cpu-util.rpt
%wio	The percentage of total CPU time spent idle while some process is waiting for I/O completion. For Solaris level 10 and later, this statistic is no longer available and will appear as 0. %wio is reported as part of the %idle statistic. [Sequential = AVG Non-Sequential = AVG] View Report: /report/solaris/sys-act/cpu/cpu-util.rpt
online_cpus	The number of CPUs that were online at the end of the sampling interval [Sequential = LST Non-Sequential = SUM]

Class:	Kernel
Subclass:	Buffers
IT Resource Name:	/TeamQuest/System/*systemname*/Kernel
TeamQuest Table Name:	Kernel.Buffers
Open Table Name:	KNLBUFFS
Statistic Name:	
%rcache	The percentage of logical reads satisfied from the buffer cache [Sequential = AVG Non-Sequential = AVG] View Report: /report/solaris/sys-act/kernel/bufc-hit.rpt
%wcache	The percentage of logical writes satisfied from the buffer cache [Sequential = AVG Non-Sequential = AVG] View Report: /report/solaris/sys-act/kernel/bufc-hit.rpt
bread/s	The number of reads per second from devices into the buffer cache [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/sys-act/kernel/bufc-xfr.rpt
bwrit/s	The number of writes per second from the buffer cache to devices [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/sys-act/kernel/bufc-xfr.rpt
hitrate	The buffer cache hit ratio [Sequential = AVG Non-Sequential = AVG]
hits/s	The rate of buffer cache hits [Sequential = AVG Non-Sequential = SUM]
lookups/s	The rate of buffer cache lookups [Sequential = AVG Non-Sequential = SUM]
lread/s	The number of reads per second from the buffer cache to a process [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/sys-act/kernel/bufc-xfr.rpt
lwrit/s	The number of writes per second from a process to the buffer cache [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/sys-act/kernel/bufc-xfr.rpt
pread/s	The number of physical read requests per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/sys-act/kernel/phys-xfr.rpt
pwrit/s	The number of physical write requests per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/sys-act/kernel/phys-xfr.rpt

Class:	Kernel
Subclass:	File Access
IT Resource Name:	/TeamQuest/System/*systemname*/Kernel
TeamQuest Table Name:	Kernel.File Access
Open Table Name:	KNLFILEACCESS
Statistic Name:	
dirblk/s	The number of directory block reads issued per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/sys-act/kernel/f-access.rpt
dnlchitrate	The directory name lookup cache hit ratio [Sequential = AVG Non-Sequential = AVG] View Report: /report/solaris/rules/dnlc.rpt
dnlchits/s	The number of directory name lookup cache hits per second [Sequential = AVG Non-Sequential = SUM]
dnlcmisses/s	The number of directory name lookup cache misses per second [Sequential = AVG Non-Sequential = SUM]
dnlcrefs/s	The number of directory name lookups per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/rules/dnlc.rpt
icrefs/s	The number of i-node lookups per second [Sequential = AVG Non-Sequential = SUM] View Reports: /report/solaris/rules/inode_hit.rpt /report/solaris/rules/inode_steal.rpt
iget/s	The number of files located by i-node entries per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/sys-act/kernel/f-access.rpt
ihitrate	The i-node cache hit ratio [Sequential = AVG Non-Sequential = AVG] View Report: /report/solaris/rules/inode_hit.rpt
ihits/s	The number of i-node cache hits per second [Sequential = AVG Non-Sequential = SUM]
imisses/s	The number of i-node cache misses per second [Sequential = AVG Non-Sequential = SUM]

iprate	The rate at which UNIX File System (UFS) i-nodes with reusable pages associated with them are taken off the free list [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/rules/inode_steal.rpt
namei/s	The number of file system path searches per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/sys-act/kernel/f-access.rpt

Class:	Kernel
Subclass:	IPC (inter process communication)
IT Resource Name:	/TeamQuest/System/*systemname*/Kernel
TeamQuest Table Name:	Kernel.IPC
Open Table Name:	KNLIPC
Statistic Name:	
msg/s	The number of message operations (send and receives) per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/sys-act/kernel/msg-sema.rpt
sema/s	The number of semaphore operations per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/sys-act/kernel/msg-sema.rpt

Class:	Kernel
Subclass:	Load Average
IT Resource Name:	/TeamQuest/System/*systemname*/Kernel
TeamQuest Table Name:	Kernel.Load Average
Open Table Name:	KNLLOADAVG
Statistic Name:	
1 min	The number of processes in the run queue averaged over the last 1 minute. This count is taken at the end of the sampling interval. [Sequential = LST Non-Sequential = SUM] View Report: /report/solaris/sys-act/kernel/load-avg.rpt

5 min	The number of processes in the run queue averaged over the last 5 minutes. This count is taken at the end of the sampling interval. [Sequential = LST Non-Sequential = SUM] View Report: /report/solaris/sys-act/kernel/load-avg.rpt
15 min	The number of processes in the run queue averaged over the last 15 minutes. This count is taken at the end of the sampling interval. [Sequential = LST Non-Sequential = SUM] View Report: /report/solaris/sys-act/kernel/load-avg.rpt

Class:	Kernel
Subclass:	Memory
IT Resource Name:	/TeamQuest/System/*systemname*/Kernel
TeamQuest Table Name:	Kernel.Memory
Open Table Name:	KNLMEM
Statistic Name:	
failures	This statistic is not available for the Oracle Database Server. The value is reported as <N/A>. [Sequential = LST Non-Sequential = SUM]
in_use	This statistic is not available for the Oracle Database Server. The value is reported as <N/A>. [Sequential = LST Non-Sequential = SUM]

Class:	Kernel
Subclass:	Paging
IT Resource Name:	/TeamQuest/System/*systemname*/Memory
TeamQuest Table Name:	Kernel.Paging
Open Table Name:	KNLPAGING
Statistic Name:	
%ufsipf	The percentage of UNIX File System (UFS) i-nodes taken off the free list by iget, which had reusable pages associated with it [Sequential = AVG Non-Sequential = AVG] View Report: /report/solaris/sys-act/kernel/paging2.rpt
apfree/s	The number of anonymous pages freed per second [Sequential = AVG Non-Sequential = SUM]
appgin/s	The number of anonymous pages paged-in per second [Sequential = AVG Non-Sequential = SUM]
appgout/s	The number of anonymous pages paged-out per second [Sequential = AVG Non-Sequential = SUM]

atch/s	The number of page faults per second that are satisfied by reclaiming a page currently in memory (attaches per second) [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/sys-act/kernel/paging1.rpt
epfree/s	The number of executable pages freed per second [Sequential = AVG Non-Sequential = SUM]
eppgin/s	The number of executable pages paged-in per second [Sequential = AVG Non-Sequential = SUM]
eppgout/s	The number of executable pages paged-out per second [Sequential = AVG Non-Sequential = SUM]
fpfree/s	The number of file system pages freed per second [Sequential = AVG Non-Sequential = SUM]
fppgin/s	The number of file system pages paged-in per second [Sequential = AVG Non-Sequential = SUM]
fppgout/s	The number of file system pages paged-out per second [Sequential = AVG Non-Sequential = SUM]
handspreadpages	The maximum distance between clock hands in bytes. This value will be one-fourth of all memory up to a maximum of 8,192 bytes. [Sequential = AVG Non-Sequential = AVG]
pflts/s	The number of page faults per second from protection errors or copy-on-writes [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/sys-act/kernel/paging1.rpt
pgfree/s	The number of pages per second placed on the free list by the page-stealing daemon [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/sys-act/kernel/paging2.rpt
pgin/s	The number of page-in requests per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/sys-act/kernel/paging1.rpt
pgout/s	The number of page-out requests per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/sys-act/kernel/paging2.rpt
pgscan/s	The number of pages per second scanned by the page-stealing daemon [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/sys-act/kernel/paging2.rpt
ppgin/s	The number of pages paged-in per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/sys-act/kernel/paging1.rpt

ppgout/s	The number of pages paged-out per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/sys-act/kernel/paging2.rpt
slock/s	The number of faults per second caused by software locks requiring physical I/O [Sequential = AVG Non-Sequential = SUM]
vflts/s	The number of address translation page faults per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/sys-act/kernel/paging1.rpt

Class:	Kernel
Subclass:	Queues
IT Resource Name:	/TeamQuest/System/*systemname*/Kernel
TeamQuest Table Name:	Kernel.Queues
Open Table Name:	KNLQS
Statistic Name:	
%runocc	The percentage of time the run queue is occupied [Sequential = AVG Non-Sequential = AVG] View Report: /report/solaris/sys-act/kernel/q-util.rpt
%swpocc	The percentage of time the swap queue is occupied [Sequential = AVG Non-Sequential = AVG] View Report: /report/solaris/sys-act/kernel/q-util.rpt
avg_cpuq_sz	The average length of the run queue per CPU (a queue of processes in memory and runnable) [Sequential = AVG Non-Sequential = AVG]
avg_runq_sz	The average length of the run queue (a queue of processes in memory and runnable) [Sequential = AVG Non-Sequential = AVG]
avg_swpq_sz	The average length of the swap queue (a queue of processes swapped out and ready to run) [Sequential = AVG Non-Sequential = AVG]
blocked	The average number of processes blocked waiting for resources [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/sys-act/kernel/blocked.rpt
cpuq_sz	The average length of the run queue per CPU (a queue of processes in memory and runnable) while the run queue is occupied [Sequential = AVG Non-Sequential = AVG] View Report: /report/solaris/rules/cpu_power.rpt

pswch/s	The number of process switches per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/sys-act/kernel/p-switch.rpt
runq_sz	The average length of the run queue (a queue of processes in memory and runnable) while the run queue is occupied [Sequential = AVG Non-Sequential = AVG] View Reports: /report/solaris/sys-act/kernel/q-sizes.rpt /report/solaris/sys-act/kernel/runq.rpt
smtx/s	The CPU mutex rate per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/rules/cpu_mutex.rpt
swpq_sz	The average length of the swap queue (a queue of processes swapped out and ready to run) while the swap queue is occupied [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/sys-act/kernel/q-sizes.rpt

Class:	Kernel
Subclass:	Swapping
IT Resource Name:	/TeamQuest/System/*systemname*/Memory
TeamQuest Table Name:	Kernel.Swapping
Open Table Name:	KNLSWAPPING
Statistic Name:	
allocated	The total amount of swap space in megabytes allocated for use as backing store. The count is taken at the end of the sampling interval. [Sequential = AVG Non-Sequential = SUM]
available	The total swap space in megabytes that is available for future reservation and allocation. The count is taken at the end of the sampling interval. [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/sys-act/kernel/freeswap.rpt
bswin/s	The number of blocks transferred per second for swap-ins [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/sys-act/kernel/swapamt.rpt
bswot/s	The number of blocks transferred per second for swap-outs [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/sys-act/kernel/swapamt.rpt
reserved	The total amount of swap space in megabytes not allocated but claimed by memory mappings to be available for future use. The count is taken at the end of the sampling interval. [Sequential = AVG Non-Sequential = SUM]

swpin/s	The rate of swap-ins (transfers into memory per second) [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/sys-act/kernel/swaprate.rpt
swpot/s	The rate of swap-outs (transfers from memory to the swap area per second) [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/sys-act/kernel/swaprate.rpt
used	The total amount of swap space in megabytes that is either allocated or reserved. The count is taken at the end of the sampling interval. [Sequential = AVG Non-Sequential = SUM]

Class:	Kernel
Subclass:	Tables
IT Resource Name:	/TeamQuest/System/*systemname*/Kernel
TeamQuest Table Name:	Kernel.Tables
Open Table Name:	KNLTABS
Statistic Name:	
inod_sz	The number of entries currently used in the i-node table. This count is taken at the end of the sampling interval. [Sequential = AVG Non-Sequential = AVG] View Report: /report/solaris/sys-act/kernel/tbl-size.rpt
proc_maxsz	The maximum possible entries in the process table. This count is taken at the end of the sampling interval. [Sequential = MAX Non-Sequential = MAX] View Report: /report/solaris/sys-act/kernel/tbl-size.rpt
proc_sz	The number of entries currently being used in the process table. This count is taken at the end of the sampling interval. [Sequential = AVG Non-Sequential = AVG] View Report: /report/solaris/sys-act/kernel/tbl-size.rpt

Class:	Kernel
Subclass:	TTY
IT Resource Name:	/TeamQuest/System/*systemname*/Kernel
TeamQuest Table Name:	Kernel.TTY
Open Table Name:	KNLTTY
Statistic Name:	
canch/s	The number of input characters per second processed by canon (canonical queue) [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/sys-act/kernel/tty-xfer.rpt
mdmin/s	The number of modem interrupts per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/sys-act/kernel/tty-intr.rpt
outch/s	The number of output characters transferred per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/sys-act/kernel/tty-xfer.rpt
rawch/s	The number of input characters per second transferred in raw mode [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/sys-act/kernel/tty-xfer.rpt
rcvin/s	The number of receiver hardware interrupts per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/sys-act/kernel/tty-intr.rpt
xmtin/s	The number of transmitter hardware interrupts per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/sys-act/kernel/tty-intr.rpt

Class:	Memory
Subclass:	N/A
IT Resource Name:	/TeamQuest/System/*systemname*/Memory
TeamQuest Table Name:	Memory
Open Table Name:	MEM
Statistic Name:	
zfs-arc-sz	The total amount of memory in megabytes used by Adaptive Replacement Cache at the end of the interval. This statistic is available only when the Zettabyte File System (ZFS) is used on the system. This memory is available to user processes and is returned to freemem as required. [Sequential = LST Non-Sequential = SUM]
freemem	The average amount of memory in megabytes available to user processes not including memory allocated to ZFS. [Sequential = AVG Non-Sequential = SUM] View Reports: /report/solaris/sys-act/memory/freemem.rpt /report/solaris/sys-act/memory/memory.rpt
physmem	The total amount of physical memory in megabytes at the end of the interval [Sequential = LST Non-Sequential = SUM] View Report: /report/solaris/sys-act/memory/memory.rpt

Class:	Swap Space
Subclass:	Summary
IT Resource Name:	/TeamQuest/System/*systemname*/Memory
TeamQuest Table Name:	Swap Space.Summary
Open Table Name:	SWAPSPACESUM
Statistic Name:	
free	The amount of free swap space in megabytes at the end of the interval [Sequential = LST Non-Sequential = SUM] View Reports: /report/solaris/rules/swap_space.rpt /report/solaris/sys-act/swap/swpspc.rpt
total	The total amount of swap space in megabytes at the end of the interval [Sequential = LST Non-Sequential = SUM] View Report: /report/solaris/sys-act/swap/swpspc.rpt

Class:	System Call
Subclass:	Summary
IT Resource Name:	/TeamQuest/System/*systemname*/Kernel
TeamQuest Table Name:	System Call.Summary
Open Table Name:	SYSCALLSUM
Statistic Name:	
exec/s	The number of exec system calls per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/sys-act/syscall/imp-scal.rpt
fork/s	The number of fork and vfork system calls per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/sys-act/syscall/imp-scal.rpt
rchar/s	The number of characters transferred by read system calls in the interval in bytes per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/sys-act/syscall/scal-xfr.rpt
scall/s	The total number of system calls per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/sys-act/syscall/imp-scal.rpt
sread/s	The number of read system calls per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/sys-act/syscall/imp-scal.rpt
swrit/s	The number of write system calls per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/sys-act/syscall/imp-scal.rpt
wchar/s	The number of characters transferred by write system calls in the interval in bytes per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/sys-act/syscall/scal-xfr.rpt

Note: *The following statistics are only available for the TeamQuest database architecture. If the open database architecture is used, a record for each agent using these statistics is created in the TQ.Agent Interval table.*

Class:	TQ
Subclass:	N/A
IT Resource Name:	N/A
TeamQuest Table Name:	N/A
Open Table Name:	N/A
Statistic Name:	
bsp interval	The number of seconds elapsed between two data samples of the System Activity Agent [Sequential = SUM Non-Sequential = ID]
tqbsp_end_time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
tqbsp_interval	The number of seconds elapsed between the end of data collection for the previous sample and the end of data collection for the current sample [Sequential = SUM Non-Sequential = ID]

Table Field Hierarchy

Class:	TQ
Subclass:	Agent Interval
IT Resource Name:	/TeamQuest/System/*systemname*
TeamQuest Table Name:	TQ.Agent Interval
Open Table Name:	AGENTINTERVAL
Collection interval:	Based on the collection period
Default retentions:	8 hours at collection period interval 8 days at 10-minute intervals 35 days at 1-hour intervals 400 days at 8-hour intervals
Table type:	Performance
Derived tables using fields from this table:	N/A

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = ID]
Agent	The name of the agent that is collecting data. This field is limited to 52 characters. Any agent name longer than 52 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Instance	The instance name of the agent that is collecting data. This field is limited to 52 characters. Any instance name longer than 52 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = ID]
PID	The process identifier of the agent instance that is collecting data [Sequential = ID Non-Sequential = ID]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
System	The name of the system where the data is collected. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential LST Non-Sequential = ID]

Parameter Hierarchy

Class:	ZFS
Subclass:	ARC Detail
IT Resource Name:	/TeamQuest/System/*systemname*/Disk
TeamQuest Table Name:	ZFS.ARC Detail
Open Table Name:	ZFSARCDETAIL
Resource:	N/A
Statistic Name:	
demand_hit_pct	The percentage of Adaptive Replacement Cache (ARC) demand reads that resulted in cache hits. Demand reads are all reads not originated by a Zettabyte File System (ZFS) predictive algorithm, such as ZFS prefetch. [Sequential = AVG Non-Sequential = SUM]
demand_hits_per_sec	The number of ARC demand hits per second [Sequential = AVG Non-Sequential = SUM]
demand_miss_pct	The percentage of ARC demand reads that resulted in cache misses [Sequential = AVG Non-Sequential = SUM]
demand_misses_per_sec	The number of ARC demand misses per second [Sequential = AVG Non-Sequential = SUM]
demand_reads_per_sec	The number of ARC demand reads per second [Sequential = AVG Non-Sequential = SUM]
evict_skips_per_sec	The number of ARC evictions that were skipped (not performed) per second. Prefetched data in the ARC has a minimum life span, forcing the ARC eviction to skip the prefetched data. [Sequential = AVG Non-Sequential = SUM]
metadata_current	The current size of the metadata cache in megabytes stored in the ARC. The metadata cache is used to hold file system metadata. Metadata includes file, directory, and volume information. [Sequential = AVG Non-Sequential = SUM]
metadata_hit_pct	The percentage of ARC metadata reads that resulted in cache hits [Sequential = AVG Non-Sequential = SUM]
metadata_hits_per_sec	The number of ARC metadata hits per second. Metadata requests relate to file system or volume metadata held within the cache. Metadata includes file, directory, and volume information. [Sequential = AVG Non-Sequential = SUM]
metadata_limit	The tunable metadata limit in megabytes for the metadata cache stored in the ARC. A value of zero indicates that the tunable value is not set and that the actual limit is determined by the operating system. [Sequential = AVG Non-Sequential = SUM]
metadata_maximum	The maximum size of the metadata cache in megabytes stored in the ARC [Sequential = AVG Non-Sequential = SUM]

metadata_miss_pct	The percentage of ARC metadata reads that resulted in cache misses [Sequential = AVG Non-Sequential = SUM]
metadata_misses_per_sec	The number of ARC metadata misses per second [Sequential = AVG Non-Sequential = SUM]
metadata_reads_per_sec	The number of ARC metadata reads per second. Calculated as hits + misses. [Sequential = AVG Non-Sequential = SUM]
mfu_ghost_hits_per_sec	The number of Most Frequently Used (MFU) ARC ghost hits per second. Ghost hits occur when requested data is found in the MFU ghost cache. The MFU ghost cache contains metadata on items recently evicted from the MFU cache and is used to dynamically tune ARC caching. [Sequential = AVG Non-Sequential = SUM]
mfu_hits_per_sec	The number of Most Frequently Used (MFU) ARC hits per second. The MFU cache is internal to the ARC and is used with the Most Recently Used (MRU) cache to balance overall cache performance. [Sequential = AVG Non-Sequential = SUM]
mru_ghost_hits_per_sec	The number of Most Recently Used (MRU) ARC ghost hits per second. Ghost hits occur when requested data is found in the MRU ghost cache. The MRU ghost cache contains metadata on items recently evicted from the MRU cache and is used to dynamically tune ARC caching. [Sequential = AVG Non-Sequential = SUM]
mru_hits_per_sec	The number of Most Recently Used (MRU) ARC hits per second. The MRU cache is internal to the ARC and is used with the Most Frequently Used (MFU) cache to balance overall ARC performance. [Sequential = AVG Non-Sequential = SUM]
mutex_misses_per_sec	The number of ARC mutex misses per second. A mutex miss occurs when ARC data cannot be evicted due to the inability of the eviction process to acquire a lock on the data. This inability is caused by processing on the cached data by another part of the overall ARC process. [Sequential = AVG Non-Sequential = SUM]
prefetch_hit_pct	The percentage of ARC prefetch reads that resulted in cache hits. Prefetch requests occur when the operating system has determined that sequential I/O operations are occurring and the prefetching of data will result in improved cache performance. These requests originate from the operating system and do not directly reflect user-generated I/O operations. [Sequential = AVG Non-Sequential = SUM]
prefetch_hits_per_sec	The number of ARC prefetch hits per second [Sequential = AVG Non-Sequential = SUM]
prefetch_miss_pct	The percentage of ARC prefetch reads that resulted in cache misses [Sequential = AVG Non-Sequential = SUM]

prefetch_misses_per_sec	The number of ARC prefetch misses per second [Sequential = AVG Non-Sequential = SUM]
prefetch_reads_per_sec	The number of ARC prefetch reads per second. Calculated as hits + misses. [Sequential = AVG Non-Sequential = SUM]
recycle_misses_per_sec	The number of ARC recycle misses per second. Cache recycles occur when an allocated block of data is reused, rather than freeing an evicted block of data. This recycling avoids the overhead of freeing and immediately reallocating a block of memory of an identical size. Recycle misses occur when cache evictions are requested but no cache items of the appropriate size are found for recycling. [Sequential = AVG Non-Sequential = SUM]

Parameter Hierarchy

Class:	ZFS
Subclass:	ARC Summary
IT Resource Name:	/TeamQuest/System/*systemname*/Disk
TeamQuest Table Name:	ZFS.ARC Summary
Open Table Name:	ZFSARCSUMMARY
Resource:	N/A
Statistic Name:	
hit_pct	The percentage of Adaptive Replacement Cache (ARC) reads that resulted in cache hits [Sequential = AVG Non-Sequential = SUM]
hits_per_sec	The number of ARC hits per second. This value is the sum of demand hits and prefetch hits. [Sequential = AVG Non-Sequential = SUM]
miss_pct	The percentage of ARC reads that resulted in cache misses [Sequential = AVG Non-Sequential = SUM]
misses_per_sec	The number of ARC misses per second. This value is the sum of the demand misses and prefetch misses. [Sequential = AVG Non-Sequential = SUM]
reads_per_sec	The number of ARC reads per second. This value is the sum of total cache hits and misses per second. [Sequential = AVG Non-Sequential = SUM]
size	The current size of the ARC in megabytes (MB) [Sequential = AVG Non-Sequential = SUM]
target_size	The target size of the ARC. This value is the ideal size of the cache as determined by the operating system. [Sequential = AVG Non-Sequential = SUM]

Parameter Hierarchy

Class:	ZFS
Subclass:	L2 ARC
IT Resource Name:	/TeamQuest/System/*systemname*/Disk
TeamQuest Table Name:	ZFS.L2 ARC
Open Table Name:	ZFSL2ARC
Resource:	N/A
Statistic Name:	
hit_pct	The percentage of Level 2 (L2) Adaptive Replacement Cache (ARC) reads that resulted in cache hits [Sequential = AVG Non-Sequential = SUM]
hits_per_sec	The number of L2 ARC hits per second [Sequential = AVG Non-Sequential = SUM]
miss_pct	The percentage of L2 ARC reads that resulted in cache misses [Sequential = AVG Non-Sequential = SUM]
misses_per_sec	The number of L2 ARC misses per second [Sequential = AVG Non-Sequential = SUM]
rbytes_per_sec	The number of bytes read from the L2 ARC per second [Sequential = AVG Non-Sequential = SUM]
reads_per_sec	The number of L2 ARC reads per second. This value is equal to the sum of total L2 cache hits and misses per second. [Sequential = AVG Non-Sequential = SUM]
size	The current size of the L2 ARC in megabytes (MB) [Sequential = AVG Non-Sequential = SUM]

Parameter Hierarchy

Class:	ZFS
Subclass:	Virtual Device Cache
IT Resource Name:	/TeamQuest/System/*systemname*/Disk
TeamQuest Table Name:	ZFS.Virtual Device Cache
Open Table Name:	ZFSVDEVCACHE
Resource:	N/A
Statistic Name:	
delegation_pct	The percentage of virtual device cache reads that resulted in cache hits on delegated cache data [Sequential = AVG Non-Sequential = SUM]
delegations_per_sec	The number of virtual device cache reads per second that resulted in cache hits on delegated cache data. A delegation is a token that a disk device grants the virtual device cache to ensure that the cache can serve read requests without the need for validating the data with a disk device. [Sequential = AVG Non-Sequential = SUM]

hit_pct	The percentage of virtual device cache reads that resulted in cache hits [Sequential = AVG Non-Sequential = SUM]
hits_per_sec	The number of virtual device cache hits per second [Sequential = AVG Non-Sequential = SUM]
miss_pct	The percentage of virtual device cache reads that resulted in cache misses [Sequential = AVG Non-Sequential = SUM]
misses_per_sec	The number of virtual device cache misses per second [Sequential = AVG Non-Sequential = SUM]
reads_per_sec	The number of virtual device cache reads per second. Calculated as hits_per_sec + misses_per_sec + delegations_per_sec. [Sequential = AVG Non-Sequential = SUM]

Parameter Hierarchy

Class:	ZFS
Subclass:	ZFetch
IT Resource Name:	/TeamQuest/System/*systemname*/Disk
TeamQuest Table Name:	ZFS.ZFetch
Open Table Name:	ZFSZFETCH
Resource:	N/A
Statistic Name:	
bogus_streams_per_sec	The number of invalid streams found per second [Sequential = AVG Non-Sequential = SUM]
colinear_hits_per_sec	The number of times per second that two linear sequences of accesses were combined into one strided sequence [Sequential = AVG Non-Sequential = SUM]
colinear_misses_per_sec	The number of times per second that two linear sequences of accesses were not combined into one strided sequence [Sequential = AVG Non-Sequential = SUM]
hits_per_sec	The number of cache hits per second [Sequential = AVG Non-Sequential = SUM]
misses_per_sec	The number of cache misses per second [Sequential = AVG Non-Sequential = SUM]
reclaim_failures_per_sec	The number of times per second that an existing stream could not be reclaimed for a new use [Sequential = AVG Non-Sequential = SUM]
reclaim_successes_per_sec	The number of times per second that an existing stream was successfully reclaimed for a new use [Sequential = AVG Non-Sequential = SUM]
streams_noresets_per_sec	The number of times per second that an existing stream was reused without being reset [Sequential = AVG Non-Sequential = SUM]

streams_resets_per_sec	The number of times per second that an existing stream was reset for a new use [Sequential = AVG Non-Sequential = SUM]
stride_hits_per_sec	The number of cache hits per second due to a strided prefetch [Sequential = AVG Non-Sequential = SUM]
stride_misses_per_sec	The number of cache misses per second during a strided prefetch [Sequential = AVG Non-Sequential = SUM]

13.2. Disk Space Statistics

The Disk Space Agent (**tqdsp**) tracks the disk space usage of locally mounted file systems. However, any data about Network File System (NFS) mounted file systems are not collected by the agent because the loss of the network connection to the NFS may result in hung processes.

Note: *File system names longer than 51 characters will be truncated.*

Parameter Hierarchy

Class:	Disk Space
Subclass:	by File System
IT Resource Name:	/TeamQuest/System/*systemname*/Disk
TeamQuest Table Name:	Disk Space.by File System
Open Table Name:	DISKSPACEBYFILESYS
Resource:	file system1, file system2, ...
Statistic Name:	
%inodes free*	The percentage of i-nodes available (not in use) on the file system at the end of the interval View Report: /report/solaris/dskspace/total/pct-inod.rpt
%inodes used*	The percentage of i-nodes in use on the file system at the end of the interval View Report: /report/solaris/dskspace/total/pct-inod.rpt
%space free*	The percentage of total space available (not in use) on the file system at the end of the interval View Reports: /report/solaris/dskspace/total/pctspace.rpt /report/solaris/dskspace/total/low-ones.rpt
%space used*	The percentage of total space in use on the file system at the end of the interval View Reports: /report/solaris/dskspace/total/pctspace.rpt /report/solaris/dskspace/total/fullest.rpt

%user space free*	The percentage of total user space available (not in use) on the file system at the end of the interval View Reports: /report/solaris/dskspace/user/pctspace.rpt /report/solaris/dskspace/user/low-ones.rpt
%user space used*	The percentage of total user space in use on the file system at the end of the interval View Reports: /report/solaris/dskspace/user/pctspace.rpt /report/solaris/dskspace/user/fullest.rpt
capacity	The percentage of total space in use on the file system at the end of the interval [Sequential = LST Non-Sequential = AVG]
free (Mb)	The amount of space available (not in use) on the file system in megabytes (Mb) at the end of the interval including the space held back from normal users [Sequential = LST Non-Sequential = SUM] View Reports: /report/solaris/dskspace/total/dskspace.rpt /report/solaris/dskspace/total/low-ones.rpt
free inodes	The number of available (not in use) i-nodes on the file system at the end of the interval [Sequential = LST Non-Sequential = SUM] View Report: /report/solaris/dskspace/total/i-nodes.rpt
total (Mb)	The total (used + available) amount of space on the file system in megabytes (Mb) at the end of the interval including the space held back from normal users [Sequential = LST Non-Sequential = SUM] View Report: /report/solaris/dskspace/total/dskspace.rpt
total inodes	The total (used + available) number of i-nodes on the file system at the end of the interval [Sequential = LST Non-Sequential = SUM] View Report: /report/solaris/dskspace/total/i-nodes.rpt
user free (Mb)	The amount of space available (not in use) on the file system in megabytes (Mb) at the end of the interval not including the space held back from normal users [Sequential = LST Non-Sequential = SUM] View Reports: /report/solaris/dskspace/user/dskspace.rpt /report/solaris/dskspace/user/low-ones.rpt
user total (Mb)*	The total (used + available) amount of space on the file system in megabytes (Mb) at the end of the interval not including the space held back from normal users View Report: /report/solaris/dskspace/user/dskspace.rpt

Note: *The following statistics are only available for the TeamQuest database architecture. If the open database architecture is used, a record for each agent using these statistics is created in the TQ.Agent Interval table.*

Class:	TQ
Subclass:	N/A
IT Resource Name:	N/A
TeamQuest Table Name:	N/A
Open Table Name:	N/A
Statistic Name:	
dsp interval	The number of seconds elapsed between two data samples of the Disk Space Agent [Sequential = SUM Non-Sequential = ID]
tqdsp_end_time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
tqdsp_interval	The number of seconds elapsed between the end of data collection for the previous sample and the end of data collection for the current sample [Sequential = SUM Non-Sequential = ID]

Table Field Hierarchy

Class:	TQ
Subclass:	Agent Interval
IT Resource Name:	/TeamQuest/System/*systemname*
TeamQuest Table Name:	TQ.Agent Interval
Open Table Name:	AGENTINTERVAL
Collection interval:	Based on the collection period
Default retentions:	8 hours at collection period interval 8 days at 10-minute intervals 35 days at 1-hour intervals 400 days at 8-hour intervals
Table type:	Performance
Derived tables using fields from this table:	N/A

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = ID]
Agent	The name of the agent that is collecting data. This field is limited to 52 characters. Any agent name longer than 52 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Instance	The instance name of the agent that is collecting data. This field is limited to 52 characters. Any instance name longer than 52 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = ID]
PID	The process identifier of the agent instance that is collecting data [Sequential = ID Non-Sequential = ID]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
System	The name of the system where the data is collected. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]

13.3. Network Statistics

The Network Agent (**tqbnp**) collects data about the interaction of the system with the network. The types of data collected by the agent include network interfaces, NFS and Remote Protocol Call (RPC), and Transmission Control Protocol (TCP).

In NFS environments, the term *server* refers to the system that owns a file system and allows other systems on the network to access the files on the file system. A *client* is a system that mounts a nonlocal file system such as NFS and accesses files from the NFS mounted file system. Any given system could be a server to some file systems and a client to other file systems. It is not uncommon to have systems that export several file systems for other systems to use and mount several other network file systems. All the NFS statistics collected by this agent show the activity of NFS clients and servers that exist on the system where the agent is running.

Parameter Hierarchy

Class:	Network
Subclass:	by Interface
IT Resource Name:	/TeamQuest/System/*systemname*/Network
TeamQuest Table Name:	Network.by Interface
Open Table Name:	NETBYINTERFACE
Resource:	interface0, interface1, ...
Statistic Name:	
brdcstrcv/s	The number of network interface broadcast bytes received per second [Sequential = AVG Non-Sequential = SUM]
brdcstxmt/s	The number of network interface broadcast bytes transmitted per second [Sequential = AVG Non-Sequential = SUM]
collisions/s	The number of network collisions per second on Carrier Sense Multiple Access (CSMA) interfaces. This statistic is not available on all types of network interfaces. The values for this statistic will be zero for interface types that do not support this measurement. [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/network/net-errs.rpt
defer/s	The number of network interface packets that could not be immediately sent per second [Sequential = AVG Non-Sequential = SUM]
ifspeed	The number of network interface line speed in megabits per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/network/net-bits.rpt

in errors/s	The number of network input errors per second [Sequential = AVG Non-Sequential = SUM] View Reports: /report/solaris/network/net-errs.rpt /report/solaris/rules/network_errors.rpt
in packets/s	The number of network input packets per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/network/net-pkts.rpt
Mbits/s	The network interface bit count in megabits per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/network/net-bits.rpt
multircv/s	The number of network interface multicast bytes received per second [Sequential = AVG Non-Sequential = SUM]
multixmt/s	The number of network interface multicast bytes transmitted per second [Sequential = AVG Non-Sequential = SUM]
nocanput/s	The number of network interface packets dropped by IP per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/rules/network_transmit.rpt
norcvbuf/s	The number of network interface buffer receive allocation failures per second [Sequential = AVG Non-Sequential = SUM]
noxmtbuf/s	The number of network interface transmit buffer allocation failures per second [Sequential = AVG Non-Sequential = SUM]
obytes/s	The number of network interface bytes output per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/network/net-bytes.rpt
out errors/s	The number of network output errors per second [Sequential = AVG Non-Sequential = SUM] View Reports: /report/solaris/network/net-errs.rpt /report/solaris/rules/network_errors.rpt

out packets/s	The number of network output packets per second [Sequential = AVG Non-Sequential = SUM] View Reports: /report/solaris/network/net-pkts.rpt /report/solaris/rules/network_collision.rpt /report/solaris/rules/network_defer.rpt
rbytes/s	The number of network interface bytes read per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/network/net-bytes.rpt

Class:	Network
Subclass:	Summary
IT Resource Name:	/TeamQuest/System/*systemname*/Network
TeamQuest Table Name:	Network.Summary
Open Table Name:	NETSUM
Statistic Name:	
errors/s	The total number of network errors per second for all network interfaces on the system [Sequential = AVG Non-Sequential = SUM]
in Kbytes/s	The total number of network interface bytes input per second in kilobytes [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/network/sum-bytes.rpt
in packets/s	The total number of network input packets per second for all network interfaces on the system [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/network/net-sum.rpt
out Kbytes/s	The total number of network interface bytes output per second in kilobytes [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/network/sum-bytes.rpt
out packets/s	The total number of network output packets per second for all network interfaces on the system [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/network/net-sum.rpt
total Kbytes/s	The total number of network interface bytes input and output per second in kilobytes [Sequential = AVG Non-Sequential = SUM]
total packets/s	The total number of network packets per second for all network interfaces on the system [Sequential = AVG Non-Sequential = SUM]

Class:	NFS
Subclass:	Client
IT Resource Name:	/TeamQuest/System/*systemname*/Network
TeamQuest Table Name:	NFS.Client
Open Table Name:	NFSCLI
Statistic Name:	
badcalls/s	The total number of Network File System (NFS) calls per second rejected from the client [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/network/client.rpt
calls/s	The total number of NFS calls sent by the client [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/network/client.rpt
gets/s	The total number of times per second an NFS client handle was received [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/network/client.rpt

Class:	NFS
Subclass:	Server
IT Resource Name:	/TeamQuest/System/*systemname*/Network
TeamQuest Table Name:	NFS.Server
Open Table Name:	NFSSERV
Statistic Name:	
badcalls/s	The total number of NFS calls per second rejected by the server [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/network/server.rpt
calls/s	The total number of NFS calls per second received by the server [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/network/server.rpt

Class:	NFSv2
Subclass:	Client
IT Resource Name:	/TeamQuest/System/*systemname*/Network
TeamQuest Table Name:	NFSv2.Client
Open Table Name:	NFSV2CLI
Statistic Name:	
calls/s*	The number of NFS version 2 calls per second sent by the client [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/network/clnt-v2s.rpt

Class:	NFSv2
Subclass:	Client
IT Resource Name:	/TeamQuest/System/*systemname*/Network
TeamQuest Table Name:	NFSv2.Client
Open Table Name:	NFSV2CLI
Resource:	create, getattr, link, lookup, mkdir, null, read, readdir, readlink, remove, rename, rmdir, root, setattr, statfs, symlink, write, writecache
Statistic Name:	
reqs/s	The number of NFS version 2 requests per second sent by the client [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/network/clnt-v2.rpt

Class:	NFSv2
Subclass:	Server
IT Resource Name:	/TeamQuest/System/*systemname*/Network
TeamQuest Table Name:	NFSv2.Server
Open Table Name:	NFSV2SERV
Statistic Name:	
calls/s*	The number of NFS version 2 calls per second received by the server [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/network/srvr-v2s.rpt

Class:	NFSv2
Subclass:	Server
IT Resource Name:	/TeamQuest/System/*systemname*/Network
TeamQuest Table Name:	NFSv2.Server
Open Table Name:	NFSV2SERV
Resource:	create, getattr, link, lookup, mkdir, null, read, readdir, readlink, remove, rename, rmdir, root, setattr, statfs, symlink, write, writecache
Statistic Name:	
reqs/s	The number of NFS version 2 requests per second received by the server [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/network/srvr-v2.rpt

Class:	NFSv3
Subclass:	Client
IT Resource Name:	/TeamQuest/System/*systemname*/Network
TeamQuest Table Name:	NFSv3.Client
Open Table Name:	NFSV3CLI
Statistic Name:	
calls/s*	The number of NFS version 3 calls per second sent by the client [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/network/clnt-v3s.rpt

Class:	NFSv3
Subclass:	Client
IT Resource Name:	/TeamQuest/System/*systemname*/Network
TeamQuest Table Name:	NFSV3.Client
Open Table Name:	NFSV3CLI
Resource:	access, commit, create, fsinfo, fsstat, getattr, link, lookup, mkdir, mknod, null, pathconf, read, readdir, readdir+, readlink, remove, rename, rmdir, setattr, symlink, write
Statistic Name:	
reqs/s	The number of NFS version 3 requests per second sent by the client [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/network/clnt-v3.rpt

Class:	NFSv3
Subclass:	Server
IT Resource Name:	/TeamQuest/System/*systemname*/Network
TeamQuest Table Name:	NFSv3.Server
Open Table Name:	NFSV3SERV
Statistic Name:	
calls/s*	The number of NFS version 3 calls per second received by the server [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/network/srvr-v3s.rpt

Class:	NFSv3
Subclass:	Server
IT Resource Name:	/TeamQuest/System/*systemname*/Network
TeamQuest Table Name:	NFSv3.Server
Open Table Name:	NFSV3SERV
Resource:	access, commit, create, fsinfo, fsstat, getattr, link, lookup, mkdir, mknod, null, pathconf, read, readdir, readdir+, readlink, remove, rename, rmdir, setattr, symlink, write
Statistic Name:	
reqs/s	The number of NFS version 3 requests per second received by the server [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/network/srvr-v3.rpt

Class:	RPC
Subclass:	Client.Connectionless
IT Resource Name:	/TeamQuest/System/*systemname*/Network
TeamQuest Table Name:	RPC.Client.Connectionless
Open Table Name:	RPCCLICONNLESS
Statistic Name:	
badcalls/s	The number of connectionless RPC calls per second rejected by the client [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/network/rpc/clnt-cl.rpt
badxid/s	The number of times per second a reply from a server was received that did not correspond to any outstanding connectionless RPC call [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/network/rpc/clnt-cl.rpt
calls/s	The total number of connectionless RPC calls per second sent by the client [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/network/rpc/clnt-cl.rpt
newcred/s	The number of times per second connectionless RPC authentication information had to be refreshed by the client [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/network/rpc/clnt-cl.rpt
retrans/s	The number of times per second a connectionless RPC call had to be retransmitted by the client due to a timeout while waiting for a reply from the server [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/network/rpc/clnt-cl.rpt
timeout/s	The number of times per second a connectionless RPC call timed out while waiting for a reply from the server [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/network/rpc/clnt-cl.rpt

Class:	RPC
Subclass:	Client.Connection Oriented
IT Resource Name:	/TeamQuest/System/*systemname*/Network
TeamQuest Table Name:	RPC.Client.Connection Oriented
Open Table Name:	RPCCLICONNORIENTED
Statistic Name:	
badcalls/s	The number of connection-oriented RPC calls per second rejected from the client [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/network/rpc/clnt-co.rpt
badxid/s	The number of times per second a reply from a server was received that did not correspond to any outstanding connection-oriented RPC call [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/network/rpc/clnt-co.rpt
calls/s	The total number of connection-oriented RPC calls per second sent by the client [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/network/rpc/clnt-co.rpt
newcred/s	The number of times per second connection-oriented RPC authentication information had to be refreshed by the client [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/network/rpc/clnt-co.rpt
timeout/s	The number of times per second a connection-oriented RPC call timed out while waiting for a reply from the server [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/network/rpc/clnt-co.rpt

Class:	RPC
Subclass:	Server.Connectionless
IT Resource Name:	/TeamQuest/System/*systemname*/Network
TeamQuest Table Name:	RPC.Server.Connectionless
Open Table Name:	RPCSERVCONNLESS
Statistic Name:	
badcalls/s	The number of connectionless RPC calls per second rejected by the server. The sum of badlens/s and xdrcalls/s. [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/network/rpc/srvr-cl.rpt
badlens/s	The number of connectionless RPC calls per second received by the server with a length shorter than a minimum-sized RPC call [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/network/rpc/srvr-cl.rpt
calls/s	The number of connectionless RPC calls per second received by the server [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/network/rpc/srvr-cl.rpt
nullrecvs/s	The number of times per second a connectionless RPC call was not available when it was thought to be received by the server [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/network/rpc/srvr-cl.rpt
xdrcalls/s	The number of connectionless RPC calls per second by the server whose header could not be External Data Representation (XDR) decoded [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/network/rpc/srvr-cl.rpt

Class:	RPC
Subclass:	Server.Connection Oriented
IT Resource Name:	/TeamQuest/System/*systemname*/Network
TeamQuest Table Name:	RPC.Server.Connection Oriented
Open Table Name:	RPCSERVCONNORIENTED
Statistic Name:	
badcalls/s	The number of connection-oriented RPC calls per second rejected by the server. The sum of badlens/s and xdrcalls/s. [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/network/rpc/srvr-co.rpt
badlens/s	The number of connection-oriented RPC calls per second received by the server with a length shorter than a minimum-sized RPC call [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/network/rpc/srvr-co.rpt
calls/s	The number of connection-oriented RPC calls per second received by the server [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/network/rpc/srvr-co.rpt
nullrecvs/s	The number of times per second a connection-oriented RPC call was not available when it was thought to be received by the server [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/network/rpc/srvr-co.rpt
xdrcalls/s	The number of connection-oriented RPC calls per second by the server whose header could not be XDR decoded [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/network/rpc/srvr-co.rpt

Class:	TCP
Subclass:	N/A
IT Resource Name:	/TeamQuest/System/*systemname*/Network
TeamQuest Table Name:	TCP
Open Table Name:	TCP
Statistic Name:	
ftp conn	The number of FTP connections at the end of an interval [Sequential = AVG Non-Sequential = AVG] View Report: /report/solaris/network/tcp/connect.rpt
http conn	The number of HTTP connections at the end of the interval [Sequential = AVG Non-Sequential = AVG] View Report: /report/solaris/network/tcp/connect.rpt
other conn	The number of other connections at the end of an interval [Sequential = AVG Non-Sequential = AVG] View Report: /report/solaris/network/tcp/connect.rpt
rlogin conn	The number of rlogin connections at the end of an interval [Sequential = AVG Non-Sequential = AVG] View Report: /report/solaris/network/tcp/connect.rpt
telnet conn	The number of telnet connections at the end of the interval [Sequential = AVG Non-Sequential = AVG] View Report: /report/solaris/network/tcp/connect.rpt
total conn	The total number of connections at the end of the interval [Sequential = AVG Non-Sequential = AVG] View Report: /report/solaris/network/tcp/connect.rpt

Note: *The following statistics are only available for the TeamQuest database architecture. If the open database architecture is used, a record for each agent using these statistics is created in the TQ.Agent Interval table.*

Class:	TQ
Subclass:	N/A
IT Resource Name:	N/A
TeamQuest Table Name:	N/A
Open Table Name:	N/A
Statistic Name:	
net interval	The number of seconds elapsed between two data samples of the Network Agent [Sequential = SUM Non-Sequential = ID]
tqbnp_end_time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
tqbnp_interval	The number of seconds elapsed between the end of data collection for the previous sample and the end of data collection for the current sample [Sequential = SUM Non-Sequential = ID]

Table Field Hierarchy

Class:	TQ
Subclass:	Agent Interval
IT Resource Name:	/TeamQuest/System/*systemname*
TeamQuest Table Name:	TQ.Agent Interval
Open Table Name:	AGENTINTERVAL
Collection interval:	Based on the collection period
Default retentions:	8 hours at collection period interval 8 days at 10-minute intervals 35 days at 1-hour intervals 400 days at 8-hour intervals
Table type:	Performance
Derived tables using fields from this table:	N/A

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = ID]
Agent	The name of the agent that is collecting data. This field is limited to 52 characters. Any agent name longer than 52 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Instance	The instance name of the agent that is collecting data. This field is limited to 52 characters. Any instance name longer than 52 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = ID]
PID	The process identifier of the agent instance that is collecting data [Sequential = ID Non-Sequential = ID]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
System	The name of the system where the data is collected. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]

13.4. Workload Statistics

Workload statistics are maintained in the TeamQuest performance database by the Process-Workload Agent (**tqwarp**). The statistics are classified by the hierarchy of key names.

Note: *The following statistics are only available for the TeamQuest database architecture. If the open database architecture is used, a record for each agent using these statistics is created in the TQ.Agent Interval table.*

Class:	TQ
Subclass:	N/A
IT Resource Name:	N/A
TeamQuest Table Name:	N/A
Open Table Name:	N/A
Statistic Name:	
tqwarp_end_time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
tqwarp_interval	The number of seconds elapsed between the end of data collection for the previous sample and the end of data collection for the current sample [Sequential = SUM Non-Sequential = ID]
warp interval	The number of seconds elapsed between two data samples of the Process-Workload Agent [Sequential = SUM Non-Sequential = ID]

Table Field Hierarchy

Class:	TQ
Subclass:	Agent Interval
IT Resource Name:	/TeamQuest/System/*systemname*
TeamQuest Table Name:	TQ.Agent Interval
Open Table Name:	AGENTINTERVAL
Collection interval:	Based on the collection period
Default retentions:	8 hours at collection period interval 8 days at 10-minute intervals 35 days at 1-hour intervals 400 days at 8-hour intervals
Table type:	Performance
Derived tables using fields from this table:	N/A

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = ID]
Agent	The name of the agent that is collecting data. This field is limited to 52 characters. Any agent name longer than 52 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Instance	The instance name of the agent that is collecting data. This field is limited to 52 characters. Any instance name longer than 52 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = ID]
PID	The process identifier of the agent instance that is collecting data [Sequential = ID Non-Sequential = ID]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
System	The name of the system where the data is collected. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential LST Non-Sequential = ID]

Parameter Hierarchy

Class:	Workload
Subclass:	by Workload
IT Resource Name:	/TeamQuest/System/*systemname*/workload /*workloadset*/*workload*
TeamQuest Table Name:	Workload.by Workload
Open Table Name:	WLBYWORKLOAD
Workload Set:	WLS1, WLS2, ...
Workload:	WL1, WL2, ...
Statistic Name:	
%cpu	The percentage of total CPU consumed by the workload. Total CPU time is sampling interval multiplied by the number of CPUs on the system. Thus, if the sum of %cpu for all workloads is less than 100%, some CPUs must have been idle for some amount of time during the sampling interval. [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/workload/pct-cpu.rpt
avgmem	The cumulative swappable process image size in kilobytes of all of the running processes in the workload at the end of the sampling interval [Sequential = AVG Non-Sequential = SUM]
datafltslp	The data page fault sleep time for the workload. This value only represents the processes active at the end of the sampling interval. [Sequential = SUM Non-Sequential = SUM] View Report: /report/solaris/workload/sleep.rpt
etime	The sum of the elapsed times in seconds of all of the processes in the workload. Dividing this number by the number of processes in the workload (pongoing + pcomplete) gives the average time a process in the workload existed during the sampling interval. [Sequential = SUM Non-Sequential = SUM]
invswch	The number of involuntary context switches for the workload. This value only represents the processes active at the end of the sampling interval. [Sequential = SUM Non-Sequential = SUM]
kernfltslp	The kernel page fault sleep time in seconds for the workload. This value only represents the processes active at the end of the sampling interval. [Sequential = SUM Non-Sequential = SUM] View Report: /report/solaris/workload/sleep.rpt

lioch	The number of logical characters in kilobytes transferred by the workload during the sampling interval [Sequential = SUM Non-Sequential = SUM] View Report: /report/solaris/workload/lioch.rpt
majflt	The number of major page faults generated by the workload for processes that were active at the end of the sampling interval. A major page fault is a page fault that requires I/O. [Sequential = SUM Non-Sequential = SUM] View Report: /report/solaris/workload/maj-flt.rpt
otherslp	The remaining sleep time not accounted for by other sleep time statistics for the workload. This value only represents the processes active at the end of the sampling interval. [Sequential = SUM Non-Sequential = SUM] View Report: /report/solaris/workload/sleep.rpt
pcomplete	The number of processes completed in the sampling interval. For process data, the same number is called cproc. The number of processes in a workload could be derived by adding pongoing and pcomplete, which is represented by the nproc statistic in process data. [Sequential = SUM Non-Sequential = SUM] View Report: /report/solaris/workload/num-proc.rpt
pio	The number of physical I/O transfers done by the workload during the sampling interval [Sequential = SUM Non-Sequential = SUM] View Report: /report/solaris/workload/pio.rpt
pongoing	The number of processes running at the end of the sampling interval. In process data, the same number is called oproc. The number of processes in a workload could be derived by adding pongoing and pcomplete. This sum is called nproc in process data. [Sequential = LST Non-Sequential = SUM] View Report: /report/solaris/workload/num-proc.rpt
prss	The resident set size in kilobytes of private memory occupied by all of the running processes in the workload at the end of the interval [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/workload/rss.rpt
pstart	The number of processes started in the sampling interval. In process data, this number is called sproc. [Sequential = SUM Non-Sequential = SUM] View Report: /report/solaris/workload/num-proc.rpt

record_count	The number of collected records represented by the record written to the database. For nonreduced records, this value is 1. For reduced records, this value is the number of records that are combined into a single database record. [Sequential = AVG Non-Sequential = SUM]
reduction_name	The name of reduction rule [Sequential = ID Non-Sequential = ID]
reduction_source	The source of the reduction record. For reduction records with agent sources, this value is A. For reduction records with harvest sources, this value is H. [Sequential = ID Non-Sequential = ID]
rss	The resident set size (real memory) in kilobytes of all running processes at the end of the interval. If a process ends within the sampling interval, the value is not available and is marked as <N/A>. [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/workload/rss.rpt
srss	The resident set size in kilobytes of shared memory occupied by all of the running processes in the workload at the end of the interval [Sequential = AVG Non-Sequential = SUM] View Report: /report/solaris/workload/rss.rpt
syscpu	The system CPU time in seconds used by the workload. System CPU time is the time spent in kernel mode (for example, the time spent in executing system calls, paging, and so on). [Sequential = SUM Non-Sequential = SUM] View Report: /report/solaris/workload/sys-cpu.rpt
textfltslp	The amount of text page fault sleep time for the workload. This value only represents the processes active at the end of the sampling interval. [Sequential = SUM Non-Sequential = SUM] View Report: /report/solaris/workload/sleep.rpt
threads	A dynamic object that represents a control point in a process and executes a sequence of instructions [Sequential = LST Non-Sequential = SUM] View Report: /report/solaris/workload/threads.rpt
totcpu	The total CPU time in seconds used by the workload. This value is the same as the sum of usrcpu + syscpu. [Sequential = SUM Non-Sequential = SUM] View Report: /report/solaris/workload/cpu-util.rpt

userlckslp	The amount of user lock sleep time for the workload. This value only represents the processes active at the end of the sampling interval. [Sequential = SUM Non-Sequential = SUM] View Report: /report/solaris/workload/sleep.rpt
usrcpu	The user CPU time in seconds used by the workload. User CPU time is the time the CPU spent running in user mode. [Sequential = SUM Non-Sequential = SUM] View Report: /report/solaris/workload/user-cpu.rpt
waitcpu	The wait CPU time in seconds used by the workload. Wait CPU time is the time spent waiting for the CPU. [Sequential = SUM Non-Sequential = SUM] View Report: /report/solaris/workload/wait-cpu.rpt

13.5. Process Statistics

The Process-Workload Agent (**tqwarp**) collects process data from the operating system and processes accounting files. The Process-Workload Agent calculates the usage of every process in a given interval, applies reduction definitions to each process, and stores the reduced process data. It also applies workload definitions to the reduced process data and stores system resource usage by workload.

Reduced Process Records

The Process-Workload Agent collects process data and reduces the data according to the user-defined reduction definitions. A reduction definition may cause multiple processes to be merged into a single process record. Thus, a process record contains data about one or more processes. When you are looking at the resource usage numbers, it is important to know how many processes a process record actually represents. When a process record is representing more than one process, the resource usage fields such as totcpu, rss, and pio_t are the sum of the resource usage of the individual processes. When all of the processes do not have the same value for a field, the identifier fields such as command, login, and gid are set to <Multi>. When data for some fields is not available, the fields are set to <N/A>.

Disabling Reduction Definitions

If you want to look at the details of every individual process and do not wish to have merged process records, you must disable reduction processing by making all reduction sets inactive. However, with reduction processing disabled, more records have to be stored and more disk space is needed. For information on disabling reductions, see the *TeamQuest Performance Software Administration Guide*.

Process Data with Process Accounting Turned Off

If process accounting is turned off, the process data is incomplete as data about completed processes is not available. In this case, the process data only shows a portion of the activity in the sampling interval. To find out whether process accounting is turned on or off, look at the cproc field of all of the process records. If the cproc field indicates all zeros, it means that processes were not completed in that sampling interval and that the process accounting is turned off.

When process accounting is not turned on, the process record <Other> includes the CPU time for processes that completed during the interval.

For more information on process accounting, see the *TeamQuest Performance Software Administration Guide*.

Retrieving Hardware Configuration Information

The Process-Workload Agent retrieves hardware configuration information. The information is stored upon startup and once-a-day in the HINV.Summary, HINV.CPUModel, HINV.Devices, HINV.FileSystem, HINV.FileSystemToDevice, and SOLARIS.ZFS Storage Pool table files of the TeamQuest performance database. The information is also stored if the agent detects a change in configuration.

Table Field Hierarchy

Class:	SOLARIS
Subclass:	Process
IT Resource Name:	/TeamQuest/System/*systemname* /TeamQuest/System/*systemname*/Process
TeamQuest Table Name:	SOLARIS.Process
Open Table Name:	SOLPROC
Collection interval:	Based on the primary aggregation set
Default retention:	1 day
Table type:	Performance

Note: *The collection interval depends on the Processes Only setting in the configuration file for the Process-Workload Agent. For more information, see the section on configuring the Process-Workload Agent in the* TeamQuest Performance Software Administration Guide.

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = ID]
avgmem_t	The size of the swappable process image in kilobytes. If a process ends within the same interval, the number is unavailable and is marked as <N/A>. [Sequential = AVG Non-Sequential = SUM]
btime	The start time of the process. For process records representing more than one process, this field shows the earliest of the start times. [Sequential = FST Non-Sequential = SUM]
command	The command name of the process. If a process starts and ends within the same interval, only up to 8 characters can be displayed. Otherwise, up to 16 characters are displayed. Therefore, an “automountd” process may appear as “automoun” if it starts and ends within the same interval. In such cases, you may want to set up your workload, reduction, or filter definitions to catch both the command names as in the following: command = {“automoun”, “automountd”} [Sequential = ID Non-Sequential = ID]
cproc	The number of processes completed in the interval [Sequential = SUM Non-Sequential = SUM]
datafltslp	The data page fault sleep time for the current interval. If a process ends within the sampling interval, the value is not available and is marked as <N/A>. [Sequential = SUM Non-Sequential = SUM]
datafltslp_t	The data page fault sleep time since the process started [Sequential = LST Non-Sequential = SUM]

etime	The elapsed time in seconds for the current interval. This number tells how long a process existed in the current interval. [Sequential = SUM Non-Sequential = SUM]
etime_t	The total elapsed time in seconds. This number tells how long a process existed since it started. For a single process, this is the same as the value of the Time field minus the value of the btime field. [Sequential = LST Non-Sequential = SUM]
fullcmd	The full command string, including arguments, for the process. If a process begins and ends in the sampling interval, the field is unavailable and is marked as <N/A>. This is an important consideration when using a workload, reduction, or filter definition. The number of characters that are stored is determined by the Command Length setting of the Process-Workload Agent configuration file in TeamQuest Manager. You can also have either the first or the last *N* characters of the command displayed. The setting is specified by the Command Orientation setting of the Process-Workload Agent configuration file in TeamQuest Manager. The limit of characters read from the operating system data source is 8095. For a description of how this may affect collection when the LAST Command Orientation is configured for the Process-Workload Agent, see the *TeamQuest Performance Software Administration Guide*. [Sequential = ID Non-Sequential = ID]
gid	The real group identifier of the owner of the process [Sequential = ID Non-Sequential = ID]
group	The group name of the owner of the process. This field is derived from gid. [Sequential = ID Non-Sequential = ID]
Interval	The expected data sampling interval [Sequential = SUM Non-Sequential = ID]
invswch	The number of involuntary context switches for the current interval. If a process ends within the sampling interval, the value is not available and is marked as <N/A>. [Sequential = SUM Non-Sequential = SUM]
invswch_t	The number of involuntary context switches since the process started [Sequential = LST Non-Sequential = SUM]
kernfltslp	The kernel page fault sleep time for the current interval. If a process ends within the sampling interval, the value is not available and is marked as <N/A>. [Sequential = SUM Non-Sequential = SUM]
kernfltslp_t	The kernel page fault sleep time since the process started [Sequential = LST Non-Sequential = SUM]
lioch	The number of logical characters in kilobytes transferred in the current interval [Sequential = SUM Non-Sequential = SUM]
lioch_t	The total number of logical characters in kilobytes transferred since the start of the process [Sequential = LST Non-Sequential = SUM]

login	The login name of the owner of the process. This field is derived from uid. [Sequential = ID Non-Sequential = ID]
majflt	The number of major page faults generated in the current interval. A major page fault is a page fault that requires I/O. If a process ends in the sampling interval, the number is unavailable and is marked as <N/A>. [Sequential = SUM Non-Sequential = SUM]
majflt_t	The total number of major page faults generated since the process started. A major page fault is a page fault that requires I/O. [Sequential = LST Non-Sequential = SUM]
nproc	The number of processes that the process record represents. If a process starts and ends within the same interval, the number is not available and is marked as <N/A>. In a reduced record, it is the number of processes that were merged together to form a single process record. When time consolidation is not applied to the process data, this number should equal the sum of cproc and oproc. When consolidating over time, the number represents the average number of processes in the process record for the consolidated period. An average is used because processes can move in and out and between reduced records from interval to interval. [Sequential = AVG Non-Sequential = SUM]
oproc	The number of ongoing processes at the end of the interval [Sequential = LST Non-Sequential = SUM]
otherslp	The remaining sleep time not accounted for by other sleep time statistics for the interval. If a process ends within the sampling interval, the value is not available and is marked as <N/A>. [Sequential = SUM Non-Sequential = SUM]
otherslp_t	The remaining sleep time not accounted for by other sleep time statistics since the start of the process. [Sequential = LST Non-Sequential = SUM]
pctcpu	The percentage of total available CPU time the process used in the current sampling interval [Sequential = AVG Non-Sequential = SUM]
pid	The process identifier number. If a process starts and ends within an interval, this number is unavailable and is marked as <N/A>. [Sequential = ID Non-Sequential = ID]
pio	The number of physical I/O requests for the current interval [Sequential = SUM Non-Sequential = SUM]
pio_t	The total number of physical I/O requests since the process started [Sequential = LST Non-Sequential = SUM]
pool	The name of the resource pool that the process is using. If the resource pool is not specified, the value is unavailable and is marked as <N/A>. [Sequential = ID Non-Sequential = ID]
poolid	The resource pool identifier. The default resource pool has a poolid of 0. [Sequential = ID Non-Sequential = ID]

ppid	The numerical identifier of the parent process. If a process starts and ends within an interval, this number is unavailable and is marked as <N/A>. [Sequential = ID Non-Sequential = ID]
pri	The priority of the process. Higher numbers mean lower priority. If a process starts and ends within an interval, this number is unavailable and is marked as <N/A>. If the process record represents more than one process, the priority is an average of the constituent running processes' priority values. [Sequential = AVG Non-Sequential = AVG]
projid	The Solaris Resource Manager project identifier. If extended process accounting is not being used, this value is set to <N/A> for processes that complete in the sampling interval. [Sequential = ID Non-Sequential = ID]
prss	The resident set size of private memory for the process at the end of the interval. If a process ends within the interval, the value is unavailable and is marked as <N/A>. [Sequential = AVG Non-Sequential = SUM]
pset	The name of the processor set that the process is using. If the processor set is not enabled, the value is unavailable and is marked as <N/A>. [Sequential = ID Non-Sequential = ID]
psetid	The processor set identifier. Solaris assigns a value of -1 to the default processor set. [Sequential = ID Non-Sequential = ID]
redname	The reduction name of the process record. If a process did not match any of the reduction definitions, then it would not be reduced and will not have a reduction name. [Sequential = ID Non-Sequential = ID]
rss	The resident set size (real memory size) of the process. If a process starts and ends within an interval, the number is unavailable and is marked as <N/A>. [Sequential = AVG Non-Sequential = SUM]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
sproc	The number of processes started in the interval [Sequential = SUM Non-Sequential = SUM]
srss	The resident set size of shared memory for the process at the end of the interval. If a process ends within the interval, the value is unavailable and is marked as <N/A>. [Sequential = AVG Non-Sequential = SUM]
syscpu	The system CPU time in seconds for the current interval. System CPU time is the time the CPU spent running in kernel mode (for example, the time spent in executing system calls, paging, and so on). If an application is taking a lot of syscpu time, you may want to optimize the use of system calls (for example, use a larger block size for I/O). [Sequential = SUM Non-Sequential = SUM]

syscpu_t	The total system CPU time in seconds [Sequential = LST Non-Sequential = SUM]
System	The name of the system where the data is collected. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
textfltslp	The amount of text page fault sleep time for the current interval. If a process ends within the sampling interval, the value is not available and is marked as <N/A>. [Sequential = SUM Non-Sequential = SUM]
textfltslp_t	The amount of text page fault sleep time since the process started [Sequential = LST Non-Sequential = SUM]
threads	The number of threads associated with the process at the end of the interval. This value represents the number of light-weight processes (LWP) or kernel-supported user threads. A thread is a dynamic object that represents a control point in a process and executes a sequence of instructions. [Sequential = LST Non-Sequential = SUM]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
totcpu	The total CPU time in seconds used in the current interval. This number is the same as the sum of usrcpu and syscpu. [Sequential = SUM Non-Sequential = SUM]
totcpu_t	The total CPU time (user + system) in seconds used by the process since it started. This number is the same as the sum of usrcpu_t and syscpu_t. [Sequential = LST Non-Sequential = SUM]
tty	The controlling terminal identifier in dev_t format. For the processes without a controlling terminal, this field will contain a -1. [Sequential = ID Non-Sequential = ID]
ttyname	The controlling terminal for the process. It is a device name without the /dev/ prefix. This is derived from tty. For the processes without a controlling terminal, this field will contain a question mark (?). [Sequential = ID Non-Sequential = ID]
uid	The real user id of the process owner [Sequential = ID Non-Sequential = ID]
userlckslp	The amount of user lock sleep time for the current interval. If a process ends within the sampling interval, the value is not available and is marked as <N/A>. [Sequential = SUM Non-Sequential = SUM]
userlckslp_t	The amount of user lock sleep time since the process started [Sequential = LST Non-Sequential = SUM]
usrcpu	The user CPU time in seconds for the current interval. User CPU time is the time the CPU spent running in user mode. If an application is taking a lot of usrcpu time, you should try to optimize the code, if possible. [Sequential = SUM Non-Sequential = SUM]

usrcpu_t	The total user CPU time in seconds since the start of the process [Sequential = LST Non-Sequential = SUM]
waitcpu	The wait CPU time in seconds for the current interval. Wait CPU time is the time spent waiting for the CPU. [Sequential = SUM Non-Sequential = SUM]
waitcpu_t	The total wait CPU time in seconds since the start of the process [Sequential = LST Non-Sequential = SUM]
Workload	The workload set and the workload associated with the process. When the Process-Workload Agent stores the process record, this field is blank. When process records are reported, the workload can be evaluated and is shown in the report. This field is available for reporting only when using TeamQuest Analyzer and TeamQuest tView. Workload evaluation takes place when data is retrieved from the database, based on workload sets defined in the database where the data is stored. Workload sets reported in the Workload field do not have to be active. For more information on workload evaluation, see the *TeamQuest Analyzer User Guide* or the *TeamQuest Performance Software Command Line Interfaces Reference Manual*. [Sequential = ID Non-Sequential = ID]
workload:*wlsname*	There is one field for each *wlsname* (Workload Set Name). The value for this field shows the name of the workload to which the process belongs. If a process belongs to none of the workloads, it will display the workload name “OTHER.” This field is available for reporting only when useing TeamQuest View or TeamQuest cView. [Sequential = ID Non-Sequential = ID]
zone	The zone name of the zone where the process is running. If extended process accounting is not being used, this value is set to <N/A> for processes that complete in the sampling interval. [Sequential = ID Non-Sequential = ID]

13.6. Project Statistics

Project statistics are stored in the TeamQuest performance database tables. Project statistics are available when a Solaris project has been modified.

Table Field Hierarchy

Class:	SOLARIS
Subclass:	Project
IT Resource Name:	/TeamQuest/System/*systemname*
TeamQuest Table Name:	SOLARIS.Project
Open Table Name:	SOLPROJECT
Collection interval:	N/A
Default retention:	1 year
Table type:	State

Statistic Name	Description
attributes	The semicolon-separated list of name value pairs. Each pair is in the form *name*[=*value*], where *name* is the key name and *value* is the optional key value. [Non-Sequential = ID]
comment	The project description. This field is blank if there is no project description. [Non-Sequential = ID]
cpushares	The number of project cpu shares for the Fair Share Scheduler (FSS) [Non-Sequential = SUM]
groups	The comma-separated list of groups of users allowed in the project. A blank field indicates that no groups are allowed in the project. [Non-Sequential = ID]
pool	The name of the resource pool to which the process is assigned. If no resource pool is assigned, the value is not available and is marked as <N/A>. [Non-Sequential = ID]
project	The name of the project [Non-Sequential = ID]
projid	The unique numerical identifier of the project. Project IDs below 100 are reserved for the operating system. [Non-Sequential = ID]
System	The name of the system where the data is collected. This field is limited to 51 characters. Any system name longer than 51 characters is truncated. [Non-Sequential = ID]

Time	The timestamp of the data sample [Non-Sequential = ID]
users	The comma-separated list of users allowed in the project. This field is blank if no users are allowed in the project. [Non-Sequential = ID]

13.7. Hardware Inventory Statistics

The Process-Workload Agent (**tqwarp**) retrieves hardware configuration information. The information is stored upon startup and once-a-day in the HINV.Summary, HINV.CPUModel, HINV.CPU Thread Speeds, HINV.Devices, HINV.FileSystem, HINV.FileSystemToDevice, and SOLARIS.ZFS Storage Pool table files of the TeamQuest performance database. The information is also stored if the agent detects a change in configuration.

Note: *The storage of hardware inventory records is also dependent on the Hardware Inventory setting in the configuration file of the Process-Workload Agent. For more information, see the section on configuring the Process-Workload Agent in the* TeamQuest Performance Software Administration Guide.

Table Field Hierarchy

Class:	HINV
Subclass:	Summary
IT Resource Name:	/TeamQuest/System/*systemname*
TeamQuest Table Name:	HINV.Summary
Open Table Name:	HINVSUM
Collection interval:	N/A
Default retention:	1 year
Table type:	State

Statistic Name	Description
core_multi_thread	The status or ability of the processor to support multiple independent threads. The field will contain <N/A> if the information is not available. [Non-Sequential = ID]
cores_per_chip	The number of cores or processors on an individual chip. The value will be zero if the information is not available. [Non-Sequential = ID]
cpu_chips	The number of CPU chips or sockets. The value will be zero if the information is not available. [Non-Sequential = ID]
cpu_count	The number of configured processors [Non-Sequential = ID]
cpu_speed	The speed of the processor in MHz or GHz [Non-Sequential = ID]

cpu_type	The basic instruction set architecture of the current system [Non-Sequential = ID]
logical_cpu_count	The number of logical processors [Non-Sequential = ID]
mem_size	The size of configured random access memory in kilobytes, where 1 kilobyte = 1,024 bytes [Non-Sequential = ID]
memory	The size of configured random access memory in megabytes, where 1 megabyte = 1,048,576 bytes [Non-Sequential = ID]
memory_size	The size of configured random access memory in megabytes or gigabytes [Non-Sequential = ID]
model	The name of the hardware implementation or platform [Non-Sequential = ID]
os_release	The name and level of the implementation of the operating system [Non-Sequential = ID]
pagesize	The size of a page of memory [Non-Sequential = ID]
partition_type	The partition type of the system. The value indicates the system hypervisor type, guest type, logical partition type, zone type, or logical domain type. If the system does not have a partition type, this field will be blank. [Non-Sequential = ID]
serial	The hardware-specific serial number of the physical machine [Non-Sequential = ID]
System	The name by which the system is known to a communication network or node name. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Non-Sequential = ID]
system_identifier	The information used to identify the system [Non-Sequential = ID]
system_type	The name of the operating system [Non-Sequential = ID]
Time	The timestamp of the data sample [Non-Sequential = ID]
timezone	The time zone where the data was collected [Non-Sequential = ID]
TQLevel	The level of TeamQuest Manager [Non-Sequential = ID]

The HINV.CPUModel table stores best-match, relative performance data about the system configuration. This table is created by the Hardware Inventory Agent (**tqhinv**) to map physical hardware to a CPU model that describes performance in relative terms. This table is not created for any virtualized system. It is populated for physical systems only. It is not populated for VMware guests, Hyper-V guests, Solaris logical domains (LDOMs), Solaris guest LDOMs, KVM guests, and Linux on POWER systems.

Table Field Hierarchy

Class:	HINV
Subclass:	CPUModel
IT Resource Name:	/TeamQuest/System/*systemname*
TeamQuest Table Name:	HINV.CPUModel
Open Table Name:	HINVCPUM
Collection interval:	N/A
Default retention:	1 year
Table type:	State

Statistic Name	**Description**
cpu_chips	The number of CPU chips or sockets [Non-Sequential = ID]
cpu_confidence	The percentage of confidence in the correctness of the CPU match based on model, frequency, and configuration (chips, cores, threads) [Non-Sequential = SUM]
cpu_cores	The number of CPU cores or processors on an individual CPU chip [Non-Sequential = ID]
cpu_name	The name of the selected CPU [Non-Sequential = ID]
cpu_relative_performance	The relative performance of the CPU on a common scale [Non-Sequential = ID]
cpu_speed	The speed of the processor in megahertz (MHz) or gigahertz (GHz) [Non-Sequential = ID]
cpu_threads	The number of CPU threads on an individual CPU core or processor [Non-Sequential = ID]
System	The name by which the system is known to a communication network or node name. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Non-Sequential = ID]
system_type	The name of the operating system [Non-Sequential = ID]
Time	The timestamp of the data sample [Non-Sequential = LST]
user_override	The user override status of the default TeamQuest generated CPU match. This field is not currently used and should appear as 0. [Non-Sequential = ID]

Table Field Hierarchy

Class:	HINV
Subclass:	CPU Thread Speeds
IT Resource Name:	/TeamQuest/System/*systemname*
TeamQuest Table Name:	HINV.CPU Thread Speeds
Open Table Name:	HINVCPUTHREADSPEEDS
Collection interval:	N/A
Default retention:	1 year
Table type:	State

Statistic Name	Description
speed_up_factor	The performance improvement when there are multiple active threads per core, compared to when there is only one active thread per core [Sequential = AVG Non-Sequential = ID]
System	The name by which the system is known to a communication network or node name. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
thread_number	The number of active threads [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = ID Non-Sequential = ID]

Table Field Hierarchy

Class:	HINV
Subclass:	Devices
IT Resource Name:	/TeamQuest/System/*systemname*
TeamQuest Table Name:	HINV.Devices
Open Table Name:	HINVDEVS
Collection interval:	N/A
Default retention:	1 year
Table type:	State

Statistic Name	Description
class	The device classification: controller, disk, or tape [Non-Sequential = ID]
controller	The device path indicator which defines a connection to another device [Non-Sequential = ID]
lun_id	The globally unique Logical Unit Number (LUN) identifier for Storage Area Network (SAN) based disk devices. This field is blank for non-SAN based disk devices, CD-ROM drives, tape drives, and so on. [Non-Sequential = ID]
name	The unique identifier for the device [Non-Sequential = ID]
name2	The alternate device name. This field may be blank. [Non-Sequential = ID]
product	The product identifier. This field may be blank. [Non-Sequential = ID]
revision	The revision level for the product. This field may be blank. [Non-Sequential = ID]
rpm	The speed at which the media spins. If an actual value cannot be obtained for the device, a default value of 7,200 is used. [Non-Sequential = ID]
sequence	The sequence number of the device [Non-Sequential = ID]
swap	A true or false statement which indicates whether or not a swap file exists on the device [Non-Sequential = ID]
System	The name by which the system is known to a communication network or node. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Non-Sequential = ID]

Time	The timestamp of the data sample [Non-Sequential = ID]
vendor	The name of the device vendor. This field may be blank. [Non-Sequential = ID]

Table Field Hierarchy

Class:	HINV
Subclass:	FileSystem
IT Resource Name:	/TeamQuest/System/*systemname*
TeamQuest Table Name:	HINV.FileSystem
Open Table Name:	HINVFILESYS
Collection interval:	N/A
Default retention:	1 year
Table type:	State

Statistic Name	Description
BlkSize	The size of a block on the file system [Non-Sequential = ID]
Device	The path for the device on which the file system is mounted [Non-Sequential = ID]
Name	The unique identifier for the file system [Non-Sequential = ID]
Source	The source logical volume of the file system. For Zettabyte File System (ZFS), this field contains the name of the ZFS storage pool that hosts the file system. This field will be blank for file systems that use a physical disk or physical disk partition directly. [Non-Sequential = ID]
System	The name by which the system is known to a communication network or node name. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Non-Sequential = ID]
Time	The timestamp of the data sample [Non-Sequential = LST]
TotBlks	The total number of blocks on the file system [Non-Sequential = ID]
TotFiles	The maximum total number of files, as represented by inodes, possible on the file system. Some inodes may be used for entities other than visible files. [Non-Sequential = ID]
TotSize	The total amount of space on the file system in megabytes [Non-Sequential = ID]
Type	The type of the file system [Non-Sequential = ID]

Table Field Hierarchy

Class:	HINV
Subclass:	FileSystemToDevice
IT Resource Name:	/TeamQuest/System/*systemname*
TeamQuest Table Name:	HINV.FileSystemToDevice
Open Table Name:	HINVFSTODEV
Collection interval:	N/A
Default retention:	1 year
Table type:	State

Statistic Name	Description
Device	The name of the device [Non-Sequential = ID]
FileSystem	The name of the file system [Non-Sequential = ID]
System	The name by which the system is known to a communication network or node. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Non-Sequential = ID]
Time	The timestamp of the data sample [Non-Sequential = ID]

Table Field Hierarchy

Class:	SOLARIS
Subclass:	ZFS Storage Pool
IT Resource Name:	/TeamQuest/System/*systemname*
TeamQuest Table Name:	SOLARIS.ZFS Storage Pool
Open Table Name:	SOLZFSPOOL
Collection interval:	N/A
Default retention:	1 year
Table type:	State

Statistic Name	Description
allocated	The total size of all allocated file systems on the Zettabyte File System (ZFS) pool [Non-Sequential = SUM]
altroot	The alternative root directory of the ZFS pool. If set, this directory is prepended to any mount points within in the ZFS pool. [Non-Sequential = ID]

autoexpand	The automatic expand setting. If set to on, the ZFS pool automatically grows in size when the underlying Logical Unit Number (LUN) backing the pool grows in size. [Non-Sequential = ID]
autoreplace	The automatic replacement setting. If set to on, any new device found in the same physical location as a device that previously belonged to the pool is automatically formatted and added to the ZFS pool. [Non-Sequential = ID]
bootfs	The default bootable dataset for the root ZFS pool [Non-Sequential = ID]
cachefile	The location of the pool configuration cache file. This file is used to discover ZFS pools at system boot time. [Non-Sequential = ID]
capacity	The percentage of the ZFS pool that is allocated (used) [Non-Sequential = AVG]
dedupditto	The threshold for making multiple copies of the duplicated data blocks. If the reference count for a deduplicated block goes above this threshold, another copy of the block is stored automatically. [Non-Sequential = ID]
dedupratio	The deduplication ratio specified for the ZFS pool. This value is expressed as a multiplier. For example, a dedupratio value of 1.3 indicates that 1.3 units of data were stored but only 1 unit of disk space was actually consumed. [Non-Sequential = ID]
delegation	The user access setting for accessing the ZFS pool. If set to on, non-privileged users are granted access to the ZFS pool based on dataset permissions. [Non-Sequential = ID]
failmode	The action to be taken if the ZFS pool has a catastrophic failure. Values for this field include: wait, continue, and panic. [Non-Sequential = ID]
free	The amount of free space remaining for allocation in the ZFS pool [Non-Sequential = SUM]
guid	The globally unique identifier of the ZFS pool [Non-Sequential = ID]
health	The health state of the ZFS pool. Values for this field include: DEGRADED, FAULTED, OFFLINE, ONLINE, REMOVED, or UNAVAIL. [Non-Sequential = ID]
listsnapshots	The list of snapshots associated with the ZFS pool. If set to on, information about the ZFS pool snapshots are displayed. Snapshots can be listed in the “zfs list” command. [Non-Sequential = ID]
name	The name of the ZFS pool [Non-Sequential = ID]

readonly	The read only status of the ZFS pool. If set to on, the ZFS pool operates in a read only mode and the configuration of the ZFS pool cannot be changed. Similarly, any mounted file systems associated with the ZFS pool operate in read only mode. [Non-Sequential = ID]
size	The total size of the ZFS pool [Non-Sequential = SUM]
System	The name by which the system is known to a communication network or node name. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Non-Sequential = ID]
Time	The timestamp of the data sample [Non-Sequential = LST]
version	The current on-disk version of the ZFS pool [Non-Sequential = ID]

13.8. System Log Statistics

The System Log Agent (**tqslp**) is used to collect system log messages generated by the system log daemon (syslogd). The System Log Agent stores these messages in the TeamQuest performance database for analysis and alarm reporting. The log messages are separated into four fields; the time that the message was posted, the host system from where the message was initiated, the program or user that posted the message, and the text of the message.

Table Field Hierarchy

Class:	System
Subclass:	System Log
IT Resource Name:	/TeamQuest/System/*systemname*/System Log
TeamQuest Table Name:	System.System Log
Open Table Name:	SYSSYSTEMLOG
Collection interval:	N/A
Default retention:	4 days
Table type:	Event

Statistic Name	Description
Event_Time	The time that the message was logged to the system log [Non-Sequential = ID]
Loghost	The name of the system that logged the message [Non-Sequential = ID]
Message	The message text [Non-Sequential = ID]
Reporter	The name of the user or process that logged the message [Non-Sequential = ID]

Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Non-Sequential = ID]
Sequence	The sequence number of the message in the sampling interval [Non-Sequential = ID]
System	The name of the system where the log message originated. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Non-Sequential = ID]
Time	The timestamp of the data sample [Non-Sequential = ID]

13.9. General Log Statistics

The General Log Agent (**tqglp**) is used to collect log messages generated by application programs. The General Log Agent stores these messages in the TeamQuest performance database for analysis. Examples include backup, security, database, and Web server applications.

Table Field Hierarchy

Class:	System
Subclass:	General Log
IT Resource Name:	/TeamQuest/System/*systemname*/General Log
TeamQuest Table Name:	System.General Log
Open Table Name:	SYSGENERALLOG
Collection interval:	N/A
Default retention:	4 days
Table type:	Event

Statistic Name	Description
Message	The message text [Non-Sequential = ID]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Non-Sequential = ID]
Sequence	The sequence number of the message in the sampling interval [Non-Sequential = ID]
System	The name of the system. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Non-Sequential = ID]
Time	The timestamp of the data sample [Non-Sequential = ID]
Type	The message type [Non-Sequential = ID]

13.10. TeamQuest Log Statistics

The following statistics are stored in the performance database tables by the TeamQuest Log Agent (**tqlog**). The collection interval and retention periods can be modified. For more information on modifying the collection interval and retention periods, see the *TeamQuest Performance Software Administration Guide*.

Table Field Hierarchy

Class:	Service
Subclass:	TeamQuest Log
IT Resource Name:	/TeamQuest/System/*systemname*/TeamQuest Log
TeamQuest Table Name:	Service.TeamQuest Log
Open Table Name:	SVCTQLOG
Collection interval:	N/A
Default retention:	1 day
Table type:	Event

Statistic Name	Description
Filename	The name of the TeamQuest log file that was the source of the message text [Non-Sequential = ID]
Message	The message text [Non-Sequential = ID]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Non-Sequential = ID]
Sequence	The sequence number of the message in the sampling interval [Non-Sequential = ID]
System	The name of the system. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Non-Sequential = ID]
Time	The timestamp of the data sample [Non-Sequential = ID]
Type	The log message type. This is always set to **tqlog**. [Non-Sequential = ID]

13.11. Derived Statistics

Some products within TeamQuest Performance Software use derived statistics to display common statistics across different platforms. The derived statistics are inserted into the performance database when databases are created. In this section, a derived statistic is marked with an asterisk (*).

See the following statistics for more information:

- Workload Performance Derived Statistics (see 13.11.1)
- TeamQuest On the Web Derived Statistics (see 13.11.2)
- TeamQuest Alert Derived Statistics (see 13.11.3)
- Rules Derived Statistics (see 13.11.4)

13.11.1. Workload Performance Derived Statistics

TeamQuest Manager maintains derived statistics that use data from the System Activity Agent (**tqbsp**) and Process-Workload Agent (**tqwarp**). The workload performance reports reference these statistics. For information on workload performance reports, see the *TeamQuest View Reports Reference Manual*.

Parameter Hierarchy

Class:	Derived
Subclass:	Workload Performance.by Workload
Workload Set:	WLS1, WLS2, ...
Workload:	ALL
Statistic Name:	
%cpu*	The total percentage of CPU utilization. Collected by the Process-Workload Agent. View Report: /report/solaris/wkldperf/workload.rpt
Kbytes resident memory/process*	The average amount of resident memory used per process. Collected by the Process-Workload Agent. View Report: /report/solaris/wkldperf/workload.rpt
Kbytes virtual memory/process*	The average amount of virtual memory used per process. Collected by the Process-Workload Agent. View Report: /report/solaris/wkldperf/workload.rpt
PIOs/sec*	The number of physical I/Os per second. Collected by the Process-Workload Agent. View Report: /report/solaris/wkldperf/workload.rpt

Population (etime/interval)*	The average number of concurrent processes. Collected by the Process-Workload Agent. View Report: /report/solaris/wkldperf/workload.rpt
Response (etime/process)*	The elapsed time per process. Collected by the Process-Workload Agent. View Report: /report/solaris/wkldperf/workload.rpt
Throughput (processes/sec)*	The number of processes completed per second. Collected by the Process-Workload Agent. View Report: /report/solaris/wkldperf/workload.rpt
Total Kbytes resident memory*	The average amount of resident memory used. Collected by the Process-Workload Agent. View Report: /report/solaris/wkldperf/workload.rpt
Total Kbytes virtual memory*	The average amount of virtual memory used. Collected by the Process-Workload Agent. View Report: /report/solaris/wkldperf/workload.rpt

Class:	Derived
Subclass:	Workload Performance.Summary
Workload Set:	WLS1, WLS2, ...
Statistic Name:	
%cpu*	The total percentage of CPU utilization. Collected by the Process-Workload Agent. View Report: /report/solaris/wkldperf/overall.rpt
block IO avresp*	The average disk and tape I/O response in milliseconds. Collected by the System Activity Agent. View Report: /report/solaris/wkldperf/overall.rpt
block IO r+w/s*	The number of disk and tape I/Os per second. Collected by the System Activity Agent. View Report: /report/solaris/wkldperf/overall.rpt
Kbytes resident memory/process*	The average amount of resident memory used per process. Collected by the Process-Workload Agent. View Report: /report/solaris/wkldperf/overall.rpt
Kbytes virtual memory/process*	The average amount of virtual memory used per process. Collected by the Process-Workload Agent. View Report: /report/solaris/wkldperf/overall.rpt

PIOs/sec*	The number of physical I/Os per second. Collected by the Process-Workload Agent. View Report: /report/solaris/wkldperf/overall.rpt
Population (etime/interval)*	The average number of concurrent processes. Collected by the Process-Workload Agent. View Report: /report/solaris/wkldperf/overall.rpt
Response (etime/process)*	The elapsed time per process. Collected by the Process-Workload Agent. View Report: /report/solaris/wkldperf/overall.rpt
Throughput (processes/sec)*	The number of processes completed per second. Collected by the Process-Workload Agent. View Report: /report/solaris/wkldperf/overall.rpt
Total Kbytes resident memory*	The average amount of resident memory used. Collected by the Process-Workload Agent. View Report: /report/solaris/wkldperf/overall.rpt
Total Kbytes virtual memory*	The average amount of virtual memory used. Collected by the Process-Workload Agent. View Report: /report/solaris/wkldperf/overall.rpt

13.11.2. TeamQuest On the Web Derived Statistics

The derived statistics used by TeamQuest On the Web include the following:

Parameter Hierarchy

Class:	Derived
Subclass:	TQWeb.Summary
Statistic Name:	
avg_disk_queue_length*	The average number of requests outstanding for all of the devices
avg_service_time*	The average time in milliseconds for a transfer request to be completed
buffer_pct_read_cache*	The percentage of logical reads satisfied from the buffer cache
buffer_pct_write_cache*	The percentage of logical writes satisfied from the buffer cache
disk_xfers_per_sec*	The total number of read and write transfers per second for all of the devices
free_disk_space*	The amount of space available (not in use) on all file systems in megabytes. This measurement is taken at the end of the sampling interval and includes the space held back from normal users.
free_swap_space*	The number of megabytes free for process swapping

free_real_mem*	The amount of free memory available in megabytes. This measurement is taken at the end of the sampling interval.
nfs_calls_per_sec*	The total number of NFS calls sent by the client
page_ins_per_sec*	The number of swap-in requests per second
page_outs_per_sec*	The number of page-out requests per second
page_scans_per_sec*	The number of pages per second the page daemon scans to see if they can be freed
pct_cpu_busy*	The percentage of total CPU time that the CPU was not idle. This value includes the time running system code and the time running normal priority user processes.
pct_disk_busy*	The percentage of time a disk was busy servicing a transfer request
pct_sys_cpu*	The percentage of total CPU time spent in system mode
pct_usr_cpu*	The percentage of total CPU time spent running in user mode
pkt_errors_per_sec*	The total number (in + out) of network errors per second for all network interfaces
pkts_in_per_sec*	The total number of network input packets per second for all network interfaces
pkts_out_per_sec*	The total number of network output packets per second for all network interfaces
pkts_per_sec*	The total number (in + out) of network packets per second for all network interfaces
total_disk_space*	The total (used + available) amount of space on all file systems in megabytes. This measurement is taken at the end of the sampling interval and includes the space held back from normal users.
total_processes*	The number of entries currently being used in the process table. This measurement is taken at the end of the sampling interval.
total_real_mem*	The total amount of real (physical) memory in megabytes. This measurement is taken at the end of the sampling interval.
total_swap_space*	The total number of megabytes available for swapping

13.11.3. TeamQuest Alert Derived Statistics

The derived statistics used by TeamQuest Alert include the following:

Parameter Hierarchy

Class:	Derived
Subclass:	TQAlert.Summary
Statistic Name:	
free_real_mem*	The average amount of memory available to user processes in megabytes
kmem_fails*	The number of kernel requests of memory that were not satisfied
net_errors*	The number of network errors for all network interfaces
page_scans*	The number of pages per second scanned by the page-stealing daemon
pct_swap_free*	The percentage of unused swap space at the end of the sampling interval in megabytes
pct_wio*	The percentage of time spent idle while processes are waiting for I/O completion
run_queue*	The average length of the run queue (a queue of processes in memory and runnable) while the run queue is occupied
total_processes*	The total number of processes active on the system

13.11.4. Rules Derived Statistics

The TeamQuest View Rules reports reference the following derived statistics. For more information, see the *TeamQuest View Reports Reference Manual*.

Parameter Hierarchy

Class:	Derived
Subclass:	Rules.CPU Rules
Statistic Name:	
mutex_warning*	The CPU mutex rate divided by 500
pct_cpu_busy*	The percentage of time the user and system CPU was not idle View Report: /report/solaris/rules/cpu_usage.rpt

Class:	Derived
Subclass:	Rules.File System Rules
Statistic Name:	
%inodes free*	The percentage of total i-nodes that are free View Report: /report/solaris/rules/inodes_free.rpt
user space free*	The amount of free user disk space View Report: /report/solaris/rules/file_space.rpt

Class:	Derived
Subclass:	Rules.Network Rules
Statistic Name:	
%collisions*	The percentage of network interface out packets that had collisions View Report: /report/solaris/rules/network_collisions.rpt
%defer*	The percentage of network interface out packets that were deferred View Report: /report/solaris/rules/network_defer.rpt

Class:	Derived
Subclass:	Rules.NFS Rules
Statistic Name:	
maxtimeout*	A maximum time out value for client RPC calls View Report: /report/solaris/rules/nfs.rpt
rpc_client_calls*	The total number of client RPC calls View Report: /report/solaris/rules/nfs.rpt
rpc_client_timeouts*	A total number of client RPC timeouts View Report: /report/solaris/rules/nfs.rpt

Class:	Derived
Subclass:	Rules.Ram Rules
Statistic Name:	
maxrestime*	The maximum amount of idle page residence time. Used to avoid the possibility of dividing by zero when deriving idle page residence time (restime).
minscans*	The minimum amount of ipage scan rate. Used to avoid the possibility of dividing by zero when deriving idle page residence time (restime).
restime*	An approximation to idle page residence time. The time that an idle page will stay in memory. View Report: /report/solaris/rules/ram.rpt

13.12. Zone Statistics

Zone statistics are maintained in the TeamQuest performance database by the Process-Workload Agent (**tqwarp**). Zone statistics are updated when a new zoneid appears in the process table or when an existing zoneid no longer appears in the process table.

Table Field Hierarchy

Class:	SOLARIS
Subclass:	Zone
IT Resource Name:	/TeamQuest/System/*systemname*
TeamQuest Table Name:	SOLARIS.Zone
Open Table Name:	SOLZONE
Collection interval:	N/A
Default retention:	1 year
Table type:	State

Statistic Name	Description
brand	The brand zone of the operating system [Non-Sequential = ID]
capped-cpu.ncpus	The percentage of CPU time that can be used by a zone. The value relates to the zone.cpu-cap resource control. If the CPU time is not specified, the value is not available and is marked as <N/A>. [Non-Sequential = ID]
capped-memory.locked	The maximum amount of locked memory for the zone in megabytes. This value relates to the zone.max-locked-memory resource control. If the amount of locked memory is not specified, the value is not available and is marked as <N/A>. [Non-Sequential = ID]
capped-memory.physical	The maximum amount of physical memory for the zone in megabytes. This value relates to the zone.max-rss resource control. If the amount of physical memory is not specified, the value is unavailable and is marked as <N/A>. [Non-Sequential = ID]
capped-memory.swap	The maximum amount of swap memory for the zone in megabytes. This value relates to the zone-max-swap resource control. If the amount of swap memory is not specified, the value is unavailable and is marked as <N/A>. [Non-Sequential = ID]
cpu-shares	The number of zone cpu shares for the Fair Share Scheduler (FSS). If the number of zone cpu shares is not specified, the value is unavailable and is marked as <N/A>. [Non-Sequential = ID]

dedicated-cpu.importance	The importance property for the temporary resource pool that is created when the zone is booted. If the importance property is not specified, the value is unavailable and is marked as <N/A>. [Non-Sequential = LST]
dedicated-cpu.ncpus	The number of CPUs that should be assigned to the zone. This value can be a range of the minimum and maximum number of processors in the temporary processor set that is created when the zone is booted. If the number of CPUs that should be assigned to the zone is not specified, the value is unavailable and is marked as <N/A>. [Non-Sequential = ID]
id	The zone identifier. A value of <N/A> indicates the zone is not active. [Non-Sequential = ID]
ip	The IP type of the zone. The value can be shared or exclusive. [Non-Sequential = ID]
path	The path to the zone file system [Non-Sequential = ID]
pool	The name of the resource pool that was bound to the zone when the zone was booted. If no resource pool is assigned, the value is not available and is marked as <N/A>. [Non-Sequential = ID]
scheduling-class	The scheduling class that is set when the zone is booted. It is possible to override the process scheduling class for processes running in a zone. The scheduling class can be Fair Share Scheduling (FSS), Time Share (TS), or Real Time (RT). If the scheduling class is not specified, the value is unavailable and is marked as <N/A>. [Non-Sequential = ID]
state	The state of the zone. This value can be configured, incomplete, ready, installed, or running. [Non-Sequential = ID]
System	The name of the system where the data is collected. This field is limited to 51 characters. Any system name longer than 51 characters is truncated. [Non-Sequential = ID]
Time	The timestamp of the data sample [Non-Sequential = ID]
uuid	The zone unique universal identifier. This value can be optionally attached to a zone and does not change if the zone is renamed or moved. [Non-Sequential = ID]
zone	The name of the zone. The name of the default zone is global. [Non-Sequential = ID]

13.13. Processor Set Statistics

Processor set statistics are stored in the TeamQuest performance database by the Process-Workload Agent (**tqwarp**). Processor set statistics are available if the resource pool facility is turned on. The statistics are updated upon startup, once every 24 hours, and when a process using a new processor set is detected.

Table Field Hierarchy

Class:	SOLARIS
Subclass:	Processor Set
IT Resource Name:	/TeamQuest/System/*systemname*
TeamQuest Table Name:	SOLARIS.Processor Set
Open Table Name:	SOLPROCSET
Collection interval:	N/A
Default retention:	1 year
Table type:	State

Statistic Name	Description
comment	The description of the processor set. This field is blank if there is no processor set description. [Non-Sequential = ID]
max	The maximum number of CPUs that can be assigned to the processor set [Non-Sequential = ID]
min	The minimum number of CPUs that can be assigned to the processor set. If this number is more than the number of available processors, the processor set and associated resource pools or zones are not available. If a value of 0 is displayed, processes assigned to the processor set will only get CPU time when the processor is not required by other processor sets. [Non-Sequential = ID]
poold_objectives	The objectives for the pool resource controller (poold) as stated in the configuration of the process set [Non-Sequential = ID]
pset	The name of the processor set [Non-Sequential = ID]
pset_default	Indicates the designated default processor set. If a value of TRUE is displayed, the processor set is the default processor set. If a value of FALSE is displayed, the processor set is not the default processor set. [Non-Sequential = ID]
psetid	The processor set identifier. Solaris assigns a value of -1 to the default processor set. [Non-Sequential = ID]

System	The name of the system where the data is collected. This field is limited to 51 characters. Any system name longer than 51 characters is truncated. [Non-Sequential = ID]
temporary	The status of the processor set. If a value of TRUE is displayed, the processor set is temporary. If a value of FALSE is displayed, the processor set is permanent. [Non-Sequential = ID]
Time	The timestamp of the data sample [Non-Sequential = ID]

13.14. Resource Pool Statistics

Resource pool statistics are stored in the TeamQuest performance database by the Process-Workload Agent (**tqwarp**). Resource pool statistics are available if the resource pool facility is turned on. The statistics are updated upon startup, once every 24 hours, and when a process using a new resource pool is detected.

Table Field Hierarchy

Class:	SOLARIS
Subclass:	Resource Pool
IT Resource Name:	/TeamQuest/System/*systemname*
TeamQuest Table Name:	SOLARIS.Resource Pool
Open Table Name:	SOLRESPOOL
Collection interval:	N/A
Default retention:	1 year
Table type:	State

Statistic Name	Description
comment	The description of the resource pool. This field is blank if there is no resource pool description. [Non-Sequential = ID]
important	The relative importance of the pool. This value can be used for possible resource dispute resolution by the resource pool controller, called poold. [Non-Sequential = ID]
pool	The name of the resource pool [Non-Sequential = ID]
pool_active	The active status of the resource pool. If a value of TRUE is displayed, the resource pool is active. If a value of FALSE is displayed, the resource pool is not active. [Non-Sequential = ID]

pool_default	Indicates the designated default resource pool. If a value of TRUE is displayed, the resource pool is the default resource pool. If a value of FALSE is displayed, the resource pool is not the default resource pool. [Non-Sequential = ID]
poolid	The resource pool identifier. The default poolid is 0. [Non-Sequential = ID]
pset	The name of the processor set with which the resource pool is associated. There can only be one processor set associated with a resource pool, but multiple pools can be associated with a processor set. [Non-Sequential = ID]
scheduler	The specific scheduling class that the resource pool uses when allocating CPU resources to processes working in the project or a zone in which the resource pool is assigned. This field will be blank if the scheduling class is not specified. [Non-Sequential = ID]
System	The name of the system where the data is collected. This field is limited to 51 characters. Any system name longer than 51 characters is truncated. [Non-Sequential = ID]
temporary	The status of the resource pool. If a value of TRUE is displayed, the resource pool is temporary. If a value of FALSE is displayed, the resource pool is permanent. [Non-Sequential = ID]
Time	The timestamp of the data sample [Non-Sequential = ID]

Section 14
PostgreSQL Database Agent

The PostgreSQL Database Agent (**tqpgsql**) collects information about the PostgreSQL database usage and gathers usage statistics on each table in the database.

This section contains a listing of the statistics collected by the agent:

- Database Summary Statistics (see 14.1)
- Database Detail Statistics (see 14.2)

Note: *At the end of each statistic description, you will see a notation in brackets indicating the method that is used for data consolidation (for example,* [Sequential = SUM Non-Sequential = SUM]). *Sequential means that the field is consolidated over time. Non-Sequential means that the field is consolidated within a specified time interval.*

The following notations are used:

AVG = Average
DIV =Weight
FST = First
ID = Identifier
LST = Last
MAX = Maximum
MIN = Minimum
NON = None or no method was used
SUM = Summation

Because derived statistics are not stored in the performance database, the data consolidation method is not shown in the description of a derived statistic.

14.1. Database Summary Statistics

Summary information about the PostgreSQL database is stored within the PostgreSQL.Database Summary table in the PostgreSQL database.

Table Field Hierarchy

Class:	PostgreSQL
Subclass:	Database Summary
IT Resource Name:	/TeamQuest/System/*systemname*
TeamQuest Table Name:	PostgreSQL.Database Summary
Open Table Name:	PGSQLDBSUM
Collection interval:	5 minutes (default)
Default retention:	N/A
Table type:	Performance

Statistic Name	Description
active_conn	The number of active connections to the database [Sequential = AVG Non-Sequential = SUM]
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = ID]
database	The name of the database. This field is limited to 63 characters. Any database name longer than 63 characters will be truncated. [Sequential = ID Non-Sequential = ID]
free_disk_mb	The amount of free disk space in megabytes (MB) on the file system where the database is located [Sequential = AVG Non-Sequential = SUM]
index_size_mb	The size of all the indexes in megabytes (MB) for the database [Sequential = AVG Non-Sequential = SUM]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = ID]
pct_free_disk	The parentage of free space on the file system where the database is located [Sequential = AVG Non-Sequential = SUM]
System	The name of the system where the agent is running. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
table_size_mb	The size of all the tables in megabytes (MB) in the database [Sequential = AVG Non-Sequential = SUM]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]

total_disk_mb	The total amount of disk space in megabytes (MB) on the file system where the database is located [Sequential = AVG Non-Sequential = SUM]
total_size_mb	The size of all the indexes and tables in megabytes (MB) in the database [Sequential = AVG Non-Sequential = SUM]

14.2. Database Detail Statistics

Detailed information about the PostgreSQL database is stored within the PostgreSQL.Table Detail table in the PostgreSQL database.

Table Field Hierarchy

Class:	PostgreSQL
Subclass:	Table Detail
IT Resource Name:	/TeamQuest/System/*systemname*
TeamQuest Table Name:	PostgreSQL.Table Detail
Open Table Name:	PGSQLTBLDETAIL
Collection interval:	1 hour (default)
Default retention:	N/A
Table type:	Performance

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = ID]
database	The name of the database. This field is limited to 63 characters. Any database name longer than 63 characters will be truncated. [Sequential = ID Non-Sequential = ID]
dead_tuples	The number of dead tuples for the table. A tuple is a record in the database. [Sequential = AVG Non-Sequential = SUM]
index_ratio	The index ratio for the table. Calculated as index ratio = index_size_mb / table_size_mb [Sequential = AVG Non-Sequential = AVG]
index_size_mb	The size of all the indexes in megabytes (MB) for the table [Sequential = AVG Non-Sequential = SUM]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = ID]
last_analyzed	The date the table was last analyzed [Sequential = LST Non-Sequential = ID]

last_autoanalyzed	The date the table was last automatically analyzed [Sequential = LST Non-Sequential = ID]
last_autovacuumed	The date the table was last automatically vacuumed [Sequential = LST Non-Sequential = ID]
last_vacuumed	The date the table was last vacuumed [Sequential = LST Non-Sequential = ID]
live_tuples	The number of live tuples for the table. A tuple is a record in the database. [Sequential = AVG Non-Sequential = SUM]
schema_name	The name of the schema for the table [Sequential = ID Non-Sequential = ID]
System	The name of the system where the agent is running. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
table_name	The name of the table [Sequential = ID Non-Sequential = ID]
table_size_mb	The size of the tables in the database [Sequential = AVG Non-Sequential = SUM]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
total_size_mb	The total size of the table and all the indexes in megabytes (MB) for the table [Sequential = AVG Non-Sequential = SUM]

Section 15
Sybase ASE Server

Note: *These statistics are only available for use with Sybase ASE level 15.*

The Sybase ASE Agent (**tqsybase**) collects performance data from Sybase servers. The agent obtains parameter data pertaining to CPU, disk capacity, disk I/O, locks, memory, networks, procedure cache, SQL cache, system, and transaction summaries. It also gathers table data pertaining to active SQL, configuration, database detail and summary, device detail, engine detail, lock detail, process, process waits, and system waits statistics.

This section contains a listing of the statistics collected by the agent:

- Performance Statistics (see 15.1)
- Active SQL Statistics (see 15.2)
- Configuration Statistics (see 15.3)
- Database Detail Statistics (see 15.4)
- Database Summary Statistics (see 15.5)
- Device Detail Statistics (see 15.6)
- Engine Detail Statistics (see 15.7)
- Lock Detail Statistics (see 15.8)
- Process Statistics (see 15.9)
- Process Waits Statistics (see 15.10)
- System Waits Statistics (see 15.11)

Note: *At the end of each statistic description, you will see a notation in brackets indicating the method that is used for data consolidation (for example,* [Sequential = SUM Non-Sequential = SUM]*). Sequential means that the field is consolidated over time. Non-Sequential means that the field is consolidated within a specified time interval.*

The following notations are used:

AVG = Average
DIV = Weight
FST = First
ID = Identifier
LST = Last
MAX = Maximum
MIN = Minimum
NON = None or no method was used
SUM = Summation

If you are using TeamQuest View to view aggregation set data, the sequential method is used for data consolidation.

Because derived statistics are not stored in the performance database, the data consolidation method is not shown in the description of a derived statistic.

15.1. Performance Statistics

All aggregation set parameters for Sybase ASE servers will be classified within the Sybase ASE Category Group key. The actual system name from which the data is collected will be used in the System key. The remaining keys are defined in the following tables:

Parameter Hierarchy

Class:	Sybase ASE
Subclass:	CPU
IT Resource Name:	/TeamQuest/System/*systemname*/Sybase ASE/*instancename*
TeamQuest Table Name:	Sybase ASE.CPU
Open Table Name:	SYBASECPU
Resource:	instance1, instance2, ...
Statistic Name:	
%CpuBusy	The percentage of time that the Adaptive Server is using the CPU [Sequential = AVG Non-Sequential = SUM] View Report: /report/sybaseASE/cputil.rpt
%Idle	The percentage of time that the Adaptive Server is not using the CPU [Sequential = AVG Non-Sequential = SUM] View Report: /report/sybaseASE/cputil.rpt
%IoBusy	The percentage of time that the Adaptive Server is doing I/O operations [Sequential = AVG Non-Sequential = SUM] View Report: /report/sybaseASE/cputil.rpt
CpuBusy	The total amount of CPU in seconds that the Adaptive Server was performing Adaptive Server work [Sequential = SUM Non-Sequential = SUM]
Idle	The total amount of CPU in seconds that the Adaptive Server is idle [Sequential = SUM Non-Sequential = SUM]
IoBusy	The total amount of CPU in seconds that the Adaptive Server is performing I/O operations [Sequential = SUM Non-Sequential = SUM]
TotalCpuTics	The sum of CPU ticks used for all engines [Sequential = SUM Non-Sequential = SUM]

Class:	Sybase ASE
Subclass:	Disk.Capacity
IT Resource Name:	/TeamQuest/System/*systemname*/Sybase ASE/*instancename*
TeamQuest Table Name:	Sybase ASE.Disk.Capacity
Open Table Name:	SYBASEDISKCAPACITY
Resource:	instance1, instance2, ...
Statistic Name:	
%FreeDisk	The percentage of disk space that is not being used [Sequential = LST Non-Sequential = SUM]
%UsedDisk	The percentage of disk space that is being used [Sequential = LST Non-Sequential = SUM]
FreeDiskMB	The amount of allocated disk space in megabytes (MB) that is not being used [Sequential = LST Non-Sequential = SUM] View Report: /report/sybaseASE/diskutil.rpt
TotalDiskMB	The amount of allocated disk space in megabytes (MB) [Sequential = LST Non-Sequential = SUM] View Report: /report/sybaseASE/diskutil.rpt
UsedDiskMB	The amount of allocated disk space in megabytes (MB) that is being used [Sequential = LST Non-Sequential = SUM]

Class:	Sybase ASE
Subclass:	Disk.IO
IT Resource Name:	/TeamQuest/System/*systemname*/Sybase ASE/*instancename*
TeamQuest Table Name:	Sybase ASE.Disk.IO
Open Table Name:	SYBASEDISKIO
Resource:	instance1, instance2, ...
Statistic Name:	
DiskErrors/s	The number of Adaptive Server errors per second when reading and writing to disk [Sequential = AVG Non-Sequential = SUM] View Report: /report/sybaseASE/ioutil.rpt
DiskReads/s	The number of Adaptive Server reads to disk per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/sybaseASE/ioutil.rpt
DiskWrites/s	The number of Adaptive Server writes to disk per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/sybaseASE/ioutil.rpt

Class:	Sybase ASE
Subclass:	Locks
IT Resource Name:	/TeamQuest/System/*systemname*/Sybase ASE/*instancename*
TeamQuest Table Name:	Sybase ASE.Locks
Open Table Name:	SYBASELOCKS
Resource:	instance1, instance2, ...
Statistic Name:	
%Deadlocks	The percentage of deadlocks as a percentage of the total number of locks [Sequential = AVG Non-Sequential = AVG]
AvgLockContention	The average number of times there was lock contention as a percentage of the total number of lock requests [Sequential = AVG Non-Sequential = AVG]
LockRequests/s	The number of lock requests per second [Sequential = SUM Non-Sequential = SUM]
TotalLockRequests	The total number of lock requests in the interval [Sequential = SUM Non-Sequential = SUM]

Class:	Sybase ASE
Subclass:	Memory
IT Resource Name:	/TeamQuest/System/*systemname*/Sybase ASE/*instancename*
TeamQuest Table Name:	Sybase ASE.Memory
Open Table Name:	SYBASEMEM
Resource:	instance1, instance2, ...
Statistic Name:	
MemoryUsageMB	The amount of memory in megabytes (MB) that is allocated to all Adaptive Server processes [Sequential = LST Non-Sequential = SUM] View Report: /report/sybaseASE/memory.rpt

Class:	Sybase ASE
Subclass:	Network
IT Resource Name:	/TeamQuest/System/*systemname*/Sybase ASE/*instancename*
TeamQuest Table Name:	Sybase ASE.Network
Open Table Name:	SYBASENET
Resource:	instance1, instance2, ...
Statistic Name:	
PacketErrors/s	The number of packet errors detected by the Adaptive Server per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/sybaseASE/packets.rpt
PacketsReceived/s	The number of input packets read by the Adaptive Server per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/sybaseASE/packets.rpt
PacketsSent/s	The number of output packets written by the Adaptive Server per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/sybaseASE/packets.rpt

Class:	Sybase ASE
Subclass:	Procedure.Cache
IT Resource Name:	/TeamQuest/System/*systemname*/Sybase ASE/*instancename*
TeamQuest Table Name:	Sybase ASE.Procedure.Cache
Open Table Name:	SYBASEPROCEDURECACHE
Resource:	instance1, instance2, ...
Statistic Name:	
ProcedureReads/s	The number of procedure reads from disk during the interval [Sequential = AVG Non-Sequential = SUM]
ProcedureRecompiles/s	The number of times a procedure was executed with the recompile option in effect [Sequential = AVG Non-Sequential = SUM]
ProcedureRemovals/s	The number of times that a procedure aged out of cache [Sequential = AVG Non-Sequential = SUM]
ProcedureWrites/s	The number of procedure writes to disk during the interval [Sequential = AVG Non-Sequential = SUM]

Class:	Sybase ASE
Subclass:	SQL.Cache
IT Resource Name:	/TeamQuest/System/*systemname*/Sybase ASE/*instancename*
TeamQuest Table Name:	Sybase ASE.SQL.Cache
Open Table Name:	SYBASESQLCACHE
Resource:	instance1, instance2, ...
Statistic Name:	
SqlStmtsCached	The number of SQL statements used in cache [Sequential = LST Non-Sequential = SUM]
SqlStmtsDroppedFromCache	The number of SQL statements removed from the cache [Sequential = LST Non-Sequential = SUM]
SqlStmtsInCache	The number of SQL statements in cache at the end of the interval [Sequential = LST Non-Sequential = SUM]
SqlStmtsNeverInCache	The number of SQL statements used but not eligible for cache [Sequential = LST Non-Sequential = SUM]
SqlStmtsNotInCache	The number of SQL statements no longer in cache at the end of the interval [Sequential = LST Non-Sequential = SUM]
SqlStmtsRestoredToCache	The number of SQL statements restored to cache [Sequential = LST Non-Sequential = SUM]

Class:	Sybase ASE
Subclass:	Sample
IT Resource Name:	/TeamQuest/System/*systemname*/Sybase ASE/*instancename*
TeamQuest Table Name:	Sybase ASE.Sample
Open Table Name:	SYBASESAMPLE
Resource:	instance1, instance2, ...
Statistic Name:	
tqsybase_end_time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
tqsybase_interval	The number of seconds elapsed between the end of data collection for the previous sample and the end of data collection for the current sample [Sequential = LST Non-Sequential = ID]

Sybase ASE Server

Class:	Sybase ASE
Subclass:	System
IT Resource Name:	/TeamQuest/System/*systemname*/Sybase ASE/*instancename*
TeamQuest Table Name:	Sybase ASE.System
Open Table Name:	SYBASESYS
Resource:	instance1, instance2, ...
Statistic Name:	
ActiveLocks	The number of active locks [Sequential = LST Non-Sequential = SUM] View Report: /report/sybaseASE/system.rpt
ConnectionsAttempted	The number of logins or attempted logins [Sequential = SUM Non-Sequential = SUM]
CurrentConnections	The number of connections at the time of the last sample [Sequential = SUM Non-Sequential = SUM] View Report: /report/sybaseASE/system.rpt
Databases	The number of databases that exist for the server [Sequential = LST Non-Sequential = SUM] View Report: /report/sybaseASE/system.rpt
Processes	The number of Adaptive Server processes [Sequential = LST Non-Sequential = SUM] View Report: /report/sybaseASE/system.rpt
Users	The number of Adaptive Server users [Sequential = LST Non-Sequential = SUM] View Report: /report/sybaseASE/system.rpt

Class:	Sybase ASE
Subclass:	Transaction Summary
IT Resource Name:	/TeamQuest/System/*systemname*/Sybase ASE/*instancename*
TeamQuest Table Name:	Sybase ASE.Transaction Summary
Open Table Name:	SYBASETXNSUM
Resource:	instance1, instance2, ...
Statistic Name:	
APLClusteredTableInserts	The number of clustered table inserts with all of the pages locked [Sequential = SUM Non-Sequential = SUM]
APLHeapTableInserts	The number of heap table inserts with all of the pages locked [Sequential = SUM Non-Sequential = SUM]
TotalRowsDeleted	The number of table rows deleted [Sequential = SUM Non-Sequential = SUM]
TotalRowsUpdated	The number of table rows updated [Sequential = SUM Non-Sequential = SUM]
TranCount	The number of transactions committed [Sequential = SUM Non-Sequential = SUM]
TranRollbacks	The number of transaction rollbacks [Sequential = SUM Non-Sequential = SUM]

15.2. Active SQL Statistics

The Sybase ASE Agent (**tqsybase**) stores information about SQL processes that are currently active in the system. Statements with executions that do not cross over time intervals do not appear in this list.

Note: *This table requires that the Sybase Monitor Data Analysis (MDA) tables be installed.*

Table Field Hierarchy

Class:	Sybase ASE
Subclass:	Active SQL
IT Resource Name:	/TeamQuest/System/*systemname*/Sybase ASE/*instancename*
TeamQuest Table Name:	Sybase ASE.Active SQL
Open Table Name:	SYBASEACTIVESQL
Collection interval:	60 seconds (default)
Default retention:	1 day
Table type:	Performance

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = ID]
BatchID	The unique identifier for the SQL batch containing the SQL text [Sequential = ID Non-Sequential = ID]
ContextID	The stack frame of the procedure, if it is a procedure [Sequential = ID Non-Sequential = ID]
CpuTime	The amount of CPU time in seconds used by the statement [Sequential = SUM Non-Sequential = SUM]
Dbname	The database name [Sequential = ID Non-Sequential = ID]
Instance	The name of the instance from which the data is obtained [Sequential = ID Non-Sequential = ID]
Interval	The expected data sampling interval [Sequential = SUM Non-Sequential = ID]
Kpid	The kernel process identifier [Sequential = ID Non-Sequential = ID]
LogicalReads	The number of buffers read from the cache [Sequential = SUM Non-Sequential = SUM]
MemUsageMB	The amount of memory in megabytes (MB) that was used for execution of the statement [Sequential = SUM Non-Sequential = SUM]

NetworkPacketSize	The size in bytes of the network packet currently configured for the session [Sequential = ID Non-Sequential = ID]
NewPagesModified	The number of pages modified by the statement [Sequential = SUM Non-Sequential = SUM]
PacketsReceived	The number of network packets received by ASE [Sequential = ID Non-Sequential = ID]
PacketsSent	The number of network packets sent by ASE [Sequential = ID Non-Sequential = ID]
PhysicalReads	The number of buffers read from disk [Sequential = SUM Non-Sequential = SUM]
PlansAltered	The number of plans altered at execution time [Sequential = SUM Non-Sequential = SUM]
ProcedureID	The unique identifier for the procedure [Sequential = ID Non-Sequential = ID]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
ServerUserID	The server user identifier of the user executing the SQL [Sequential = ID Non-Sequential = ID]
Spid	The session process identifier [Sequential = ID Non-Sequential = ID]
SQLText	The SQL text [Sequential = ID Non-Sequential = ID]
StartTime	The date and time when the statement began execution [Sequential = SUM Non-Sequential = SUM]
System	The name of the system where the data is collected [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
WaitTime	The amount of time in seconds that the task has waited during execution of the statement [Sequential = SUM Non-Sequential = SUM]

15.3. Configuration Statistics

The Sybase ASE Agent (**tqsybase)** stores configuration data into a set of tables in the TeamQuest performance database. A record is stored only when a change in the configuration data is detected.

Table Field Hierarchy

Class:	Sybase ASE
Subclass:	Configuration
IT Resource Name:	/TeamQuest/System/*systemname*/Sybase ASE/*instancename*
TeamQuest Table Name:	Sybase ASE.Configuration
Open Table Name:	SYBASECONF
Collection interval:	N/A
Default retention:	6 months
Table type:	Event

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Non-Sequential = ID]
ConfigNum	The configuration parameter number [Non-Sequential = ID]
ConfigValueChar	The value for the parameter datatype. The value is NULL for parameters with a datatype of integer. [Non-Sequential = ID]
ConfigValueInt	The value for the parameter with an integer datatype. The value is 0 for parameters with a datatype of character. This value can be modified by the user. [Non-Sequential = ID]
Default	The default value of the configuration parameter [Non-Sequential = ID]
Instance	The name of the instance from which the data is obtained [Non-Sequential = ID]
Interval	The expected data sampling interval [Non-Sequential = ID]
MemoryUsedMB	The amount of memory in megabytes (MB) used by each configuration parameter [Non-Sequential = ID]
ParameterName	The name of the configuration parameter [Non-Sequential = ID]

RunValueChar	The current run value for the parameter with a datatype of character. The value is NULL for parameters with a datatype of integer. [Non-Sequential = ID]
RunValueInt	The current run value for the parameter with a datatype of integer. The value is 0 for the parameters with a datatype of character. [Non-Sequential = ID]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Non-Sequential = ID]
Shared Memory	Specifies if the memory used is shared memory. Values can be True, False, or <N/A> if the parameter does not use any memory. [Non-Sequential = ID]
System	The name of the system where the data is collected [Non-Sequential = ID]
Time	The timestamp of the data sample [Non-Sequential = ID]
Type	Specifies whether a configuration parameter is declared dynamic or static in its structure definition. The value can be one of the following: Dynamic (takes effect immediately) Static (takes effect after restarting Adaptive Server) [Non-Sequential = ID]
Unit	The unit of the parameter. The value can be one of the following: Not applicable–parameter has no units Number (number of items) Clock ticks (number of clock ticks) Microseconds Milliseconds Seconds Minutes Hours Days Bytes Kilobytes Megabytes Memory pages (2K) Virtual pages (2K) Logical pages Percent Ratio Switch (a Boolean value) ID (ID number) Name Rows [Non-Sequential = ID]

15.4. Database Detail Statistics

Detailed information about the Sybase ASE database statistics is stored within the Sybase ASE.Database Detail table in the TeamQuest performance database.

Table Field Hierarchy

Class:	Sybase ASE
Subclass:	Database Detail
IT Resource Name:	/TeamQuest/System/*systemname*/Sybase ASE/*instancename*
TeamQuest Table Name:	Sybase ASE.Database Details
Open Table Name:	SYBASEDBDETAIL
Collection interval:	60 seconds (default)
Default retention:	10 days
Table type:	Performance

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = ID]
CreateDate	The date the space was defined for the database [Sequential = ID Non-Sequential = ID]
Dbname	The database name [Sequential = ID Non-Sequential = ID]
Device_Fragments	The name of the device fragment [Sequential = ID Non-Sequential = ID]
FreeSizeMB	The available space in megabytes (MB) [Sequential = ID Non-Sequential = ID]
Instance	The name of the instance from which the data is obtained [Sequential = ID Non-Sequential = ID]
Interval	The expected data sampling interval [Sequential = SUM Non-Sequential = ID]
Owner	The user ID of the database owner [Sequential = ID Non-Sequential = ID]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
System	The name of the system where the data is collected [Sequential = ID Non-Sequential = ID]

Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
TotalSizeMB	The device size in megabytes (MB) [Sequential = ID Non-Sequential = ID]

15.5. Database Summary Statistics

Summary information about the Sybase ASE database statistics is stored within the Sybase ASE.Database Summary table in the TeamQuest performance database.

Table Field Hierarchy

Class:	Sybase ASE
Subclass:	Database Summary
IT Resource Name:	/TeamQuest/System/*systemname*/Sybase ASE/*instancename*
TeamQuest Table Name:	Sybase ASE.Database Summary
Open Table Name:	SYBASEDBSUM
Collection interval:	60 seconds (default)
Default retention:	10 days
Table type:	Performance

Statistic Name	**Description**
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = ID]
CreateDate	The date the space was defined for the database [Sequential = ID Non-Sequential = ID]
Dbname	The database name [Sequential = ID Non-Sequential = ID]
FreeSizeMB	The available space in megabytes (MB) [Sequential = ID Non-Sequential = ID]
Instance	The name of the instance from which the data is obtained [Sequential = ID Non-Sequential = ID]
Interval	The expected data sampling interval [Sequential = SUM Non-Sequential = ID]
Owner	The user ID of the database owner [Sequential = ID Non-Sequential = ID]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
System	The name of the system where the data is collected [Sequential = ID Non-Sequential = ID]

Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
TotalSizeMB	The database size in megabytes (MB) [Sequential = ID Non-Sequential = ID]

15.6. Device Detail Statistics

Detailed information about the Sybase ASE device statistics is stored within the Sybase ASE.Device Detail table in the TeamQuest performance database.

Table Field Hierarchy

Class:	Sybase ASE
Subclass:	Device Detail
IT Resource Name:	/TeamQuest/System/*systemname*/Sybase ASE/*instancename*
TeamQuest Table Name:	Sybase ASE.Device Detail
Open Table Name:	SYBASEDEVDETAIL
Collection interval:	60 seconds (default)
Default retention:	10 days
Table type:	Performance

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = ID]
DeviceName	The name of the storage device [Sequential = LST Non-Sequential = ID]
DeviceType	The identifier to determine if the device is defined as a Physical Disk, Dump Device, or Logical Disk [Sequential = LST Non-Sequential = ID]
FreeSizeMB	The available space in megabytes (MB) [Sequential = ID Non-Sequential = ID] View Report: /report/sybaseASE/diskutil.rpt
Instance	The name of the instance from which the data is obtained [Sequential = ID Non-Sequential = ID]
Interval	The expected data sampling interval [Sequential = SUM Non-Sequential = ID]
PctFreeSize	The percentage of disk space that is not being used [Sequential = ID Non-Sequential = ID]
PhysicalName	The system address of the storage device [Sequential = LST Non-Sequential = ID]

Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
System	The name of the system where the data is collected [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
TotalSizeMB	The device size in megabytes (MB) [Sequential = ID Non-Sequential = ID] View Report: /report/sybaseASE/diskutil.rpt

15.7. Engine Detail Statistics

Detailed information about the Sybase ASE engine statistics is stored within the Sybase ASE.Engine Detail table in the TeamQuest performance database.

Table Field Hierarchy

Class:	Sybase ASE
Subclass:	Engine Detail
IT Resource Name:	/TeamQuest/System/*systemname*/Sybase ASE/*instancename*
TeamQuest Table Name:	Sybase ASE.Engine Detail
Open Table Name:	SYBASEENGINEDETAIL
Collection interval:	60 seconds (default)
Default retention:	10 days
Table type:	Performance

Statistic Name	**Description**
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = ID]
BytesSent/Received	The total number of bytes received and sent for the engine [Sequential = SUM Non-Sequential = SUM]
ClockTicks	The number of clock ticks [Sequential = SUM Non-Sequential = SUM]
ContextSwitches	The number of times the Adaptive Server engine switched context from one user task to another [Sequential = SUM Non-Sequential = SUM]
CpuBusy	The amount of CPU time in seconds that the Adaptive Server CPU is doing Adaptive Server work for the engine [Sequential = SUM Non-Sequential = SUM]

EngineNum	The number of the engine [Sequential = ID Non-Sequential = ID]
EngineSleeps	The number of times the engine was idle [Sequential = SUM Non-Sequential = SUM]
Idle	The amount of CPU time in seconds that the Adaptive Server has been idle [Sequential = SUM Non-Sequential = SUM]
Instance	The name of the instance from which the data is obtained [Sequential = ID Non-Sequential = ID]
Interval	The expected data sampling interval [Sequential = SUM Non-Sequential = ID]
IoBusy	The amount of CPU time in seconds that the Adaptive Server has spent doing I/O operations [Sequential = SUM Non-Sequential = SUM]
PacketsSent/Received	The number of packets received and sent for the engine [Sequential = SUM Non-Sequential = SUM]
PctCpuBusy	The percentage of time the Adaptive Server is using the CPU [Sequential = AVG Non-Sequential = SUM] View Report: /report/sybaseASE/cputil.rpt
PctIdle	The percentage of time the Adaptive Server is not using the CPU [Sequential = AVG Non-Sequential = SUM] View Report: /report/sybaseASE/cputil.rpt
PctIoBusy	The percentage of time the Adaptive Server is doing I/O operations [Sequential = AVG Non-Sequential = SUM] View Report: /report/sybaseASE/cputil.rpt
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
System	The name of the system where the data is collected [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]

15.8. Lock Detail Statistics

Detailed information about the Sybase ASE lock statistics is stored within the Sybase ASE.Lock Detail table in the TeamQuest performance database.

Note: *This table requires that the Sybase Monitor Data Analysis (MDA) tables be installed.*

Table Field Hierarchy

Class:	Sybase ASE
Subclass:	Lock Detail
IT Resource Name:	/TeamQuest/System/*systemname*/Sybase ASE/*instancename*
TeamQuest Table Name:	Sybase ASE.Lock Detail
Open Table Name:	SYBASELOCKDETAIL
Collection interval:	60 seconds (default)
Default retention:	1 day
Table type:	Performance

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = ID]
Dbname	The database name [Sequential = ID Non-Sequential = ID]
Instance	The name of the instance from which the data is obtained [Sequential = ID Non-Sequential = ID]
Interval	The expected data sampling interval [Sequential = SUM Non-Sequential = ID]
Kpid	The kernel process identifier [Sequential = ID Non-Sequential = ID]
LockId	The lock object identifier [Sequential = ID Non-Sequential = ID]
LockLevel	The type of object for which the lock was requested. The value can be one of the following: Row Page Table Address [Sequential = ID Non-Sequential = ID]

LockState	Indicates whether the lock has been granted. The value can be one of the following: Hold Wait [Sequential = ID Non-Sequential = ID]
LockType	The type of lock. The value can be one of the following: Exclusive Shared Update [Sequential = ID Non-Sequential = ID]
PageNumber	The page that is locked when LockLevel = Page [Sequential = ID Non-Sequential = ID]
ParentSpid	The parent server process identifier [Sequential = ID Non-Sequential = ID]
RowNumber	The row that is locked when LockLevel = Row [Sequential = ID Non-Sequential = ID]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
Spid	The server process identifier [Sequential = ID Non-Sequential = ID]
System	The name of the system where the data is collected [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
WaitTime	The time in seconds that the lock request has not been granted [Sequential = SUM Non-Sequential = SUM]

15.9. Process Statistics

Process statistics are stored in the TeamQuest performance database tables by the Sybase ASE Agent (**tqsybase**). The process statistics are available when the processes have completed.

Table Field Hierarchy

Class:	Sybase ASE
Subclass:	Process
IT Resource Name:	/TeamQuest/System/*systemname*/Sybase ASE/*instancename*
TeamQuest Table Name:	Sybase ASE.Process
Open Table Name:	SYBASEPROC
Collection interval:	60 seconds (default)
Default retention:	1 day
Table type:	Performance

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = ID]
Affinity	The name of the engine to which the process has affinity [Sequential = ID Non-Sequential = ID]
Blocking_Spid	The server process identifier for blocking processes [Sequential = ID Non-Sequential = ID]
ClientHostName	The name by which the host is known for the current session [Sequential = ID Non-Sequential = ID]
ClientName	The name by which the user is known for the current session [Sequential = ID Non-Sequential = ID]
Cmd	The command currently being executed [Sequential = ID Non-Sequential = ID]
CPUSeconds	The CPU time the server application processes are using on the host. This number includes only Sybase Server internal processes, excluding the portion of the OS CPU time reported. [Sequential = SUM Non-Sequential = SUM]
Dbname	The database name [Sequential = ID Non-Sequential = ID]
EngineNum	The number of the engine on which the process is being executed [Sequential = ID Non-Sequential = ID]
Execlass	The execution class to which the process is bound [Sequential = ID Non-Sequential = ID]
GroupID	The group ID of the user who executed the command [Sequential = ID Non-Sequential = ID]

HostName	The name of the host computer [Sequential = ID Non-Sequential = ID]
Instance	The name of the instance from which the data is obtained [Sequential = ID Non-Sequential = ID]
Interval	The expected data sampling interval [Sequential = SUM Non-Sequential = ID]
IpAddress	The IP address of the client where the login is made [Sequential = ID Non-Sequential = ID]
Kpid	The kernel process identifier [Sequential = ID Non-Sequential = ID]
Lock_id	The lock owner identifier for a lock that is blocking a transaction [Sequential = ID Non-Sequential = ID]
LoggedInTime	The time and date when the client connected to Adaptive Server [Sequential = ID Non-Sequential = ID]
MemUsageMB	The amount of memory in megabytes (MB) allocated to the process [Sequential = LST Non-Sequential = ID]
NetworkPacketSize	The network packet size of the current connection [Sequential = ID Non-Sequential = ID]
Original_Server_Userid	The original server user identifier. If this field is not blank, the original server user identifier is used for the session authorization [Sequential = ID Non-Sequential = ID]
PhysicalIO	The number of accesses to the hard drive since each process started. This value includes accesses to the hard drive for physical reads and physical writes. [Sequential = SUM Non-Sequential = SUM]
Priority	The base priority associated with the process [Sequential = ID Non-Sequential = ID]
ProgramName	The name of the front-end module [Sequential = ID Non-Sequential = ID]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
Server_Userid	The server user identifier of the user executing the process [Sequential = ID Non-Sequential = ID]
Spid	The server process identifier [Sequential = ID Non-Sequential = ID]

Status	The Process ID status. The value can be one of the following: Infected Background Recv sleep Send sleep Alarm sleep Lock sleep Sleeping Runnable Running Stopped Bad status Log suspend [Sequential = LST Non-Sequential = ID]
System	The name of the system where the data is collected [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
Time_Blocked	The amount of time being blocked in seconds [Sequential = AVG Non-Sequential = SUM]
Tranname	The name of the active transaction [Sequential = LST Non-Sequential = ID]
Userid	The ID of the user who executed the command [Sequential = ID Non-Sequential = ID]

15.10. Process Waits Statistics

The Sybase ASE.Process Waits table stores detailed information about current wait events by a process.

Note: *This table requires that the Sybase Monitor Data Analysis (MDA) tables be installed.*

Table Field Hierarchy

Class:	Sybase ASE
Subclass:	Process Waits
IT Resource Name:	/TeamQuest/System/*systemname*/Sybase ASE/*instancename*
TeamQuest Table Name:	Sybase ASE.Process Waits
Open Table Name:	SYBASEPROCWAITS
Collection interval:	60 seconds (default)
Default retention:	1 day
Table type:	Performance

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = ID]
AvgWaitTime	The average amount of time in seconds the process spent waiting for the event [Sequential = AVG Non-Sequential = SUM]
Instance	The name of the instance from which the data is obtained [Sequential = ID Non-Sequential = ID]
Interval	The expected data sampling interval [Sequential = SUM Non-Sequential = ID]
Kpid	The kernel process identifier [Sequential = ID Non-Sequential = ID]
LoginId	The login name for the process that is waiting [Sequential = ID Non-Sequential = ID]
ProcessWaits	The number of times the process has waited for the event [Sequential = SUM Non-Sequential = SUM]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
Spid	The server process identifier [Sequential = ID Non-Sequential = ID]
System	The name of the system where the data is collected [Sequential = ID Non-Sequential = ID]

Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
WaitEventID	The unique identifier for the wait event [Sequential = ID Non-Sequential = ID]

15.11. System Waits Statistics

The Sybase ASE.System Waits table stores detailed information about current wait events by a system.

Note: *This table requires that the Sybase Monitor Data Analysis (MDA) tables be installed.*

Table Field Hierarchy

Class:	Sybase ASE
Subclass:	System Waits
IT Resource Name:	/TeamQuest/System/*systemname*/Sybase ASE/*instancename*
TeamQuest Table Name:	Sybase ASE.System Waits
Open Table Name:	SYBASESYSWAITS
Collection interval:	60 seconds (default)
Default retention:	1 day
Table type:	Performance

Statistic Name	**Description**
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = ID]
AvgWaitTime	The average amount of time in seconds the process spent waiting for the event [Sequential = SUM Non-Sequential = SUM]
Instance	The name of the instance from which the data is obtained [Sequential = ID Non-Sequential = ID]
Interval	The expected data sampling interval [Sequential = SUM Non-Sequential = ID]
LoginId	The ID of the user who executed the command [Sequential = ID Non-Sequential = ID]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
System	The name of the system where the data is collected [Sequential = ID Non-Sequential = ID]

Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
WaitEventID	The unique identifier for the wait event [Sequential = ID Non-Sequential = ID]
Waits	The number of times tasks have waited for the event [Sequential = SUM Non-Sequential = SUM]

Section 16
System Alarm Statistics

Alarms generated by TeamQuest Manager are recorded in the System Alarms table. This table can be managed and viewed using the TeamQuest performance applications (TeamQuest Analyzer, TeamQuest View, and TeamQuest Alert).

The System Alarms table is created by the Alarm Service (**tqalm**). The table is located in your database directory *TQDATADIR**databasename*\alarms.

Note: *At the end of each statistic description, you will see a notation in brackets indicating the method that is used for data consolidation (for example,* [Sequential = SUM Non-Sequential = SUM]). *Sequential means that the field is consolidated over time. Non-Sequential means that the field is consolidated within a specified time interval.*

The following notations are used:

AVG = Average
DIV = Weight
FST = First
ID = Identifier
LST = Last
MAX = Maximum
MIN = Minimum
NON = None or no method was used
SUM = Summation

If you are using TeamQuest View to view aggregation set data, the sequential method is used for data consolidation.

Because derived statistics are not stored in the performance database, the data consolidation method is not shown in the description of a derived statistic.

Table Field Hierarchy

Class:	System
Subclass:	Alarms
IT Resource Name:	/TeamQuest/System/*systemname*
TeamQuest Table Name:	System.Alarms
Open Table Name:	SYSALARMS
Collection interval:	N/A
Default retention:	1 month
Table type:	Event

Statistic Name	Description
The combination of Sequence_Number, System, and Time fields is the unique identifier for an alarm within TeamQuest Manager.	
Alarm_Status	The timestamp of the data sample. This is a hidden field and is for internal use only. [Non-Sequential = ID]
Sequence_Number	A sequential number assigned to the alarm for uniqueness [Non-Sequential = ID]
System	The name of the system for which the alarm occurred. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Non-Sequential = ID]
Time	The date and time at which the alarm occurred. When the Alarm_Type is 1, the Event_Timestamp field may be a more accurate indicator of when the alarm actually occurred. [Non-Sequential = ID]

The combination of Original_Timestamp, Original_Sequence_Number, and Original_System is the unique identifier for when the alarm was last raised. For the first time the alarm is raised, or after a previous alarm clear, these have the same values as Sequence_Number, System, and Time. As the severity escalates on an alarm, these fields will reflect when the alarm was last raised. For example, if an alarm goes from Warning to Critical, these fields on the Critical alarm record will contain the values of Sequence_Number, System, and Time from the Warning alarm record. These fields can also be used to match up an alarm clear with when the alarm was raised.

Alarm_Conditions
: A string that shows the conditions that caused the alarm to be generated (and values of any aliases referenced only in the alarm action). The last condition is followed by a trailing null instead of a new line. For example:

```
alias1(45.40) > 25.00 and < 50
alias2(95.50) > 85.00
```

The value inside the parentheses is the current value for the parameter, derived statistic, or table field referenced by the alias. The mathematical operators and threshold values will only be present when an alarm is being raised.
[Non-Sequential = ID]

Alarm_ID
: The user-defined alarm identifier assigned to the alarm. It will also contain specific resource and workload names if needed.
[Non-Sequential = ID]

Alarm_Message
: A user-defined message from the alarm action definition that contains information regarding the alarm. If no information exists, the field will be blank. This message can be sent as a console message by updating Console Message setting to ON in the Alarm Service configuration file of TeamQuest Manager.
[Non-Sequential = ID]

Alarm_Type
: This has a value of 1 for an event alarm and 0 for alarms that have both a raised and a clear condition. This is a hidden field and is for internal use only.
[Non-Sequential = ID]

Event_Timestamp
: The actual time that the event occurred. This is always the same as the Time field in the alarm record unless table data is used in the alarm. When using table data, this field will be set to the value of the Time field in the table record where the alarm was detected. If there is no Time field in the table record, the Event_Timestamp field will be the same as the Time field of the alarm record.
[Non-Sequential = ID]

Count
: A count of alarms that is useful when consolidating the alarms at report time
[Non-Sequential = SUM]

Database_Name
: The name of the performance database and aggregation set used to detect the alarm condition. The names are separated by a colon (Database:Aggset).
[Non-Sequential = ID]

Parameter_Information
: A string made up of all alias names and the associated parameters, derived statistics, or table field names that are referenced in the alarm definition.
[Non-Sequential = ID]
The parameters, derived statistics, and table field names are colon-delimited and the last one is followed by a trailing null instead of a new line. Table and parameter aliases are grouped together and have a section name to identify them. If there are no section names present, all aliases are assumed to be parameter aliases.
For example:

```
[Parameter]
conn1 = saturn:Web Server:Summary::connections/sec:WebServer1::
conn2 = saturn:Web Server:Summary::connections/sec:WebServer2::
[Table]
login = NT:Process:login
cmd = NT:Process:command
```

Original_Timestamp
: The timestamp when the alarm was last raised
[Non-Sequential = ID]

Original_Sequence_Number
: The Sequence_Number when the alarm was last raised
[Non-Sequential = ID]

Original_System
: The system where the alarm was last raised
[Non-Sequential = ID]

Sample_Interval
: The frequency of how often the Alarm Service checks for alarms (in seconds). The value in this field is the same as the sample rate of the aggregation set specified in the Database_Name field. This is a hidden field and is for internal use only.
[Non-Sequential = LST]

Severity
: The severity of the alarm (Normal, Warning, Minor, Major, or Critical)
[Non-Sequential = ID]

Severity_Number
: The alarm severity as a numeric value:

0 = Unknown
1 = Normal
2 = Warning
3 = Minor
4 = Major
5 = Critical

[Non-Sequential = ID]

SNMP_Message
: The text of the SNMP message generated for the alarm. If no text exists, the field will be blank.
[Non-Sequential = ID]

Table_Key	A string containing the primary key information pointing to the table record that caused the alarm to be raised or cleared for alarms that use table data. It is a set of Fieldname = Value pairs. The last pair is followed by a trailing null instead of a new line. If table data is not used in the alarm, this is an empty string. [Non-Sequential = ID]
Table_Name	A string containing the class and name of the table that is used in the alarm (Class:Name) for alarms that use table data. If table data is not used in the alarm, this is an empty string. [Non-Sequential = ID]

Section 17
VMware Systems

The VMware Infrastructure Agent (**tqvmwarep**) remotely collects performance data for VMware vCenter servers, VMware hosts, and VMware virtual machines.

This section contains a listing of the statistics collected by the agent:

- Physical Tables (see 17.1)
- Derived Tables (see 17.2)

Note: *At the end of each statistic description, you will see a notation in brackets indicating the method that is used for data consolidation (for example,* [Sequential = SUM Non-Sequential = SUM]). *Sequential means that the field is consolidated over time. Non-Sequential means that the field is consolidated within a specified time interval.*

The following notations are used:

AVG = Average
DIV = Weight
FST = First
ID = Identifier
LST = Last
MAX = Maximum
MIN = Minimum
NON = None or no method was used
SUM = Summation

17.1. Physical Tables

A physical table definition allows multiple stored tables to be brought together into a single logical table. A derived table is created by indicating which fields from one or more stored tables are brought together, and which fields are to be calculated based on values of other fields in the same record when the stored tables have been brought together.

A derived table definition can reference one or more stored tables. A derived table cannot reference another derived table. One of the stored tables referenced by a derived table must be identified as the *primary reference table*. The primary reference table is the table that the other tables are joined to. The other reference tables are referred to as the *secondary reference tables*. One of the reference tables can be flagged as the table to use when determining the selection statements for applying an IT Resource to the derived table. This table is referred to as the *primary selection table*.

In this subsection, you can find a listing of the physical table statistics collected by the agent:

- Block Device.by Host System Device Table (see 17.1.1)
- Block Device.by Virtual Machine Table (see 17.1.2)
- Block Device.VMware Summary Table (see 17.1.3)
- CPU.by Host Processor Table (see 17.1.4)
- CPU.by Virtual CPU Table (see 17.1.5)
- CPU.by Virtual Machine Table (see 17.1.6)
- CPU.by VMware Resource Table (see 17.1.7)
- CPU.Relative Performance Table (see 17.1.8)
- CPU.VMware Summary Table (see 17.1.9)
- HINV.CPUModel Table (see 17.1.10)
- HINV.CPU Thread Speeds Table (see 17.1.11)
- HINV.Devices Table (see 17.1.12)
- HINV.FileSystem Table (see 17.1.13)
- HINV.Summary Table (see 17.1.14)
- Memory.by Virtual Machine Table (see 17.1.15)
- Memory.VMware Summary Table (see 17.1.16)
- Network Device.by Host System Device Table (see 17.1.17)
- Network Device.by Virtual Machine Table (see 17.1.18)
- Network Device.vmnic by Virtual Machine Table (see 17.1.19)
- Network Device.VMware Summary Table (see 17.1.20)
- VMware.Availability by Virtual Machine Table (see 17.1.21)

- VMware.Host Configuration Table (see 17.1.22)
- VMware.Host Status Table (see 17.1.23)
- VMware.Storage Configuration Table (see 17.1.24)
- VMware.Support Metrics Table (see 17.1.25)
- VMware.Virtual_Machines Table (see 17.1.26)
- VMware Cluster.CPU Summary Table (see 17.1.27)
- VMware Cluster.Memory Summary Table (see 17.1.28)
- VMware Cluster.Resource Allocation Table (see 17.1.29)
- VMware Cluster.Virtual Machine Operations (see 17.1.30)
- VMware Datastore.File Type Usage by Datacenter Table (see 17.1.31)
- VMware Datastore.Summary Table (see 17.1.32)
- VMware Datastore.Usage by Virtual Machine Table (see 17.1.33)
- VMware Resource Pool.CPU Summary Table (see 17.1.34)
- VMware Resource Pool.Memory Summary Table (see 17.1.35)
- VMware Resource Pool.Resource Allocation Table (see 17.1.36)
- VMware Storage.Adapter by Host System Table (see 17.1.37)
- VMware Storage.Adapter Summary Table (see 17.1.38)
- VMware Storage.Datastore by Host System (see 17.1.39)
- VMware Storage.Datastore by Virtual Machine (see 17.1.40)
- VMware Storage.Datastore Summary (see 17.1.41)
- VMware Storage.Path by Host System Table (see 17.1.42)
- VMware Storage.Path Summary Table (see 17.1.43)
- VMware Storage.Virtual Disk by Virtual Machine Table (see 17.1.44)

17.1.1. Block Device.by Host System Device Table

The Block Device.by Host System Device table stores device-level I/O data for all of the logical unit numbers associated with VMware hosts.

Table Field Hierarchy

Class:	Block Device
Subclass:	by Host System Device
IT Resource Name:	/TeamQuest/System/VMware/Host/*systemname*
TeamQuest Table Name:	Block Device.by Host System Device
Open Table Name:	BLKDEVBYHOSTSYSDEVIC
Collection interval:	Based on the collection period
Default retentions:	3 days at collection period interval 8 days at 10-minute intervals 4 months at 1-hour intervals 9 months at 24-hour intervals
Table type:	Performance
Derived tables using fields from this table:	Host Block Device Usage

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
avgDeviceLatency	The average amount of time in milliseconds taken to complete a command to the physical device [Sequential = AVG Non-Sequential = AVG]
avgDeviceReadLatency	The average amount of time in milliseconds taken to complete a read from the physical device [Sequential = AVG Non-Sequential = AVG]
avgDeviceWriteLatency	The average amount of time in milliseconds taken to complete a write to the physical device [Sequential = AVG Non-Sequential = AVG]
avgKernelLatency	The average amount of time in milliseconds spent in the ESX Server VMKernel per command [Sequential = AVG Non-Sequential = AVG]
avgKernelReadLatency	The average amount of time in milliseconds spent in the ESX Server VMKernel per read [Sequential = AVG Non-Sequential = AVG]
avgKernelWriteLatency	The average amount of time in milliseconds spent in the ESX Server VMKernel per write [Sequential = AVG Non-Sequential = AVG]

avgLatency	The average amount of time in milliseconds taken to complete a command request (queue and disk service time) by the host system disk [Sequential = AVG Non-Sequential = AVG]
avgQueueLatency	The average amount of time in milliseconds spent in the ESX Server VMKernel queue per command [Sequential = AVG Non-Sequential = AVG]
avgQueueReadLatency	The average amount of time in milliseconds spent in the ESX Server VMKernel queue per read [Sequential = AVG Non-Sequential = AVG]
avgQueueWriteLatency	The average amount of time in milliseconds spent in the ESX Server VMKernel queue per write [Sequential = AVG Non-Sequential = AVG]
avgReadLatency	The average amount of time in milliseconds taken by a read operation to complete from the perspective of a guest operating system [Sequential = AVG Non-Sequential = AVG]
avgWriteLatency	The average amount of time in milliseconds taken by a write operation to complete from the perspective of a guest operating system [Sequential = AVG Non-Sequential = AVG]
busRst/s	The number of bus resets per second that occurred on the host system disk [Sequential = AVG Non-Sequential = SUM]
cmds/s	The number of commands (requests) issued per second to the host system disk [Sequential = AVG Non-Sequential = SUM]
cmdsAbrt/s	The number of commands aborted by the host system disk per second [Sequential = AVG Non-Sequential = SUM]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
KB_read/s	The amount of data read per second in kilobytes (KB) by the host system disk [Sequential = AVG Non-Sequential = SUM]
KB_write/s	The amount of data written per second in kilobytes (KB) by the host system disk [Sequential = AVG Non-Sequential = SUM]
KB/s	The amount of data transferred per second in kilobytes (KB) by the host system disk [Sequential = AVG Non-Sequential = SUM]
maxQueueDepth	The maximum queue depth. The maximum number of I/O operations supported by the LUN that can be outstanding at a given time. This statistic is available for VMware ESX 4.1.0 and later. [Sequential = AVG Non-Sequential = SUM]

reads/s	The number of read requests issued per second to the host system disk [Sequential = AVG Non-Sequential = SUM]
Resource	The name of the disk device [Sequential = ID Non-Sequential = ID]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
System	The name of the host system. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
totalTime	The total time in milliseconds for all command requests on a VMware host [Sequential = SUM Non-Sequential = SUM]
writes/s	The number of write requests issued per second to the host system disk [Sequential = AVG Non-Sequential = SUM]

17.1.2. Block Device.by Virtual Machine Table

The Block Device.by Virtual Machine table stores device-level I/O data for disk devices from the perspective of the virtual machine.

The Block Device.by Virtual Machine table data includes VMware host management agent data, which contains the consumption of disk resources by the VMware host. The virtual machine name of this record is the same as the VMware host name.

Table Field Hierarchy

Class:	Block Device
Subclass:	by Virtual Machine
IT Resource Name:	/TeamQuest/System/VMware/Virtual Machines/*virtualmachinename*
TeamQuest Table Name:	Block Device.by Virtual Machine
Open Table Name:	BLKDEVBYVM
Collection interval:	Based on the collection period
Default retentions:	3 days at collection period interval 8 days at 10-minute intervals 4 months at 1-hour intervals 9 months at 24-hour intervals
Table type:	Performance
Derived tables using fields from this table:	Virtual Machine Block Device Usage

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
avgDeviceLatency	The average amount of time in milliseconds taken to complete a command to the physical device [Sequential = AVG Non-Sequential = AVG]
avgDeviceReadLatency	The average amount of time in milliseconds taken to complete a read from the physical device [Sequential = AVG Non-Sequential = AVG]
avgDeviceWriteLatency	The average amount of time in milliseconds taken to complete a write to the physical device [Sequential = AVG Non-Sequential = AVG]
avgKernelLatency	The average amount of time in milliseconds spent in the ESX Server VMKernel per command [Sequential = AVG Non-Sequential = AVG]
avgKernelReadLatency	The average amount of time in milliseconds spent in the ESX Server VMKernel per read [Sequential = AVG Non-Sequential = AVG]

avgKernelWriteLatency	The average amount of time in milliseconds spent in the ESX Server VMKernel per write [Sequential = AVG Non-Sequential = AVG]
avgLatency	The average amount of time in milliseconds taken to complete a command request (queue and disk service time) by the host system disk [Sequential = AVG Non-Sequential = AVG]
avgQueueLatency	The average amount of time in milliseconds spent in the ESX Server VMKernel queue per command [Sequential = AVG Non-Sequential = AVG]
avgQueueReadLatency	The average amount of time in milliseconds spent in the ESX Server VMKernel queue per read [Sequential = AVG Non-Sequential = AVG]
avgQueueWriteLatency	The average amount of time in milliseconds spent in the ESX Server VMKernel queue per write [Sequential = AVG Non-Sequential = AVG]
avgReadLatency	The average amount of time in milliseconds taken by a read operation to complete from the perspective of a guest operating system [Sequential = AVG Non-Sequential = AVG]
avgWriteLatency	The average amount of time in milliseconds taken by a write operation to complete from the perspective of a guest operating system [Sequential = AVG Non-Sequential = AVG]
busRst/s	The number of bus resets per second that occurred on the virtual machine [Sequential = AVG Non-Sequential = SUM]
cmds/s	The number of commands (requests) issued per second to the physical device [Sequential = AVG Non-Sequential = SUM]
cmdsAbrt/s	The number of commands per second that were aborted by the virtual machine [Sequential = AVG Non-Sequential = SUM]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
KB_read/s	The amount of data read per second in kilobytes (KB) by the virtual machine [Sequential = AVG Non-Sequential = SUM]
KB_write/s	The amount of data written per second in kilobytes (KB) by the virtual machine [Sequential = AVG Non-Sequential = SUM]
KB/s	The amount of data transferred per second in kilobytes (KB) by the virtual machine [Sequential = AVG Non-Sequential = SUM]

maxTotalLatency	The highest latency value across all disks used by the host. Latency measures the time taken to process a SCSI command issued by the guest OS to the virtual machine. This statistic is available for VMware ESX 4.0.0 and later. [Sequential = MAX Non-Sequential = MAX]
reads/s	The number of read requests issued per second to the physical device [Sequential = AVG Non-Sequential = SUM]
Resource	The name of the physical device [Sequential = ID Non-Sequential = ID]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
System	The name of the host system. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
totalTime	The total time in milliseconds for all command requests by the virtual machine [Sequential = SUM Non-Sequential = SUM]
Virtual_Machine	The name of the virtual machine to which the data applies [Sequential = ID Non-Sequential = ID]
writes/s	The total number of write requests issued per second to the physical device [Sequential = AVG Non-Sequential = SUM]

17.1.3. Block Device.VMware Summary Table

The Block Device.VMware Summary table stores device-level I/O data for disk devices from the perspective of the VMware host.

Table Field Hierarchy

Class:	Block Device
Subclass:	VMware Summary
IT Resource Name:	/TeamQuest/System/VMware/Host/*systemname*
TeamQuest Table Name:	Block Device.VMware Summary
Open Table Name:	BLKDEVVMSUM
Collection interval:	Based on the collection period
Default retentions:	3 days at collection period interval 8 days at 10-minute intervals 4 months at 1-hour intervals 9 months at 24-hour intervals
Table type:	Performance
Derived tables using fields from this table:	Host Block Device Summary

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
cmds/s	The total number of read and write command requests per second [Sequential = AVG Non-Sequential = SUM]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
KB_read/s	The amount of data read per second in kilobytes (KB) for all of the disk instances of the host system [Sequential = AVG Non-Sequential = SUM]
KB_write/s	The amount of data written per second in kilobytes (KB) for all of the disk instances of the host system [Sequential = AVG Non-Sequential = SUM]
KB/s	The amount of data read and written per second in kilobytes (KB) for all of the disk instances of the host system [Sequential = AVG Non-Sequential = SUM]
maxTotalLatency	The highest latency value across all disks used by the host. Latency measures the time taken to process a SCSI command issued by the guest OS to the virtual machine. This statistic is available for VMware ESX 4.0.0 and later. [Sequential = MAX Non-Sequential = MAX]

reads/s	The total number of read requests per second for all of the disk instances of the host system [Sequential = AVG Non-Sequential = SUM]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
System	The name of the host system. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
writes/s	The total number of write requests per second for all of the disk instances of the host system [Sequential = AVG Non-Sequential = SUM]

17.1.4. CPU.by Host Processor Table

The CPU.by Host Processor table stores device-level utilization data for processors from the perspective of the VMware host system.

Table Field Hierarchy

Class:	CPU
Subclass:	by Host Processor
IT Resource Name:	/TeamQuest/System/VMware/Host/*systemname*
TeamQuest Table Name:	CPU.by Host Processor
Open Table Name:	CPUBYHOSTPROC
Collection interval:	Based on the collection period
Default retentions:	3 days at collection period interval 8 days at 10-minute intervals 4 months at 1-hour intervals 9 months at 24-hour intervals
Table type:	Performance
Derived tables using fields from this table:	Host CPU Usage

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
idle	The amount of processor time in seconds that is spent in an idle state [Sequential = SUM Non-Sequential = SUM]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
Object	The name of the CPU object [Sequential = ID Non-Sequential = ID]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
System	The name of the host system. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]

usage	The percentage of time the CPU is in use over the collection interval [Sequential = AVG Non-Sequential = SUM]
usedsec	The processor time consumed by the VMware host in seconds [Sequential = SUM Non-Sequential = SUM]

17.1.5. CPU.by Virtual CPU Table

The CPU.by Virtual CPU table stores utilization data from virtual processors from the perspective of the virtual machine.

Table Field Hierarchy

Class:	CPU
Subclass:	by Virtual CPU
IT Resource Name:	/TeamQuest/System/VMware/Virtual Machines/*virtualmachinename*
TeamQuest Table Name:	CPU.by Virtual CPU
Open Table Name:	CPUBYVIRTCPU
Collection interval:	Based on the collection period
Default retentions:	3 days at collection period interval 8 days at 10-minute intervals 4 months at 1-hour intervals 9 months at 24-hour intervals
Table type:	Performance
Derived tables using fields from this table:	Virtual Machine Virtual CPU Usage

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
maxlimited	The amount of time in seconds the virtual machine was ready to run but did not run because it reached the maximum CPU limit setting. This statistic is available for VMware ESX 5.0.0 and later. [Sequential = SUM Non-Sequential = SUM]
Object	The name of the CPU object [Sequential = ID Non-Sequential = ID]
overlap	The amount of time in seconds the virtual machine was interrupted while performing system services. This statistic is available for VMware ESX 5.0.0 and later. [Sequential = SUM Non-Sequential = SUM]

ready	The virtual CPU time that is spent in the ready state in seconds [Sequential = SUM Non-Sequential = SUM]
run	The total amount of time in seconds scheduled for the CPU by the virtual CPU. This time does not account for hyper-threading and system time. On a hyper-threading enabled server, the percentage of run time can be twice as large as the percentage of CPU used time. This statistic is available for VMware ESX 5.0.0 and later. [Sequential = SUM Non-Sequential = SUM]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
syssec	The virtual CPU time that is spent on system processes in seconds [Sequential = SUM Non-Sequential = SUM]
System	The name of the host system. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
usage(MHz)	The CPU usage in megahertz (MHz) over the collection interval [Sequential = AVG Non-Sequential = SUM]
usedsec	The virtual CPU time that is used in seconds [Sequential = SUM Non-Sequential = SUM]
Virtual_Machine	The name of the virtual machine to which the data applies [Sequential = ID Non-Sequential = ID]
waitsec	The virtual CPU wait time in seconds [Sequential = SUM Non-Sequential = SUM]

17.1.6. CPU.by Virtual Machine Table

The CPU.by Virtual Machine table stores utilization data for processors summarized to the virtual machine level.

The CPU.by Virtual Machine table data includes VMware host management agent data, which contains the consumption of CPU resources by the VMware host. The virtual machine name of this record is the same as the VMware host name.

Table Field Hierarchy

Class:	CPU
Subclass:	by Virtual Machine
IT Resource Name:	/TeamQuest/System/VMware/Virtual Machines/*virtualmachinename*
TeamQuest Table Name:	CPU.by Virtual Machine
Open Table Name:	CPUBYVM
Collection interval:	Based on the collection period
Default retentions:	3 days at collection period interval 8 days at 10-minute intervals 4 months at 1-hour intervals 9 months at 24-hour intervals
Table type:	Performance
Derived tables using fields from this table:	Virtual Machine CPU Usage

Statistic Name	Description
%busy	The percentage of the server processor or processors that the virtual machine used [Sequential = AVG Non-Sequential = SUM]
%vcpu_busy	The percentage of the virtual machine's virtual processors used [Sequential = AVG Non-Sequential = SUM]
%vcpu_ready	The percentage of time the virtual machine was ready to perform an operation but had to wait for a processor [Sequential = AVG Non-Sequential = SUM]
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
costop	The amount of time in seconds a Symmetric Multi-Processing (SMP) virtual machine was ready to run, but was delayed due to console virtual CPU (co-vCPU) scheduling contention. This statistic is available for VMware ESX 5.0.0 and later. [Sequential = SUM Non-Sequential = SUM]

demand	The rate of CPU demand in megahertz (MHz). This value represents the average active CPU load in the sampling interval. This statistic is available for VMware ESX 5.0.0 and later. [Sequential = AVG Non-Sequential = SUM]
entitlement	The share of the CPU resource in megahertz (MHz) that a virtual machine should get as a result of the virtual CPU count and assigned shares. This statistic is available for VMware ESX 5.0.0 and later. [Sequential = LST Non-Sequential = SUM]
host_uptime	The elapsed time in seconds between two samples that the host or virtual machine was powered on [Sequential = SUM Non-Sequential = SUM]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
latency	The percentage of time the virtual machine was ready to run but was not scheduled to run because of physical CPU resource contention. This statistic is available for VMware ESX 5.0.0 and later. [Sequential = AVG Non-Sequential = SUM]
ready	The amount of time in seconds the virtual machine was ready to perform an operation but had to wait for a processor [Sequential = SUM Non-Sequential = SUM]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
shares	The number of CPU shares allocated to the virtual machine [Sequential = LST Non-Sequential = SUM]
swapwait	The amount of time in seconds the virtual machine was waiting for swap page-ins. CPU swap wait is included in CPU wait. This statistic is available for VMware ESX 4.0.0 and later. [Sequential = SUM Non-Sequential = SUM]
syssec	The amount of system time in seconds consumed by the virtual machine [Sequential = SUM Non-Sequential = SUM]
System	The name of the host system. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
totalCapacity	Total amount of CPU reservation (in megaHertz) used by and available for powered-on virtual machines and vSphere services on the host. This statistic is available for VMware ESX 4.1.0 and later. [Sequential = AVG Non-Sequential = SUM]
uptime	The elapsed time in seconds between two samples that the host or virtual machine was powered on [Sequential = SUM Non-Sequential = SUM]
usage(MHz)	The CPU usage in megahertz (MHz) over the collected interval [Sequential = AVG Non-Sequential = SUM]

usedsec	The processor time in seconds consumed by the virtual machine [Sequential = SUM Non-Sequential = SUM]
Virtual_Machine	The name of the virtual machine to which the data applies [Sequential = ID Non-Sequential = ID]
waitsec	The virtual CPU wait time in seconds [Sequential = SUM Non-Sequential = SUM]

17.1.7. CPU.by VMware Resource Table

The CPU.by VMware Resource table stores processor utilization data on how the hypervisor is managing the CPU.

Table Field Hierarchy

Class:	CPU
Subclass:	by VMware Resource
IT Resource Name:	/TeamQuest/System/VMware/Host/*systemname*
TeamQuest Table Name:	CPU.by VMware Resource
Open Table Name:	CPUBYVMRES
Collection interval:	Based on the collection period
Default retentions:	3 days at collection period interval 8 days at 10-minute intervals 4 months at 1-hour intervals 9 months at 24-hour intervals
Table type:	Performance
Derived tables using fields from this table:	Host CPU Resource Usage

Statistic Name	**Description**
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
Object	The name of the object for the host system [Sequential = ID Non-Sequential = ID]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]

System	The name of the host system. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
usage(MHz)	The CPU usage in megahertz (MHz) over the collection interval [Sequential = AVG Non-Sequential = SUM]

17.1.8. CPU.Relative Performance Table

The CPU.Relative Performance table stores the current relative performance data for physical systems.

Table Field Hierarchy

Class:	CPU
Subclass:	Relative Performance
IT Resource Name:	/TeamQuest/System/VMware/Host/*systemname*
TeamQuest Table Name:	CPU.Relative Performance
Open Table Name:	CPURELPERF
Collection interval:	1 minute
Default retentions:	1 month
Table type:	Performance
Derived tables using fields from this table:	VMware CPU Relative Performance

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = ID]
cpu_relative_ performance	The relative performance of the CPU on a common scale [Sequential = AVG Non-Sequential = SUM]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = ID]
relative_unused	The amount of CPU resources not used based on a common, relative scale [Sequential = AVG Non-Sequential = SUM]
rel_used	The amount of CPU resources used based on a common, relative scale [Sequential = AVG Non-Sequential = SUM]

System	The name of the system where the data is collected. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]

17.1.9. CPU.VMware Summary Table

The CPU.VMware Summary table stores CPU performance data summarized by VMware hosts.

Table Field Hierarchy

Class:	CPU
Subclass:	VMware Summary
IT Resource Name:	/TeamQuest/System/VMware/Host/*systemname*
TeamQuest Table Name:	CPU.VMware Summary
Open Table Name:	CPUVMSUM
Collection interval:	Based on the collection period
Default retentions:	3 days at collection period interval 8 days at 10-minute intervals 4 months at 1-hour intervals 9 months at 24-hour intervals
Table type:	Performance
Derived tables using fields from this table:	Host CPU Summary

Statistic Name	Description
%busy	The percentage of the CPU used [Sequential = AVG Non-Sequential = SUM]
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
costop	The amount of time in seconds a Symmetric Multi-Processing (SMP) virtual machine was ready to run, but was delayed due to console virtual CPU (co-vCPU) scheduling contention. This statistic is available for VMware ESX 5.0.0 and later. [Sequential = SUM Non-Sequential = SUM]
demand	The rate of CPU demand in megahertz (MHz). This value represents the average active CPU load in the sampling interval. This statistic is available for VMware ESX 5.0.0 and later. [Sequential = AVG Non-Sequential = SUM]

idle	The processor time in seconds that is spent in an idle state [Sequential = SUM Non-Sequential = SUM]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
latency	The percentage of time the host was ready to run but was not scheduled to run because of CPU resource contention. This statistic is available for VMware ESX 5.0.0 and later. [Sequential = AVG Non-Sequential = SUM]
online_cpus	The number of logical CPUs that were online [Sequential = LST Non-Sequential = SUM]
online_cpus_physical	The number of physical CPUs that were online [Sequential = LST Non-Sequential = SUM]
reservedCapacity	The total CPU capacity in megahertz (MHz) reserved by all of the virtual machines [Sequential = LST Non-Sequential = SUM]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
swapwait	The amount of time in seconds the virtual machine was waiting for swap page-ins. CPU swap wait is included in CPU wait. This statistic is available for VMware ESX 4.0.0 and later. [Sequential = SUM Non-Sequential = SUM]
System	The name of the host system. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
totalCapacity	The total amount of CPU reservation in megahertz (MHz) used by and available for powered-on virtual machines and VMware vSphere services on the host. This statistic is available for VMware ESX 4.1.0 and later. [Sequential = AVG Non-Sequential = SUM]
uptime_t	The total time in days elapsed since the last VMware host reboot [Sequential = LST Non-Sequential = SUM]
usage(MHz)	The CPU usage in megahertz (MHz) over the collected interval [Sequential = AVG Non-Sequential = SUM]

17.1.10. HINV.CPUModel Table

The HINV.CPUModel table stores best-match, relative performance data about the system configuration. This table is created by the VMware Infrastructure Agent (**tqvmwarep**) to map physical hardware to a CPU model that describes performance in relative terms. This table is not created for any virtualized system. It is populated for physical systems and VMware hosts. It is not populated for VMware guests, Hyper-V guests, Solaris logical domains (LDOMs), Solaris guest LDOMs, KVM guests, or Linux on POWER systems.

Table Field Hierarchy

Class:	HINV
Subclass:	CPUModel
IT Resource Name:	/TeamQuest/System/*systemname*
TeamQuest Table Name:	HINV.CPUModel
Open Table Name:	HINVCPUM
Collection interval:	N/A
Default retention:	1 year
Table type:	State
Derived tables using fields from this table:	N/A

Statistic Name	Description
cpu_chips	The number of CPU chips or sockets [Non-Sequential = ID]
cpu_confidence	The percentage of confidence in the correctness of the CPU match based on model, frequency, and configuration (chips, cores, threads) [Non-Sequential = ID]
cpu_cores	The number of CPU cores or processors on an individual CPU chip [Non-Sequential = ID]
cpu_name	The name of the selected CPU [Non-Sequential = ID]
cpu_relative_performance	The relative performance of the CPU on a common scale [Non-Sequential = ID]
cpu_speed	The speed of the processor in megahertz (MHz) or gigahertz (GHz) [Non-Sequential = ID]
cpu_threads	The number of CPU threads on an individual CPU core or processor [Non-Sequential = ID]
System	The name by which the system is known to a communication network or node name. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Non-Sequential = ID]
system_type	The name of the operating system [Non-Sequential = ID]

Time	The timestamp of the data sample [Non-Sequential = ID]
user_override	The user override status of the default TeamQuest generated CPU match. This field is not currently used and should appear as 0. [Non-Sequential = ID]

17.1.11. HINV.CPU Thread Speeds Table

The HINV.CPU Thread Speeds table stores best-match, performance improvement factors based on the number of active threads per core.

Table Field Hierarchy

Class:	HINV
Subclass:	CPU Thread Speeds
IT Resource Name:	/TeamQuest/System/*systemname*
TeamQuest Table Name:	HINV.CPU Thread Speeds
Open Table Name:	HINVCPUTHREADSPEEDS
Collection interval:	N/A
Default retention:	1 year
Table type:	State

Statistic Name	Description
speed_up_factor	The performance improvement when there are multiple active threads per core, compared to when there is only one active thread per core [Sequential = AVG Non-Sequential = ID]
System	The name by which the system is known to a communication network or node name. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
thread_number	The number of active threads [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = ID Non-Sequential = ID]

17.1.12. HINV.Devices Table

The HINV.Devices table stores configuration data for physical block devices and respective device controllers in VMware hosts.

Table Field Hierarchy

Class:	HINV
Subclass:	Devices
IT Resource Name:	/TeamQuest/System/*systemname*
TeamQuest Table Name:	HINV.Devices
Open Table Name:	HINVDEVS
Collection interval:	N/A
Default retention:	1 year
Table type:	State
Derived tables using fields from this table:	N/A

Statistic Name	Description
class	The device classification. For example, controller, disk, tape, or cdrom. [Non-Sequential = ID]
controller	The device path indicator which defines a connection to another device [Non-Sequential = ID]
lun_id	The globally unique Logical Unit Number (LUN) identifier for Storage Area Network (SAN) based disk devices. The LUN identifier can be a Network Address Authority (NAA), Extended Unique Identifier (EUI), or iSCSI Qualified Name (IQN) value. This field is reported as <N/A> for non-SAN based disk devices, CD-ROM drives, tape drives, and so on. [Non-Sequential = ID]
name	The unique identifier for this device [Non-Sequential = ID]
name2	This statistic is not available for the VMware Infrastructure Agent. The value is reported as <N/A>. [Non-Sequential = ID]
product	The product identifier. This field may be blank. [Non-Sequential = ID]
revision	The revision level for this product. This field may be blank. [Non-Sequential = ID]
rpm	This statistic is not available for the VMware Infrastructure Agent. The value is reported as <N/A>. [Non-Sequential = ID]
sequence	The sequence number of the device [Non-Sequential = ID]

swap	This statistic is not available for the VMware Infrastructure Agent. The value is reported as <N/A>. [Non-Sequential = ID]
System	The name by which the system is known to a communication network or node. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Non-Sequential = ID]
Time	The timestamp of the data sample [Non-Sequential = ID]
vendor	The name of the device vendor. This field may be blank. [Non-Sequential = ID]

17.1.13. HINV.FileSystem Table

The HINV.FileSystem table stores configuration data about host file systems.

Table Field Hierarchy

Class:	HINV
Subclass:	FileSystem
IT Resource Name:	/TeamQuest/System/VMware/Host/*systemname*
TeamQuest Table Name:	HINV.FileSystem
Open Table Name:	HINVFILESYS
Collection interval:	N/A
Default retention:	1 year
Table type:	State
Derived tables using fields from this table:	N/A

Statistic Name	Description
BlkSize	The size of a block on the file system in bytes [Non-Sequential = ID]
Device	The path for the device on which the file system is mounted [Non-Sequential = ID]
Name	The unique identifier for the file system [Non-Sequential = ID]
Source	The source physical disk or logical volume of the file system. This field is always blank for this platform. [Non-Sequential = ID]
System	The name by which the system is known to a communication network or node name. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Non-Sequential = ID]
Time	The timestamp of the data sample [Non-Sequential = LST]

TotBlks	The total number of blocks on the file system [Non-Sequential = ID]
TotFiles	This statistic is not available for the VMware Infrastructure Agent. The value is reported as <N/A>. [Non-Sequential = ID]
TotSize	The total amount of space on the file system in megabytes [Non-Sequential = ID]
Type	The type of the file system [Non-Sequential = ID]

17.1.14. HINV.Summary Table

The HINV.Summary table stores configuration data about VMware hosts.

Table Field Hierarchy

Class:	HINV
Subclass:	Summary
IT Resource Name:	/TeamQuest/System/VMware/Host/*systemname*
TeamQuest Table Name:	HINV.Summary
Open Table Name:	HINVSUM
Collection interval:	N/A
Default retention:	1 year
Table type:	State
Derived tables using fields from this table:	N/A

Statistic Name	Description
core_multi-thread	The status or ability of the processor to support multiple independent threads. This field contains <N/A> if the information is not available. For VMware guests, this field contains <N/A>. [Non-Sequential = ID]
cores_per_chip	The number of cores or processors on an individual chip. This field contains <N/A> if the information is not available. For VMware guests, this field contains <N/A>. [Non-Sequential = ID]
cpu_chips	The number of CPU chips or sockets. This field contains <N/A> if the information is not available. For VMware guests, this field contains <N/A>. [Non-Sequential = ID]
cpu_count	The number of configured processors [Non-Sequential = ID]
cpu_speed	The speed of the processor in MHz or GHz [Non-Sequential = ID]

cpu_type	The basic instruction set architecture of the current system [Non-Sequential = ID]
logical_cpu_count	The number of logical processors [Non-Sequential = ID]
mem_size	The size of configured random access memory in kilobytes, where 1 kilobyte = 1,024 bytes [Non-Sequential = ID]
memory	The size of configured random access memory in megabytes [Non-Sequential = ID]
memory_size	The size of configured random access memory in megabytes or gigabytes [Non-Sequential = ID]
model	The name of the hardware implementation or platform [Non-Sequential = ID]
os_release	The name and level of the implementation of the operating system [Non-Sequential = ID]
pagesize	This statistic is not available for the VMware Infrastructure Agent. The value is reported as <N/A>. [Non-Sequential = ID]
partition_type	The partition type of the system. This field will contain VMware Host if the system is a VMware host system. [Non-Sequential = ID]
serial	This statistic is not available for the VMware Infrastructure Agent. The value is reported as <N/A>. [Non-Sequential = ID]
System	The name by which the host system is known to a communication network or node name. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Non-Sequential = ID]
system_identifier	This statistic is not available for the VMware Infrastructure Agent. The value is reported as <N/A>. [Non-Sequential = ID]
system_type	The name of the operating system [Non-Sequential = ID]
Time	The timestamp of the data sample [Non-Sequential = LST]
timezone	The time zone where the data was collected [Non-Sequential = ID]
TQLevel	The level of TeamQuest Manager [Non-Sequential = ID]

17.1.15. Memory.by Virtual Machine Table

The Memory.by Virtual Machine table stores performance data related to memory for VMware virtual machines.

The Memory.by Virtual Machine table data includes VMware host management agent data, which contains the consumption of memory resources by the VMware host. The virtual machine name of this record is the same as the VMware host name.

Table Field Hierarchy

Class:	Memory
Subclass:	by Virtual Machine
IT Resource Name:	/TeamQuest/System/VMware/Virtual Machines/*virtualmachinename*
TeamQuest Table Name:	Memory.by Virtual Machine
Open Table Name:	MEMBYVM
Collection interval:	Based on the collection period
Default retentions:	3 days at collection period interval 8 days at 10-minute intervals 4 months at 1-hour intervals 9 months at 24-hour intervals
Table type:	Performance
Derived tables using fields from this table:	Virtual Machine Memory Usage

Statistic Name	Description
%usage	The percentage of total available memory that is used [Sequential = AVG Non-Sequential = SUM]
active	The working set size estimate in megabytes at the end of the interval for the virtual machine [Sequential = AVG Non-Sequential = SUM]
activewrite	The amount of memory in megabytes actively being written to or by the virtual machine. This statistic is available for VMware ESX 4.1.0 and later. [Sequential = AVG Non-Sequential = SUM]
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
consumed	The amount of host memory in megabytes consumed by the virtual machine for guest memory [Sequential = AVG Non-Sequential = SUM]
entitlement	The share of the memory resource in megabytes that a virtual machine should get as a result of the virtual CPU count and assigned shares. This statistic is available for VMware ESX 5.0.0 and later. [Sequential = AVG Non-Sequential = SUM]

Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
latency	The percentage of time the virtual machine was waiting to access swapped or compressed memory. This statistic is available for VMware ESX 5.0.0 and later. [Sequential = AVG Non-Sequential = SUM]
lowfreethreshold	The threshold of free host physical memory in megabytes. The VMware ESX Server will begin reclaiming memory from virtual machines through ballooning and swapping if the amount of free host physical memory falls below this value. This statistic is available for VMware ESX 5.0.0 and later. [Sequential = AVG Non-Sequential = SUM]
memctl	The amount of memory in megabytes currently reclaimed using vmmemctl for the virtual machine [Sequential = AVG Non-Sequential = SUM]
memctlgt	The target memory size in megabytes to reclaim using vmmemctl for the virtual machine [Sequential = AVG Non-Sequential = SUM]
overheadMax	The amount of memory in megabytes reserved for the virtualization overhead for the virtual machine. This statistic is available for VMware ESX 4.1.0 and later. [Sequential = AVG Non-Sequential = SUM]
overheadTouched	The amount of actively touched overhead memory in megabytes reserved for the virtualization overhead for the virtual machine. This statistic is available for VMware ESX 5.0.0 and later. [Sequential = AVG Non-Sequential = SUM]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
shared	The amount of memory in megabytes shared between all running virtual machines and within a virtual machine [Sequential = AVG Non-Sequential = SUM]
shares	The number of memory shares allocated to the virtual machine [Sequential = LST Non-Sequential = SUM]
size	The amount of memory in megabytes currently allocated to the virtual machine [Sequential = AVG Non-Sequential = SUM]
swapin	The total amount of memory in megabytes that has been read from the virtual machine's swap file to the machine memory by the VMKernel during the interval [Sequential = AVG Non-Sequential = SUM]

swapinRate	The rate memory is swapped from the disk into active memory during the collection interval. This value applies to virtual machines. This value is more useful than the swapin statistic to determine if the virtual machine is running slow due to memory swapping, especially when evaluating real-time data. This statistic is available for VMware ESX 4.0.0 and later. [Sequential = AVG Non-Sequential = SUM]
swapout	The total amount of memory in megabytes that has been transferred the virtual machine's swap file to the machine memory by the VMKernel during the interval [Sequential = AVG Non-Sequential = SUM]
swapoutRate	The rate memory is swapped from active memory to the disk during the collection interval. This value applies to virtual machines. This value is more useful than the swapout statistic to determine if the virtual machine is running slow due to memory swapping, especially when evaluating real-time data. This statistic is available for VMware ESX 4.0.0 and later. [Sequential = AVG Non-Sequential = SUM]
swapped	The amount of memory in megabytes currently swapped to the VMware File System 3 (VMFS3) swap file [Sequential = AVG Non-Sequential = SUM]
swaptgt	The target size in megabytes to swap to the VMware File System 3 (VMFS3) swap file for the virtual machine [Sequential = AVG Non-Sequential = SUM]
System	The name of the host system. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
totalCapacity	The total amount of memory reservation in megabytes used by and available for powered-on virtual machines and VMware vSphere services on the host. This statistic is available for VMware ESX 4.1.0 and later. [Sequential = AVG Non-Sequential = SUM]
Virtual_Machine	The name of the virtual machine to which the data applies [Sequential = ID Non-Sequential = ID]
zero	The amount of memory in megabytes that is zeroed out [Sequential = AVG Non-Sequential = SUM]

zipped	The amount of zipped memory in megabytes. This statistic is available for VMware ESX 4.1.0 and later. [Sequential = LST Non-Sequential = SUM]
zipSaved	The amount of memory in megabytes saved due to memory zipping. This statistic is available for VMware ESX 4.1.0 and later. [Sequential = LST Non-Sequential = SUM]

17.1.16. Memory.VMware Summary Table

The Memory.VMware Summary table stores memory data for VMware host systems.

Table Field Hierarchy

Class:	Memory
Subclass:	VMware Summary
IT Resource Name:	/TeamQuest/System/VMware/Host/*systemname*
TeamQuest Table Name:	Memory.VMware Summary
Open Table Name:	MEMVMSUM
Collection interval:	Based on the collection period
Default retentions:	3 days at collection period interval 8 days at 10-minute intervals 4 months at 1-hour intervals 9 months at 24-hour intervals
Table type:	Performance
Derived tables using fields from this table:	Host Memory Summary

Statistic Name	Description
%usage	The percentage of memory usage over the collection interval [Sequential = AVG Non-Sequential = SUM]
active	The working set size estimate in megabytes at the end of the interval for the host [Sequential = AVG Non-Sequential = SUM]
activewrite	The amount of memory in megabytes actively being written to or by the virtual machine. This statistic is available for VMware ESX 4.1.0 and later. [Sequential = AVG Non-Sequential = SUM]
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]

consumed	The amount of memory in megabytes used on the host. It includes service console memory, VMKernel memory, VMware Infrastructure services memory, and VM memory. [Sequential = AVG Non-Sequential = SUM]
free_mem	The amount of memory in megabytes currently available to be used by the host system [Sequential = LST Non-Sequential = SUM]
heap	The amount of memory in megabytes allocated for the heap [Sequential = AVG Non-Sequential = SUM]
heapfree	The amount of free space in megabytes in the memory heap [Sequential = AVG Non-Sequential = SUM]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
latency	The percentage of time the virtual machine was waiting to access swapped or compressed memory. This statistic is available for VMware ESX 5.0.0 and later. [Sequential = AVG Non-Sequential = SUM]
lowfreethreshold	The threshold of free host physical memory in megabytes. The VMware ESX Server will begin reclaiming memory from virtual machines through ballooning and swapping if the amount of free host physical memory falls below this value. This statistic is available for VMware ESX 5.0.0 and later. [Sequential = AVG Non-Sequential = SUM]
overhead	The amount of additional host memory in megabytes allocated to the virtual machine [Sequential = AVG Non-Sequential = SUM]
reservedCapacity	The amount of memory in megabytes reserved by the virtual machines on a VMware host [Sequential = AVG Non-Sequential = SUM]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
shared	The amount of memory in megabytes shared between the virtual machines on a VMware host [Sequential = AVG Non-Sequential = ID]
shared_comm_mem	The total amount of shared common memory in megabytes on the host system [Sequential = LST Non-Sequential = SUM]
size	The amount of memory in megabytes granted [Sequential = AVG Non-Sequential = SUM]
state	The VMKernel threshold for the amount of free memory on the host [Sequential = LST Non-Sequential = SUM]
swapin	The total amount of memory in megabytes that is swapped in on a VMware host [Sequential = AVG Non-Sequential = SUM]

swapinRate	The rate memory is swapped from the disk into active memory during the collection interval. This value applies to virtual machines. This value is more useful than the swapin statistic to determine if the virtual machine is running slow due to memory swapping, especially when evaluating real-time data. This statistic is available for VMware ESX 4.0.0 and later. [Sequential = AVG Non-Sequential = SUM]
swapout	The total amount of memory in megabytes that is swapped out on a VMware host [Sequential = AVG Non-Sequential = SUM]
swapoutRate	The rate memory is swapped from active memory to the disk during the collection interval. This value applies to virtual machines. This value is more useful than the swapout statistic to determine if the virtual machine is running slow due to memory swapping, especially when evaluating real-time data. This statistic is available for VMware ESX 4.0.0 and later. [Sequential = AVG Non-Sequential = SUM]
swapused	The amount of memory in megabytes that is used by swap [Sequential = AVG Non-Sequential = SUM]
System	The name of the host system. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
sysUsage	The amount of memory in megabytes used by the VMKernel for core functionality, such as device drivers and other internal usage [Sequential = AVG Non-Sequential = SUM]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
total_mem	The total amount of physical memory in megabytes on the host system [Sequential = LST Non-Sequential = SUM]
totalCapacity	The total amount of memory reservation in megabytes used by and available for powered-on virtual machines and VMware vSphere services on the host. This statistic is available for VMware ESX 4.1.0 and later. [Sequential = AVG Non-Sequential = SUM]
unreserved	The amount of memory in megabytes that is unreserved [Sequential = AVG Non-Sequential = SUM]
vmmemctl	The amount of memory in megabytes used by memory control [Sequential = AVG Non-Sequential = SUM]
zero	The amount of memory in megabytes that is zeroed out [Sequential = AVG Non-Sequential = SUM]

17.1.17. Network Device.by Host System Device Table

The Network Device.by Host System Device table stores data on network device usage by VMware hosts.

Table Field Hierarchy

Class:	Network Device
Subclass:	by Host System Device
IT Resource Name:	/TeamQuest/System/VMware/Host/*systemname*
TeamQuest Table Name:	Network Device.by Host System Device
Open Table Name:	NETDEVBYHOSTSYSDEVIC
Collection interval:	Based on the collection period
Default retentions:	3 days at collection period interval 8 days at 10-minute intervals 4 months at 1-hour intervals 9 months at 24-hour intervals
Table type:	Performance
Derived tables using fields from this table:	Host Network Device Usage

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
broadcast/s	The total number of broadcast packets received and sent per second by the host system interface. This statistic is available for VMware ESX 5.0.0 and later. Calculated as broadcast = broadcastRx + broadcastTx [Sequential = SUM Non-Sequential = SUM]
broadcastRx/s	The number of broadcast packets received by the host system interface. This statistic is available for VMware ESX 5.0.0 and later. [Sequential = SUM Non-Sequential = SUM]
broadcastTx/s	The number of broadcast packets sent by the host system interface. This statistic is available for VMware ESX 5.0.0 and later. [Sequential = SUM Non-Sequential = SUM]
dropped	The total number of packets dropped during the collection interval. Calculated as dropped = droppedRx + droppedTx [Sequential = SUM Non-Sequential = SUM]

droppedRx	The number of receive packets dropped during the collection interval. This statistic is available for VMware ESX 4.0.0 and later. [Sequential = SUM Non-Sequential = SUM]
droppedTx	The number of sent packets dropped during the collection interval. This statistic is available for VMware ESX 4.0.0 and later. [Sequential = SUM Non-Sequential = SUM]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
KBRx/s	The amount of data received per second in kilobytes (KB) by the host system interface [Sequential = AVG Non-Sequential = SUM]
KBTx/s	The amount of data transmitted per second in kilobytes (KB) by the host system interface [Sequential = AVG Non-Sequential = SUM]
KBx/s	The amount of data transferred per second in kilobytes (KB) by the host system interface [Sequential = AVG Non-Sequential = SUM]
multicast	The total number of multicast packets received and sent during the collection interval. Calculated as multicast = multicastRx + multicastTx [Sequential = SUM Non-Sequential = SUM]
multicastRx	The number of multicast packets received during the collection interval. This statistic is available for VMware ESX 5.0.0 and later. [Sequential = SUM Non-Sequential = SUM]
multicastTx	The number of multicast packets sent during the collection interval. This statistic is available for VMware ESX 5.0.0 and later. [Sequential = SUM Non-Sequential = SUM]
packets/s	The total number of packets transferred per second by the host system interface [Sequential = AVG Non-Sequential = SUM]
pktsRx/s	The number of packets received per second by the host system interface [Sequential = AVG Non-Sequential = SUM]
pktsTx/s	The number of packets transmitted per second by the host system interface [Sequential = AVG Non-Sequential = SUM]
Resource	The name of the host system interface [Sequential = ID Non-Sequential = ID]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
System	The name of the host system. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]

Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
unknownProtos	The number of frames with unknown protocols received during the collection interval. This statistic is available for VMware ESX 5.0.0 and later. [Sequential = SUM Non-Sequential = SUM]

17.1.18. Network Device.by Virtual Machine Table

The Network Device.by Virtual Machine table stores overall network performance data for VMware virtual machines.

Table Field Hierarchy

Class:	Network Device
Subclass:	by Virtual Machine
IT Resource Name:	/TeamQuest/System/VMware/Virtual Machines/*virtualmachinename*
TeamQuest Table Name:	Network Device.by Virtual Machine
Open Table Name:	NETDEVBYVM
Collection interval:	Based on the collection period
Default retentions:	3 days at collection period interval 8 days at 10-minute intervals 4 months at 1-hour intervals 9 months at 24-hour intervals
Table type:	Performance
Derived tables using fields from this table:	Virtual Machine Network Device Usage

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
broadcast/s	The total number of broadcast packets received and sent per second by the host system interface. This statistic is available for VMware ESX 5.0.0 and later. Calculated as broadcast = broadcastRx + broadcastTx [Sequential = AVG Non-Sequential = SUM]
broadcastRx/s	The number of broadcast packets received per second by the host system interface. This statistic is available for VMware ESX 5.0.0 and later. [Sequential = AVG Non-Sequential = SUM]

broadcastTx/s	The number of broadcast packets sent per second by the host system interface. This statistic is available for VMware ESX 5.0.0 and later. [Sequential = AVG Non-Sequential = SUM]
dropped	The total number of packets dropped during the collection interval. Calculated as dropped = droppedRx + droppedTx [Sequential = SUM Non-Sequential = SUM]
droppedRx	The number of receive packets dropped during the collection interval. This statistic is available for VMware ESX 4.0.0 and later. [Sequential = SUM Non-Sequential = SUM]
droppedTx	The number of sent packets dropped during the collection interval. This statistic is available for VMware ESX 4.0.0 and later. [Sequential = SUM Non-Sequential = SUM]
errors	The total number of packets with errors received and sent during the collection interval. Calculated as errors = errorsRx + errorsTx [Sequential = SUM Non-Sequential = SUM]
errorsRx	The number of packets with errors received during the collection interval. This statistic is available for VMware ESX 5.0.0 and later. [Sequential = SUM Non-Sequential = SUM]
errorsTx	The number of packets with errors sent during the collection interval. This statistic is available for VMware ESX 5.0.0 and later. [Sequential = SUM Non-Sequential = SUM]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
KBRx/s	The amount of data received per second in kilobytes (KB) by the virtual machine [Sequential = AVG Non-Sequential = SUM]
KBTx/s	The amount of data transmitted per second in kilobytes (KB) by the virtual machine [Sequential = AVG Non-Sequential = SUM]
KBx/s	The amount of data transferred per second in kilobytes (KB) by the virtual machine [Sequential = AVG Non-Sequential = SUM]
multicast	The total number of multicast packets received and sent during the collection interval. Calculated as multicast = multicastRx + multicastTx [Sequential = SUM Non-Sequential = SUM]
multicastRx	The number of multicast packets received during the collection interval. This statistic is available for VMware ESX 5.0.0 and later. [Sequential = SUM Non-Sequential = SUM]
multicastTx	The number of multicast packets sent during the collection interval. This statistic is available for VMware ESX 5.0.0 and later. [Sequential = SUM Non-Sequential = SUM]

packets/s	The number of packets transferred per second by the virtual machine [Sequential = AVG Non-Sequential = SUM]
pktsRx/s	The number of packets received per second by the virtual machine [Sequential = AVG Non-Sequential = SUM]
pktsTx/s	The number of packets transmitted per second by the virtual machine [Sequential = AVG Non-Sequential = SUM]
Resource	The name of the host system interface [Sequential = ID Non-Sequential = ID]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
System	The name of the host system. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
Virtual_Machine	The name of the virtual machine to which the data applies [Sequential = ID Non-Sequential = ID]

17.1.19. Network Device.vmnic by Virtual Machine Table

The Network Device.vmnic by Virtual Machine table stores overall network performance data for VMware virtual machines.

Table Field Hierarchy

Class:	Network Device
Subclass:	vmnic by Virtual Machine
IT Resource Name:	/TeamQuest/System/VMware/Virtual Machines/*virtualmachinename*
TeamQuest Table Name:	Network Device.vmnic by Virtual Machine
Open Table Name:	NETDEVVMNICBYVM
Collection interval:	Based on the collection period
Default retentions:	3 days at collection period interval 8 days at 10-minute intervals 4 months at 1-hour intervals 9 months at 24-hour intervals
Table type:	Performance
Derived tables using fields from this table:	Virtual Machine Network vmnic Usage

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
KBRx/s	The amount of data received per second in kilobytes (KB) by the virtual machine [Sequential = AVG Non-Sequential = SUM]
KBTx/s	The amount of data transmitted per second in kilobytes (KB) by the virtual machine [Sequential = AVG Non-Sequential = SUM]
KBx/s	The amount of data transferred per second in kilobytes (KB) by the virtual machine [Sequential = AVG Non-Sequential = SUM]
packets/s	The number of packets transferred per second by the virtual machine [Sequential = AVG Non-Sequential = SUM]
pktsRx/s	The number of packets received per second by the virtual machine [Sequential = AVG Non-Sequential = SUM]
pktsTx/s	The number of packets transmitted per second by the virtual machine [Sequential = AVG Non-Sequential = SUM]
Resource	The name of the host system interface [Sequential = ID Non-Sequential = ID]

Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
System	The name of the host system. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
Virtual_Machine	The name of the virtual machine to which the data applies [Sequential = ID Non-Sequential = ID]

17.1.20. Network Device.VMware Summary Table

The Network Device.VMware Summary table stores overall network performance data for VMware hosts.

Table Field Hierarchy

Class:	Network Device
Subclass:	VMware Summary
IT Resource Name:	/TeamQuest/System/VMware/Host/*systemname*
TeamQuest Table Name:	Network Device.VMware Summary
Open Table Name:	NETDEVVMSUM
Collection interval:	Based on the collection period
Default retentions:	3 days at collection period interval 8 days at 10-minute intervals 4 months at 1-hour intervals 9 months at 24-hour intervals
Table type:	Performance
Derived tables using fields from this table:	Host Network Device Summary

Statistic Name	**Description**
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
broadcast/s	The total number of broadcast packets received and sent per second by the host system interface. This statistic is available for VMware ESX 5.0.0 and later. Calculated as broadcast = broadcastRx + broadcastTx [Sequential = AVG Non-Sequential = SUM]

broadcastRx/s	The number of broadcast packets received per second by the host system interface. This statistic is available for VMware ESX 5.0.0 and later. [Sequential = AVG Non-Sequential = SUM]
broadcastTx/s	The number of broadcast packets sent per second by the host system interface. This statistic is available for VMware ESX 5.0.0 and later. [Sequential = AVG Non-Sequential = SUM]
dropped	The total number of packets dropped during the collection interval. Calculated as dropped = droppedRx + droppedTx [Sequential = SUM Non-Sequential = SUM]
droppedRx	The number of receive packets dropped during the collection interval. This statistic is available for VMware ESX 4.0.0 and later. [Sequential = SUM Non-Sequential = SUM]
droppedTx	The number of sent packets dropped during the collection interval. This statistic is available for VMware ESX 4.0.0 and later. [Sequential = SUM Non-Sequential = SUM]
errors	The total number of packets with errors received and sent during the collection interval. Calculated as errors = errorsRx + errorsTx [Sequential = SUM Non-Sequential = SUM]
errorsRx	The number of packets with errors received during the collection interval. This statistic is available for VMware ESX 5.0.0 and later. [Sequential = SUM Non-Sequential = SUM]
errorsTx	The number of packets with errors sent during the collection interval. This statistic is available for VMware ESX 5.0.0 and later. [Sequential = SUM Non-Sequential = SUM]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
KBRx/s	The amount of data received per second in kilobytes (KB) [Sequential = AVG Non-Sequential = SUM]
KBTx/s	The amount of data transmitted per second in kilobytes (KB) [Sequential = AVG Non-Sequential = SUM]
KBx/s	The amount of data transferred per second in kilobytes (KB) [Sequential = AVG Non-Sequential = SUM]
multicast	The total number of multicast packets received and sent during the collection interval. Calculated as multicast = multicastRx + multicastTx [Sequential = SUM Non-Sequential = SUM]
multicastRx	The number of multicast packets received during the collection interval. This statistic is available for VMware ESX 5.0.0 and later. [Sequential = SUM Non-Sequential = SUM]

multicastTx	The number of multicast packets sent during the collection interval. This statistic is available for VMware ESX 5.0.0 and later. [Sequential = SUM Non-Sequential = SUM]
packets/s	The total number of packets transferred per second [Sequential = AVG Non-Sequential = SUM]
pktsRx/s	The total number of packets received per second [Sequential = AVG Non-Sequential = SUM]
pktsTx/s	The total number of packets transmitted per second [Sequential = AVG Non-Sequential = SUM]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
System	The name of the host system. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
unknownProtos	The number of frames with unknown protocols received during the collection interval. This statistic is available for VMware ESX 5.0.0 and later. [Sequential = SUM Non-Sequential = SUM]

17.1.21. VMware.Availability by Virtual Machine Table

The VMware.Availability by Virtual Machine table stores high level status data.

Table Field Hierarchy

Class:	VMware
Subclass:	Availability by Virtual Machine
IT Resource Name:	/TeamQuest/System/VMware/Virtual Machines/*virtualmachinename*
TeamQuest Table Name:	VMware.Availability by Virtual Machine
Open Table Name:	VMAVAILABILITYBYVM
Collection interval:	Based on the collection period
Default retentions:	3 days at collection period interval 8 days at 10-minute intervals 4 months at 1-hour intervals 9 months at 24-hour intervals
Table type:	Performance
Derived tables using fields from this table:	Virtual Machine Availability

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
heartbeat	The number of heartbeats in the collection period. The heartbeat represents the overall health of the guest operating system. [Sequential = AVG Non-Sequential = SUM]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
System	The name of the host system. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
uptime_t	The total time in days elapsed since the last virtual machine reboot [Sequential = LST Non-Sequential = SUM]
Virtual_Machine	The name of the virtual machine to which the data applies [Sequential = ID Non-Sequential = ID]

17.1.22. VMware.Host Configuration Table

The VMware.Host Configuration table stores configuration data for VMware hosts.

Table Field Hierarchy

Class:	VMware
Subclass:	Host Configuration
IT Resource Name:	/TeamQuest/System/VMware/vCenter/*vCenter*
TeamQuest Table Name:	VMware.Host Configuration
Open Table Name:	VMHOSTCONF
Collection interval:	N/A
Default retention:	1 year
Table type:	State
Derived tables using fields from this table:	Cluster CPU Summary Cluster Memory Summary Cluster Resource Allocation Cluster Virtual Machine Operations Host Block Device Summary Host Block Device Usage Host CPU Summary Host CPU Usage Host Memory Summary Host Network Device Summary Host Network Device Usage Virtual Machine Availability Virtual Machine Block Device Usage Virtual Machine Configuration Virtual Machine CPU Usage Virtual Machine Memory Usage Virtual Machine Network Device Usage Virtual Machine Network vmnic Usage Virtual Machine Virtual CPU Usage

Statistic Name	Description
Cluster	The name of the cluster to which the host belongs. This field contains <N/A> if the host does not belong to a VMware cluster. [Non-Sequential = ID]
ClusterId	The unique identifier for a cluster provided by the VMware API. This identifier does not change when a cluster is renamed. This field contains <N/A> if the host does not belong to a VMware cluster. [Non-Sequential = ID]
Datacenter	The name of the datacenter to which the host belongs [Non-Sequential = ID]
DatacenterId	The unique identifier for a datacenter provided by the VMware API. This identifier does not change when a datacenter is renamed. [Non-Sequential = ID]

directoryPath	The path of the directory under the VMware vCenter where the VMware cluster resides. This path name consists of zero or more administrator-defined folder names separated by slashes, followed by the datacenter name. The datacenter name can be followed by zero or more administrator-defined folder names separated by slashes. Often, the directoryPath is the datacenter name. This is the path name that was configured at the time the record was stored. [Non-Sequential = ID]
Host	The name of the host system. This field is limited to 51 characters. Any system name longer than 51 characters is truncated. [Non-Sequential = ID]
Time	The timestamp of the data sample [Non-Sequential = ID]
vCenter	The name of the VMware vCenter server [Non-Sequential = ID]

17.1.23. VMware.Host Status Table

The VMware.Host Status table stores performance data for VMware datastores assigned to individual hosts.

Table Field Hierarchy

Class:	VMware
Subclass:	Host Status
IT Resource Name:	/TeamQuest/System/VMware/vCenter/*vCenter*
TeamQuest Table Name:	VMware.Host Status
Open Table Name:	VMHOSTSTATUS
Collection interval:	Based on the collection period
Default retentions:	3 days at collection period interval 8 days at 10-minute intervals 4 months at 1-hour intervals 9 months at 24-hour intervals
Table type:	Performance
Derived tables using fields from this table:	N/A

Statistic Name	Description
collectionAvailable	The percentage of time that data collection was possible with the VMware Infrastructure Agent. To accurately determine this value, the vCenter Host configuration Collection Method field must be set to Through vCenter in the TeamQuest Manager interface. Collection is available if the following conditions occur: connected is 100.00 poweredOn is 100.00 [Sequential = AVG Non-Sequential = AVG]
connected	The percentage of time the VMware host was connected to the VMware vCenter server, sampled at the end of each collection interval [Sequential = AVG Non-Sequential = AVG]
disconnected	The percentage of time the VMware host was disconnected from the VMware vCenter server, sampled at the end of each collection interval [Sequential = AVG Non-Sequential = AVG]
Host	The name of the host system. This field is limited to 51 characters. Any system name longer than 51 characters is truncated. [Sequential = ID Non-Sequential = ID]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
maintenanceMode	The percentage of time the VMware host was in maintenance mode at the end of each collection interval [Sequential = AVG Non-Sequential = AVG]

notResponding	The percentage of time the VMware host was not responding to the VMware vCenter server, sampled at the end of each collection interval [Sequential = AVG Non-Sequential = AVG]
poweredOff	The percentage of time the VMware host was powered off, sampled at the end of each collection interval [Sequential = AVG Non-Sequential = AVG]
poweredOn	The percentage of time the VMware host was powered on, sampled at the end of each collection interval [Sequential = AVG Non-Sequential = AVG]
powerUnknown	The percentage of time the VMware host was in an unknown state at the end of each collection interval [Sequential = AVG Non-Sequential = AVG]
standby	The percentage of time the VMware host was on standby, sampled at the end of each collection interval [Sequential = AVG Non-Sequential = AVG]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
vCenter	The name of the VMware vCenter server [Sequential = ID Non-Sequential = ID]

17.1.24. VMware.Storage Configuration Table

The VMware.Storage Configuration table stores configuration data for VMware datastore storage.

Table Field Hierarchy

Class:	VMware
Subclass:	Storage Configuration
IT Resource Name:	/TeamQuest/System/VMware/vCenter/*vCenter*
TeamQuest Table Name:	VMware.Storage Configuration
Open Table Name:	VMSTORAGECONF
Collection interval:	N/A
Default retentions:	1 year
Table type:	State
Derived tables using fields from this table:	Storage Datastore by Host System Storage Datastore Summary Storage Datastore by Virtual Machine Datastore Cluster File Type Usage Datastore Cluster Summary Datastore Cluster Usage by Virtual Machine

Statistic Name	Description
Datacenter	The name of the datacenter to which the datastore belongs [Sequential = ID Non-Sequential = ID]
DatacenterId	The unique identifier for a datacenter provided by the VMware API. This identifier does not change when a datacenter is renamed. [Sequential = ID Non-Sequential = ID]
Datastore	The name of the VMware datastore to which the data applies [Sequential = ID Non-Sequential = ID]
Datastore_Cluster	The name of the VMware datastore cluster to which the data applies [Sequential = ID Non-Sequential = ID]
Datastore_ClusterId	The identifier assigned to the VMware datastore cluster that is unique within a VMware vCenter server [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
UniqueId	The identifier assigned to a datastore that is unique within a VMware vCenter server [Sequential = ID Non-Sequential = ID]
vCenter	The name of the VMware vCenter server [Sequential = ID Non-Sequential = ID]

17.1.25. VMware.Support Metrics Table

The VMware.Support Metrics table contains data used by customer support when troubleshooting customer issues.

Table Field Hierarchy

Class:	VMware
Subclass:	Support Metrics
IT Resource Name:	/TeamQuest/System/*systemname*
TeamQuest Table Name:	VMware.Support Metrics
Open Table Name:	VMSUPPORTMETRICS
Collection interval:	Based on the collection period
Default retentions:	1 week at collection period interval
Table type:	Performance
Derived tables using fields from this table:	N/A

17.1.26. VMware.Virtual_Machines Table

The VMware.Virtual_Machines table stores configuration data about virtual machines.

Table Field Hierarchy

Class:	VMware
Subclass:	Virtual_Machines
IT Resource Name:	/TeamQuest/System/VMware/Host/*systemname*
TeamQuest Table Name:	VMware.Virtual_Machines
Open Table Name:	VMVMS
Collection interval:	N/A
Default retention:	1 year
Table type:	State
Derived tables using fields from this table:	Virtual Machine Configuration

Statistic Name	Description
Configuration_File	The configuration file for the virtual machine [Non-Sequential = ID]
CPU_Limit	The cap on the consumption of CPU time by the virtual machine, measured in megahertz (MHz). A value of zero indicates no limit on CPU consumption. [Non-Sequential = SUM]
CPU_Reservation	The number of CPU cycles reserved for the virtual machine, measured in megahertz (MHz) [Non-Sequential = SUM]
CPU_Shares	The CPU share allocation for the virtual machine [Non-Sequential = SUM]
Disk_Shares	The disk share allocation for the virtual machine [Non-Sequential = SUM]
ESX_Server	The version of VMware ESX Server [Non-Sequential = ID]
htSharing	Specifies how the VCPUs of a virtual machine are allowed to share physical cores on a hyperthreaded system. Values can be any, internal, or none. [Non-Sequential = ID]
Memory_Limit	The cap on the memory consumption by this virtual machine, measured in megabytes. A value of zero indicates no fixed limit on memory consumption. [Non-Sequential = SUM]
Memory_Reservation	The amount of memory reserved for the virtual machine, measured in megabytes [Non-Sequential = SUM]

Memory_Shares	The memory share allocation for the virtual machine [Non-Sequential = SUM]
OS	The virtual machine operating system name [Non-Sequential = ID]
System	The name of the host system. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Non-Sequential = ID]
Time	The timestamp of the data sample [Non-Sequential = ID]
VM	The virtual machine name [Non-Sequential = ID]
VMID	The virtual machine identifier [Non-Sequential = ID]
VCPU_Count	The number of virtual processors for the virtual machine [Non-Sequential = SUM]

17.1.27. VMware Cluster.CPU Summary Table

The VMware Cluster.CPU Summary table stores CPU usage data by VMware clusters.

The historical statistic interval is the “Past-day” statistic interval configured in the VMware vCenter server. For example, if the “Past-day” statistic interval in the VMware vCenter server is configured as a 5-minute interval, the historical statistic interval is 3 days at 5-minute intervals.

Table Field Hierarchy

Class:	VMware Cluster
Subclass:	CPU Summary
IT Resource Name:	/TeamQuest/System/VMware/Cluster/*Cluster(ClusterId)*
TeamQuest Table Name:	VMware Cluster.CPU Summary
Open Table Name:	VMCLSTRCPUSUM
Collection interval:	Based on the historical statistic interval
Default retention:	3 days at historical statistic interval 8 days at 10-minute intervals 4 months at 1-hour intervals 9 months at 24-hour intervals
Table type:	Performance
Derived tables using fields from this table:	Cluster CPU Summary

Statistic Name	Description
%busy	The percentage of elapsed CPU time the processors were busy across all of the virtual machines in the VMware cluster. A value of <N/A> is displayed when the VMware Distributed Resource Scheduler (DRS) is disabled for the VMware cluster. [Sequential = AVG Non-Sequential = AVG]
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
Cluster	The name of the cluster to which the data applies [Sequential = ID Non-Sequential = ID]
ClusterId	The unique identifier for a cluster provided by the VMware API. This identifier does not change when a VMware cluster is renamed. [Sequential = ID Non-Sequential = ID]

effectivecpu	The total amount of available CPU in megahertz (MHz) of all of the hosts within a VMware cluster. A value of <N/A> is displayed when the VMware DRS is disabled for the VMware cluster. Calculated as effectivecpu = aggregate host CPU capacity - (VMKernel + service console CPU + other service CPU) [Sequential = AVG Non-Sequential = AVG]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
reservedCapacity	The total CPU capacity in megahertz (MHz) reserved by all of the virtual machines within a VMware cluster. This statistic is only available for VMware vCenter server statistic level 2. [Sequential = LST Non-Sequential = SUM]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
total(MHz)	The total amount of CPU in megahertz (MHz) of all of the hosts within the VMware cluster. The maximum value is equal to the frequency of the processors multiplied by the number of cores. A value of <N/A> is displayed when the VMware DRS is disabled for the VMware cluster. [Sequential = AVG Non-Sequential = SUM]
usage(MHz)	The CPU usage in megahertz (MHz) of all of the powered-on virtual machines in a VMware cluster. A value of <N/A> is displayed when the VMware DRS is disabled for the VMware cluster. [Sequential = AVG Non-Sequential = SUM]
vCenter	The name of the VMware vCenter server [Sequential = ID Non-Sequential = ID]

17.1.28. VMware Cluster.Memory Summary Table

The VMware Cluster.Memory summary table stores memory usage data by VMware clusters.

The historical statistic interval is the “Past-day” statistic interval configured in the VMware vCenter server. For example, if the “Past-day” statistic interval in the VMware vCenter server is configured as a 5-minute interval, the historical statistic interval is 3 days at 5-minute intervals.

Table Field Hierarchy

Class:	VMware Cluster
Subclass:	Memory Summary
IT Resource Name:	/TeamQuest/System/VMware/Cluster/*Cluster(ClusterId)*
TeamQuest Table Name:	VMware Cluster.Memory Summary
Open Table Name:	VMCLSTRMEMSUM
Collection interval:	Based on the historical statistic interval
Default retention:	3 days at historical statistic interval 8 days at 10-minute intervals 4 months at 1-hour intervals 9 months at 24-hour intervals
Table type:	Performance
Derived tables using fields from this table:	Cluster Memory Summary

Statistic Name	Description
%usage	The percentage of total available memory that is used. A value of <N/A> is displayed when the VMware Distributed Resource Scheduler (DRS) is disabled for the VMware cluster. Calculated as memory usage = (memory consumed + memory overhead) / effectivemem [Sequential = AVG Non-Sequential = AVG]
active	The working set size estimate in megabytes at the end of the interval for the VMware cluster. This statistic is only available for VMware vCenter server statistic level 2. [Sequential = AVG Non-Sequential = SUM]
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]

balloon	The amount of memory in megabytes allocated by the virtual machine memory control driver (vmmemctl), which is installed with VMware Tools. The vmmemctl is a memory management driver that controls ballooning. A value of <N/A> is displayed when the VMware DRS is disabled for the VMware cluster. [Sequential = AVG Non-Sequential = SUM]
consumed	The amount of host memory in megabytes consumed by all of the powered-on virtual machines for guest memory within a VMware cluster [Sequential = AVG Non-Sequential = SUM]
Cluster	The name of the VMware cluster to which the data applies [Sequential = ID Non-Sequential = ID]
ClusterId	The unique identifier for a VMware cluster provided by the VMware API. This identifier does not change when a cluster is renamed. [Sequential = ID Non-Sequential = ID]
effectivemem	The total amount of memory in megabytes of all of the hosts within a VMware cluster that are available for the virtual machine memory and the virtual machine overhead memory. A value of <N/A> is displayed when the VMware DRS is disabled for the VMware cluster. [Sequential = AVG Non-Sequential = AVG]
granted	The amount of all granted memory in megabytes for all of the powered-on virtual machines. This statistic is only available for VMware vCenter server statistic level 2. [Sequential = AVG Non-Sequential = SUM]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
overhead	The amount of additional host memory in megabytes allocated to the virtual machine. A value of <N/A> is displayed when the VMware DRS is disabled for the VMware cluster. [Sequential = AVG Non-Sequential = SUM]
reservedCapacity	The amount of memory in megabytes reserved by the virtual machines on a VMware host. This statistic is only available for VMware vCenter server statistic level 2. [Sequential = LST Non-Sequential = SUM]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
shared	The amount of guest physical memory in megabytes shared with other virtual machines. This value includes the amount of zero memory. [Sequential = AVG Non-Sequential = SUM]
swapused	The amount of memory in megabytes that is used by swap. A value of <N/A> is displayed when the VMware DRS is disabled for the VMware cluster. This statistic is only available for VMware vCenter server statistic level 2. [Sequential = AVG Non-Sequential = SUM]

sysUsage	The amount of memory in megabytes used by the VMKernel for core functionality, such as device drivers and other internal usage components. A value of <N/A> is displayed when the VMware DRS is disabled for the VMware cluster. This statistic is only available for VMware vCenter server statistic level 2 and for VMware vCenter Server 4.0 and lower. [Sequential = AVG Non-Sequential = SUM]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
total	The total amount of memory in megabytes of all of the hosts within a VMware cluster that are available for the virtual machine memory and virtual machine overhead memory. A value of <N/A> is displayed when the VMware DRS is disabled for the VMware cluster. [Sequential = AVG Non-Sequential = SUM]
vCenter	The name of the VMware vCenter server [Sequential = ID Non-Sequential = ID]
zero	The amount of memory in megabytes that is zeroed out. A value of <N/A> is displayed when the VMware DRS is disabled for the VMware cluster. [Sequential = AVG Non-Sequential = SUM]

17.1.29. VMware Cluster.Resource Allocation Table

The VMware Cluster.Resource Allocation table stores usage of VMware host resources by VMware clusters.

The historical statistic interval is the “Past-day” statistic interval configured in the VMware vCenter server. For example, if the “Past-day” statistic interval in the VMware vCenter server is configured as a 5-minute interval, the historical statistic interval is 3 days at 5-minute intervals.

Table Field Hierarchy

Class:	VMware Cluster
Subclass:	Resource Allocation
IT Resource Name:	/TeamQuest/System/VMware/Cluster/*Cluster(ClusterId)*
TeamQuest Table Name:	VMware Cluster.Resource Allocation
Open Table Name:	VMCLSTRRESALLOC
Collection interval:	Based on the historical statistic interval
Default retention:	3 days at historical statistic interval 8 days at 10-minute intervals 4 months at 1-hour intervals 9 months at 24-hour intervals
Table type:	Performance
Derived tables using fields from this table:	Cluster Resource Allocation

Statistic Name	Description
activeHosts	The number of active hosts in the VMware cluster [Sequential = LST Non-Sequential = SUM]
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
Cluster	The name of the cluster to which the data applies [Sequential = ID Non-Sequential = ID]
ClusterId	The unique identifier for a cluster provided by the VMware API. This identifier does not change when a cluster is renamed. [Sequential = ID Non-Sequential = ID]
cpuAvailable	The total amount of CPU in megahertz (MHz) available to satisfy a reservation for all of the virtual machines and resource pools in the cluster [Sequential = LST Non-Sequential = SUM]
cpuReserved	The total amount of CPU in megahertz (MHz) that has been used to satisfy the reservation requirements of all of the descendants of the virtual machines and resource pools in the cluster [Sequential = LST Non-Sequential = SUM]

Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
memAvailable	The total amount of memory in megabytes that is available to satisfy the reservation for all of the virtual machines and resource pools in the cluster [Sequential = LST Non-Sequential = SUM]
memOverhead	The total amount of memory in megabytes that has been used to satisfy the reservation requirements of all of the descendants of the running virtual machines in the cluster [Sequential = LST Non-Sequential = SUM]
memReserved	The total amount of memory in megabytes that has been used to satisfy the reservation requirements of all of the descendants of the virtual machines and resource pools in the cluster [Sequential = LST Non-Sequential = SUM]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
totalCpu	The total available CPU in megahertz (MHz) of all of the hosts within the cluster [Sequential = LST Non-Sequential = SUM]
totalMem	The total amount of memory in megabytes of all of the hosts within the cluster that is available for use for virtual machine memory and virtual machine overhead memory [Sequential = LST Non-Sequential = SUM]
vCenter	The name of the VMware vCenter server [Sequential = ID Non-Sequential = ID]

17.1.30. VMware Cluster.Virtual Machine Operations

The VMware Cluster.Virtual Machine Operations table stores data on the number and type of operations performed on the virtual machine.

The historical statistic interval is the “Past-day” statistic interval configured in the VMware vCenter server. For example, if the “Past-day” statistic interval in the VMware vCenter server is configured as a 5-minute interval, the historical statistic interval is 3 days at 5-minute intervals.

Table Field Hierarchy

Class:	VMware Cluster
Subclass:	Virtual Machine Operations
IT Resource Name:	/TeamQuest/System/VMware/Cluster/*Cluster(ClusterId)*
TeamQuest Table Name:	VMware Cluster.Virtual Machine Operations
Open Table Name:	VMCLSTRVMOPERATIONS
Collection interval:	Based on the historical statistic interval
Default retention:	3 days at historical statistic interval 8 days at 10-minute intervals 4 months at 1-hour intervals 9 months at 24-hour intervals
Table type:	Performance
Derived tables using fields from this table:	Cluster Virtual Machine Operations

Statistic Name	Description
activeVMs	The number of active virtual machines in the VMware cluster [Sequential = LST Non-Sequential = SUM]
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
clone	The number of virtual machine clone operations [Sequential = SUM Non-Sequential = SUM]
Cluster	The name of the cluster to which the data applies [Sequential = ID Non-Sequential = ID]
ClusterId	The unique identifier for a cluster provided by the VMware API. This identifier does not change when a cluster is renamed. [Sequential = ID Non-Sequential = ID]
create	The number of virtual machine create operations [Sequential = SUM Non-Sequential = SUM]

datastoreChange	The number of datastore change operations for powered-off and suspended virtual machines [Sequential = SUM Non-Sequential = SUM]
delete	The number of virtual machine delete operations [Sequential = SUM Non-Sequential = SUM]
failover	The number of virtual machine failover operations. This statistic is only available for clusters with VMware High Availability (HA) on. [Sequential = LST Non-Sequential = SUM]
guestReboot	The number of virtual machine guest reboot operations [Sequential = SUM Non-Sequential = SUM]
guestShutdown	The number of virtual machine guest shutdown operations [Sequential = SUM Non-Sequential = SUM]
hostChange	The total number of host change operations for powered-down and suspended virtual machines [Sequential = SUM Non-Sequential = SUM]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
powerOff	The number of virtual machine power-off operations [Sequential = SUM Non-Sequential = SUM]
powerOn	The number of virtual machine power-on operations [Sequential = SUM Non-Sequential = SUM]
reconfigure	The number of virtual machine reconfigure operations [Sequential = SUM Non-Sequential = SUM]
register	The number of virtual machine register operations [Sequential = SUM Non-Sequential = SUM]
reset	The number of virtual machine reset operations [Sequential = SUM Non-Sequential = SUM]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
standByGuest	The number of virtual machine standby guest operations [Sequential = SUM Non-Sequential = SUM]
storageMotion	The number of migrations with storage vMotion or datastore change operations for all of the powered-on virtual machines [Sequential = SUM Non-Sequential = SUM]
suspend	The number of virtual machine suspend operations [Sequential = SUM Non-Sequential = SUM]
templateDeploy	The number of virtual machine template deploy operations [Sequential = SUM Non-Sequential = SUM]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
unregister	The number of virtual machine unregister operations [Sequential = SUM Non-Sequential = SUM]

vCenter	The name of the VMware vCenter server [Sequential = ID Non-Sequential = ID]
vMotion	The number of migrations with vMotion for powered-on virtual machines [Sequential = SUM Non-Sequential = SUM]

17.1.31. VMware Datastore.File Type Usage by Datacenter Table

The VMware Datastore.File Type Usage by Datacenter table stores data on how datastore space is used by datastore and file type.

Note: *The minimum collection period for VMware datastores is 5 minutes.*

Table Field Hierarchy

Class:	VMware Datastore
Subclass:	File Type Usage by Datacenter
IT Resource Name:	/TeamQuest/System/VMware/Datastore/*Datastore*
TeamQuest Table Name:	VMware Datastore.File Type Usage by Datacenter
Open Table Name:	VMDSFILETYPEUSAGEBYD
Collection interval:	Based on the collection period
Default retention:	3 days at collection period interval 8 days at 10-minute intervals 4 months at 1-hour intervals 9 months at 24-hour intervals
Table type:	Performance
Derived tables using fields from this table:	Datastore Cluster File Type Usage

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
capacity	The configured size of the VMware datastore in gigabytes (GB) [Sequential = LST Non-Sequential = SUM]
Datacenter	The name of the datacenter to which the datastore belongs [Sequential = ID Non-Sequential = ID]
DatacenterId	The unique identifier for a datacenter provided by the VMware API. This identifier does not change when a datacenter is renamed. [Sequential = ID Non-Sequential = ID]
Datastore	The name of the VMware datastore to which the data applies [Sequential = ID Non-Sequential = ID]

Datastore_Cluster	The name of the VMware datastore cluster to which the data applies [Sequential = ID Non-Sequential = ID]
Datastore_ClusterId	The identifier assigned to the VMware datastore cluster that is unique within a VMware vCenter server [Sequential = ID Non-Sequential = ID]
free	The amount of free physical VMware datastore space in gigabytes (GB) [Sequential = LST Non-Sequential = SUM]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
other	The amount of disk space used by all other non-virtual machine files in gigabytes (GB), such as documentation files and backup files [Sequential = LST Non-Sequential = SUM]
other_vm_files	The amount of disk space used by all other virtual machine files in gigabytes (GB), such as configuration files and log files [Sequential = LST Non-Sequential = SUM]
provisioned	The amount of physical space in gigabytes (GB) provisioned by an administrator for the VMware datastore. This value is the maximum storage size to which files on the VMware datastore can grow. [Sequential = LST Non-Sequential = SUM]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
swapfiles	The amount of disk space in gigabytes (GB) used by swap files. Swap files are used to back up the virtual machine physical memory. [Sequential = LST Non-Sequential = SUM]
snapshots	The amount of disk space in gigabytes (GB) used by virtual machine snapshot files. A snapshot state file stores the running state of the virtual machine at the time of the snapshot. The virtual machine snapshot files have the file extension of .vmsn. [Sequential = LST Non-Sequential = SUM]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
UniqueId	The identifier assigned to a datastore that is unique within a VMware vCenter server [Sequential = ID Non-Sequential = ID]

vCenter	The name of the VMware vCenter server [Sequential = ID Non-Sequential = ID]
virtual_disks	The amount of disk space in gigabytes (GB) used by virtual disk files and delta disk files. Virtual disk files store the contents of the virtual machines hard disk drive, including information that is written to the virtual machines hard disk (the operating system, program files, and data files). The virtual disk files have the file extension of .vmdk and appear as a physical disk drive on a guest operating system. Delta disk files store the updates made by the virtual machine to the virtual disks after a snapshot is taken. [Sequential = LST Non-Sequential = SUM]

17.1.32. VMware Datastore.Summary Table

The VMware Datastore.Summary table stores datastore usage data by datastore.

Note: *The minimum collection period for VMware datastores is 5 minutes.*

Table Field Hierarchy

Class:	VMware Datastore
Subclass:	Summary
IT Resource Name:	/TeamQuest/System/VMware/Datastore/*Datastore*
TeamQuest Table Name:	VMware Datastore.Summary
Open Table Name:	VMDSSUM
Collection interval:	Based on the collection period
Default retention:	3 days at collection period interval 8 days at 10-minute intervals 4 months at 1-hour intervals 9 months at 24-hour intervals
Table type:	Performance
Derived tables using fields from this table:	Datastore Cluster Summary

Statistic Name	Description
%free	The percentage of free physical VMware datastore space [Sequential = LST Non-Sequential = SUM]
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
capacity	The configured size of the VMware datastore in gigabytes (GB) [Sequential = LST Non-Sequential = SUM]

Datastore	The name of the VMware datastore to which the data applies [Sequential = ID Non-Sequential = ID]
free	The amount of free physical VMware datastore space in gigabytes (GB) [Sequential = LST Non-Sequential = SUM]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
UniqueId	The identifier assigned to a datastore that is unique within a VMware vCenter server [Sequential = ID Non-Sequential = ID]
used	The amount of the physical VMware datastore space in use in gigabytes (GB) [Sequential = LST Non-Sequential = SUM]
vCenter	The name of the VMware vCenter server [Sequential = ID Non-Sequential = ID]

17.1.33. VMware Datastore.Usage by Virtual Machine Table

The VMware Datastore.Usage by Virtual Machine table stores datastore usage by virtual machines.

Note: *The minimum collection period for VMware datastores is 5 minutes.*

Table Field Hierarchy

Class:	VMware Datastore
Subclass:	Usage by Virtual Machine
IT Resource Name:	/TeamQuest/System/VMware/Datastore/*Datastore*
TeamQuest Table Name:	VMware Datastore.Usage by Virtual Machine
Open Table Name:	VMDSUSAGEBYVM
Collection interval:	Based on the collection period
Default retention:	3 days at collection period interval 8 days at 10-minute intervals 4 months at 1-hour intervals 9 months at 24-hour intervals
Table type:	Performance
Derived tables using fields from this table:	Datastore Cluster Usage by Virtual Machine

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
Datacenter	The name of the datacenter to which the datastore belongs [Sequential = ID Non-Sequential = ID]
DatacenterId	The unique identifier for a datacenter provided by the VMware API. This identifier does not change when a datacenter is renamed. [Sequential = ID Non-Sequential = ID]
Datastore	The name of the VMware datastore to which the data applies [Sequential = ID Non-Sequential = ID]
Host	The name of the host system. This field is limited to 51 characters. Any system name longer than 51 characters is truncated. [Sequential = ID Non-Sequential = ID]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
provisioned	The amount of storage space in gigabytes (GB) set aside for use by a virtual machine [Sequential = LST Non-Sequential = SUM]

Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
UniqueId	The identifier assigned to a datastore that is unique within a VMware vCenter server [Sequential = ID Non-Sequential = ID]
unshared	The amount of storage space in gigabytes (GB) associated exclusively with a virtual machine [Sequential = LST Non-Sequential = SUM]
used	The amount of the target VMware datastore space in gigabytes (GB) used by a virtual machine [Sequential = LST Non-Sequential = SUM]
vCenter	The name of the VMware vCenter server [Sequential = ID Non-Sequential = ID]
Virtual_Machine	The name of the virtual machine to which the data applies [Sequential = ID Non-Sequential = ID]

17.1.34. VMware Resource Pool.CPU Summary Table

The VMware Resource Pool.CPU Summary table stores CPU usage data by VMware resource pools.

The historical statistic interval is the “Past-day” statistic interval configured in the VMware vCenter server. For example, if the “Past-day” statistic interval in the VMware vCenter server is configured as a 5-minute interval, the historical statistic interval is 3 days at 5-minute intervals.

Table Field Hierarchy

Class:	VMware Resource Pool
Subclass:	CPU Summary
IT Resource Name:	/TeamQuest/System/VMware/ResourcePool/*Resource_pool(Resource Pool_Id)*
TeamQuest Table Name:	VMware Resource Pool.CPU Summary
Open Table Name:	VMRESPOOLCPUSUM
Collection interval:	Based on the historical statistic interval
Default retention:	3 days at collection period interval 8 days at 10-minute intervals 4 months at 1-hour intervals 9 months at 24-hour intervals
Table type:	Performance
Derived tables using fields from this table:	Resource Pool CPU Summary

Statistic Name	Description
%busy	The percentage of elapsed CPU time the processors were busy across all of the virtual machines in the resource pool [Sequential = AVG Non-Sequential = AVG]
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
capacityContention	The percentage of time the virtual machine is unable to run because it is contending for access to the physical CPUs. This statistic is only available for VMware vCenter Server 5.0 and higher. [Sequential = AVG Non-Sequential = SUM]
capacityDemand	The amount of CPU resources a virtual machine would use if there were no CPU contention or CPU limit. This statistic is only available for VMware vCenter Server 5.0 and higher. [Sequential = AVG Non-Sequential = SUM]

capacityEntitlement	The amount of CPU resources devoted by the VMware ESX scheduler to virtual machines and resource pools. This statistic is only available for VMware vCenter Server 5.0 and higher. [Sequential = AVG Non-Sequential = SUM]
Cluster	The name of the cluster to which the resource pool belongs. This field contains <N/A> if the root resource pool is a VMware host. [Sequential = ID Non-Sequential = ID]
ClusterId	The unique identifier for the cluster provided by the VMware API. This identifier does not change when a cluster is renamed. [Sequential = ID Non-Sequential = ID]
corecountContention	The amount of time the virtual machine was ready to run but was unable to run due to co-scheduling constraints. This statistic is only available for VMware vCenter Server 5.0 and higher. [Sequential = AVG Non-Sequential = SUM]
corecountProvisioned	The number of virtual processors or physical cores provisioned to the entity. This statistic is only available for VMware vCenter Server 5.0 and higher. [Sequential = AVG Non-Sequential = SUM]
Datacenter	The name of the datacenter to which the resource pool belongs [Sequential = ID Non-Sequential = ID]
DatacenterId	The unique identifier for a datacenter provided by the VMware API. This identifier does not change when a datacenter is renamed. [Sequential = ID Non-Sequential = ID]
Host	The name of the host system to which the resource pool belongs. This field contains <N/A> if the root resource pool is a VMware cluster. This field is limited to 51 characters. Any system name longer than 51 characters is truncated. [Sequential = ID Non-Sequential = ID]
ResourcePool	The name of the resource pool to which the data applies [Sequential = ID Non-Sequential = ID]
ResourcePool_Id	The unique identifier for a resource pool provided by the VMware API. This identifier does not change when a resource pool is renamed. [Sequential = ID Non-Sequential = ID]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
usage(MHz)	The CPU usage in megahertz (MHz) over the collection interval [Sequential = AVG Non-Sequential = SUM]
vCenter	The name of the VMware vCenter server [Sequential = ID Non-Sequential = ID]

17.1.35. VMware Resource Pool.Memory Summary Table

The VMware Resource Pool.Memory Summary table stores memory usage data by VMware resource pools.

The historical statistic interval is the “Past-day” statistic interval configured in the VMware vCenter server. For example, if the “Past-day” statistic interval in the VMware vCenter server is configured as a 5-minute interval, the historical statistic interval is 3 days at 5-minute intervals.

Table Field Hierarchy

Class:	VMware Resource Pool
Subclass:	Memory Summary
IT Resource Name:	/TeamQuest/System/VMware/ResourcePool/*Resource_pool(Resource Pool_Id)*
TeamQuest Table Name:	VMware Resource Pool.Memory Summary
Open Table Name:	VMRESPOOLMEMSUM
Collection interval:	Based on the historical statistic interval
Default retention:	3 days at collection period interval 8 days at 10-minute intervals 4 months at 1-hour intervals 9 months at 24-hour intervals
Table type:	Performance
Derived tables using fields from this table:	Resource Pool Memory Summary

Statistic Name	Description
%usage	The percentage of memory usage over the collection interval. This statistic is only available for VMware vCenter Server 5.0 and higher. [Sequential = AVG Non-Sequential = AVG]
active	The working set size estimate in megabytes at the end of the interval for the resource pool [Sequential = AVG Non-Sequential = SUM]
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
balloon	The amount of memory in megabytes allocated by the virtual machine memory control driver (vmmemctl), which is installed with VMware Tools. The vmmemctl is a memory management driver that controls ballooning. [Sequential = AVG Non-Sequential = SUM]

capacityContention	The percentage of time the virtual machine is waiting to access swapped or compressed memory. This statistic is only available for VMware vCenter Server 5.0 and higher. [Sequential = AVG Non-Sequential = SUM]
capacityEntitlement	The amount of host physical memory devoted by the VMware ESX scheduler to the virtual machine. This statistic is only available for VMware vCenter Server 5.0 and higher. [Sequential = AVG Non-Sequential = SUM]
capacityUsage	The amount of physical memory in megabytes used by the virtual machine. This statistic is only available for VMware vCenter Server 5.0 and higher. [Sequential = AVG Non-Sequential = SUM]
Cluster	The name of the cluster to which the resource pool belongs. This field contains <N/A> if the root resource pool is a VMware host. [Sequential = ID Non-Sequential = ID]
ClusterId	The unique identifier for the cluster provided by the VMware API. This identifier does not change when a cluster is renamed. [Sequential = ID Non-Sequential = ID]
compressed	The amount of memory in megabytes compressed by the VMware ESX Server. This statistic is only available for VMware vCenter Server 5.0 and higher. [Sequential = AVG Non-Sequential = SUM]
compressionRate	The rate of memory compression for the virtual machine. This statistic is only available for VMware vCenter Server 5.0 and higher. [Sequential = AVG Non-Sequential = SUM]
consumed	The amount of memory in megabytes consumed by a resource pool, host, or virtual machine [Sequential = AVG Non-Sequential = SUM]
Datacenter	The name of the datacenter to which the resource pool belongs [Sequential = ID Non-Sequential = ID]
DatacenterId	The unique identifier for a datacenter provided by the VMware API. This identifier does not change when a datacenter is renamed. [Sequential = ID Non-Sequential = ID]
decompressionRate	The rate of memory decompression for the virtual machine. This statistic is only available for VMware vCenter Server 5.0 and higher. [Sequential = AVG Non-Sequential = SUM]
granted	The amount of all granted memory in megabytes for all of the powered-on virtual machines. This statistic is only available for VMware vCenter server statistic level 2. [Sequential = AVG Non-Sequential = SUM]
Host	The name of the host system to which the resource pool belongs. This field contains <N/A> if the root resource pool is a VMware cluster. This field is limited to 51 characters. Any system name longer than 51 characters is truncated. [Sequential = ID Non-Sequential = ID]

overhead	The amount of additional resource pool memory in megabytes allocated to the virtual machine [Sequential = AVG Non-Sequential = SUM]
ResourcePool	The name of the resource pool to which the data applies [Sequential = ID Non-Sequential = ID]
ResourcePool_Id	The unique identifier for a resource pool provided by the VMware API. This identifier does not change when a resource pool is renamed. [Sequential = ID Non-Sequential = ID]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
shared	The amount of virtual machine memory in megabytes that is shared with other virtual machines, relative to a single virtual machine or to all powered-on virtual machines on a host [Sequential = AVG Non-Sequential = SUM]
swapped	The amount of memory in megabytes currently swapped to the VMware File System 3 (VMFS3) swap file [Sequential = AVG Non-Sequential = SUM]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
vCenter	The name of the VMware vCenter server [Sequential = ID Non-Sequential = ID]
zero	The amount of memory in megabytes that is zeroed out. This statistic is only available for VMware vCenter Server 5.0 and higher. [Sequential = AVG Non-Sequential = SUM]

17.1.36. VMware Resource Pool.Resource Allocation Table

The VMware Resource Pool.Resource Allocation table stores usage of VMware resource pools.

The historical statistic interval is the “Past-day” statistic interval configured in the VMware vCenter server. For example, if the “Past-day” statistic interval in the VMware vCenter server is configured as a 5-minute interval, the historical statistic interval is 3 days at 5-minute intervals.

Table Field Hierarchy

Class:	VMware Resource Pool
Subclass:	Resource Allocation
IT Resource Name:	/TeamQuest/System/VMware/ResourcePool/*Resource_pool(Resource Pool_Id)*
TeamQuest Table Name:	VMware Resource Pool.Resource Allocation
Open Table Name:	VMRESPOOLRESALLOC
Collection interval:	Based on the historical statistic interval
Default retention:	3 days at collection period interval 8 days at 10-minute intervals 4 months at 1-hour intervals 9 months at 24-hour intervals
Table type:	Performance
Derived tables using fields from this table:	Resource Pool Resource Allocation

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
activeVMs	The number of active virtual machines in a resource pool [Sequential = LST Non-Sequential = SUM]
childResourcePool	The number of child resource pools in a resource pool [Sequential = LST Non-Sequential = SUM]
Cluster	The name of the cluster to which the resource pool belongs. This field contains <N/A> if the root resource pool is a VMware host. [Sequential = ID Non-Sequential = ID]
ClusterId	The unique identifier for the cluster provided by the VMware API. This identifier does not change when a cluster is renamed. [Sequential = ID Non-Sequential = ID]
cpuAvailable	The total amount of CPU in megahertz (MHz) that is available to satisfy a reservation requirement for all virtual machines in a resource pool [Sequential = LST Non-Sequential = LST]

cpuReserved	The total amount of CPU in megahertz (MHz) that is used to satisfy the reservation requirements of all descendants of the resource pools and virtual machines in a resource pool [Sequential = LST Non-Sequential = SUM]
Datacenter	The name of the datacenter to which the resource pool belongs [Sequential = ID Non-Sequential = ID]
DatacenterId	The unique identifier for a datacenter provided by the VMware API. This identifier does not change when a datacenter is renamed. [Sequential = ID Non-Sequential = ID]
Host	The name of the host system to which the resource pool belongs. This field contains <N/A> if the root resource pool is a VMware cluster. This field is limited to 51 characters. Any system name longer than 51 characters is truncated. [Sequential = ID Non-Sequential = ID]
memAvailable	The total amount of memory in megabytes that is available to satisfy the reservation requirements for all virtual machines in a resource pool [Sequential = LST Non-Sequential = LST]
memOverhead	The total amount of memory in megabytes used to satisfy the reservation requirements of all descendants of the virtual machines in a resource pool or any of the child resource pools [Sequential = LST Non-Sequential = SUM]
memReserved	The total amount of memory in megabytes used to satisfy the reservation requirements of all descendants of the resource pools and virtual machines in a resource pool [Sequential = LST Non-Sequential = SUM]
ResourcePool	The name of the resource pool to which the data applies [Sequential = ID Non-Sequential = ID]
ResourcePool_Id	The unique identifier for a resource pool provided by the VMware API. This identifier does not change when a resource pool is renamed. [Sequential = ID Non-Sequential = ID]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
vCenter	The name of the VMware vCenter server [Sequential = ID Non-Sequential = ID]

17.1.37. VMware Storage.Adapter by Host System Table

The VMware Storage.Adapter by Host System table stores storage adapter I/O operation data by host.

Table Field Hierarchy

Class:	VMware Storage
Subclass:	Adapter by Host System
IT Resource Name:	/TeamQuest/System/VMware/Host/*systemname*
TeamQuest Table Name:	VMware Storage.Adapter by Host System
Open Table Name:	VMSTORADAPTERBYHOST
Collection interval:	Based on the collection period
Default retention:	3 days at collection period interval 8 days at 10-minute intervals 4 months at 1-hour intervals 9 months at 24-hour intervals
Table type:	Performance
Derived tables using fields from this table:	Storage Adapter by Host System

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
avgQueueLatency	The average amount of time in milliseconds spent in the ESX Server VMKernel queue per command from the perspective of a storage adapter. This statistic is available for VMware ESX 5.0.0 and later. [Sequential = AVG Non-Sequential = AVG]
avgReadLatency	The average amount of time in milliseconds taken by a read operation to complete from the perspective of a storage adapter. This statistic is available for VMware ESX 4.1.0 and later. [Sequential = AVG Non-Sequential = AVG]
avgWriteLatency	The average amount of time in milliseconds taken by a write operation to complete from the perspective of a storage adapter. This statistic is available for VMware ESX 4.1.0 and later. [Sequential = AVG Non-Sequential = AVG]
cmds/s	The number of commands (requests) issued per second to the storage adapter. This statistic is available for VMware ESX 4.1.0 and later. [Sequential = AVG Non-Sequential = SUM]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]

KB_read/s	The amount of data read per second in kilobytes (KB) by the storage adapter. This statistic is available for VMware ESX 4.1.0 and later. [Sequential = AVG Non-Sequential = SUM]
KB_write/s	The amount of data written per second in kilobytes (KB) by the storage adapter. This statistic is available for VMware ESX 4.1.0 and later. [Sequential = AVG Non-Sequential = SUM]
KB/s	The amount of data transferred per second in kilobytes (KB) by the storage adapter. This statistic is available for VMware ESX 4.1.0 and later. [Sequential = AVG Non-Sequential = SUM]
oIOsPct	The percentage of I/O operations that have been issued but have not yet completed. This statistic is available for VMware ESX 5.0.0 and later. [Sequential = AVG Non-Sequential = SUM]
outstandingIOs	The number of I/O operations that have been issued but have not yet completed. This statistic is available for VMware ESX 5.0.0 and later. [Sequential = AVG Non-Sequential = SUM]
queued	The number of I/O operations waiting to be issued. This statistic is available for VMware ESX 5.0.0 and later. [Sequential = AVG Non-Sequential = SUM]
queueDepth	The maximum number of I/O operations that can be outstanding at a time. This statistic is available for VMware ESX 5.0.0 and later. [Sequential = AVG Non-Sequential = SUM]
reads/s	The number of read requests issued per second to the storage adapter. This statistic is available for VMware ESX 4.1.0 and later. [Sequential = AVG Non-Sequential = SUM]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
Storage_Adapter	The name of the storage adapter [Sequential = ID Non-Sequential = ID]
System	The name of the host system. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
throughputContention	The average amount of time in milliseconds for an I/O operation to complete. This statistic is available for VMware ESX 5.0.0 and later. [Sequential = AVG Non-Sequential = AVG]
throughputUsage	The average amount of data transferred per second in kilobytes by the storage adapter. This statistic is available for VMware ESX 5.0.0 and later. [Sequential = AVG Non-Sequential = SUM]

Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
writes/s	The total number of write requests issued per second to the storage adapter. This statistic is available for VMware ESX 4.1.0 and later. [Sequential = AVG Non-Sequential = SUM]

17.1.38. VMware Storage.Adapter Summary Table

The VMware Storage.Adapter Summary table stores I/O operation data summarized by storage adapters.

Table Field Hierarchy

Class:	VMware Storage
Subclass:	Adapter Summary
IT Resource Name:	/TeamQuest/System/VMware/Host/*systemname*
TeamQuest Table Name:	VMware Storage.Adapter Summary
Open Table Name:	VMSTORADAPTERSUM
Collection interval:	Based on the collection period
Default retention:	3 days at collection period interval 8 days at 10-minute intervals 4 months at 1-hour intervals 9 months at 24-hour intervals
Table type:	Performance
Derived tables using fields from this table:	Storage Adapter Summary

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
highestLatency	The highest latency in milliseconds of the storage adapter. This statistic is available for VMware ESX 5.0.0 and later. [Sequential = MAX Non-Sequential = MAX]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]

System	The name of the host system. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]

17.1.39. VMware Storage.Datastore by Host System

The VMware Storage.Datastore by Host System table stores I/O information for the datastore from the perspective of the VMware host.

Table Field Hierarchy

Class:	VMware Storage
Subclass:	Datastore by Host System
IT Resource Name:	/TeamQuest/System/VMware/Host/*systemname*
TeamQuest Table Name:	VMware Storage.Datastore by Host System
Open Table Name:	VMSTORDSBYHOST
Collection interval:	Based on the collection period
Default retention:	Based on the collection period
Table type:	3 days at collection period interval 8 days at 10-minute intervals 4 months at 1-hour intervals 9 months at 24-hour intervals
Derived tables using fields from this table:	Storage Datastore by Host System

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
avgReadLatency	The average amount of time in milliseconds taken by a read operation to complete from the datastore [Sequential = AVG Non-Sequential = AVG]
avgWriteLatency	The average amount of time in milliseconds taken by a write operation to complete from the datastore [Sequential = AVG Non-Sequential = AVG]
cmds	The number of commands (requests) issued per second to the datastore. Calculated as cmds= reads + writes [Sequential = SUM Non-Sequential = SUM]

cmds/s	The number of commands (requests) issued per second to the datastore. Calculated as cmds/s= reads/s + writes/s [Sequential = SUM Non-Sequential = SUM]
datastoreIops	The aggregated number of storage I/O operations on the datastore [Sequential = AVG Non-Sequential = SUM]
datastoreMaxQueue Depth	The maximum number of storage I/O operations supported by the datastore [Sequential = LST Non-Sequential = LST]
datastoreNormal ReadLatency	The storage DRS normalized read latency for the datastore [Sequential = LST Non-Sequential = LST]
datastoreNormal WriteLatency	The storage DRS normalized write latency for the datastore [Sequential = LST Non-Sequential = LST]
datastoreReadBytes	The number of storage DRS bytes read by the datastore [Sequential = LST Non-Sequential = LST]
datastoreReadIops	The number of storage DRS read I/O operations of the datastore [Sequential = LST Non-Sequential = LST]
datastoreReadLoad Metric	The storage DRS read workload metric of the datastore [Sequential = LST Non-Sequential = LST]
datastoreReadOIO	The number of outstanding read requests by the datastore [Sequential = LST Non-Sequential = LST]
datastoreWriteBytes	The number of storage DRS bytes written to the datastore [Sequential = LST Non-Sequential = LST]
datastoreWriteIops	The number of storage DRS write I/O operations of the datastore [Sequential = LST Non-Sequential = LST]
datastoreWriteLoad Metric	The storage DRS write workload metric of the datastore [Sequential = LST Non-Sequential = LST]
datastoreWriteOIO	The number of outstanding write requests by the datastore [Sequential = LST Non-Sequential = LST]
highestLatency	The highest latency value across all datastores used by the host [Sequential = MAX Non-Sequential = MAX]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
KB_read/s	The amount of data read per second in kilobytes (KB) by the datastore [Sequential = AVG Non-Sequential = SUM]
KB_write/s	The amount of data written per second in kilobytes (KB) by the datastore [Sequential = AVG Non-Sequential = SUM]
KB/s	The amount of data requests per second in kilobytes (KB) by the datastore. Calculated as KB/s= KB_reads + KB_writes [Sequential = AVG Non-Sequential = SUM]

reads	The number of read requests issued to the datastore during the collection interval [Sequential = SUM Non-Sequential = SUM]
reads/s	The number of read requests issued per second to the datastore [Sequential = AVG Non-Sequential = SUM]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
sizeNormalized DatastoreLatency	The normalized latency in milliseconds on the datastore. Data for all virtual machines is combined into this statistic. [Sequential = AVG Non-Sequential = SUM]
System	The name of the host system. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
UniqueId	The identifier assigned to the datastore that is unique within a VMware vCenter server [Sequential = ID Non-Sequential = ID]
Virtual_Machine	The name of the virtual machine to which the data applies [Sequential = ID Non-Sequential = ID]
writes	The number of write requests issued per second to the datastore [Sequential = SUM Non-Sequential = SUM]
writes/s	The number of write requests issued to the datastore during the collection interval [Sequential = AVG Non-Sequential = SUM]

17.1.40. VMware Storage.Datastore by Virtual Machine

The VMware Storage.Datastore by Virtual Machine table stores I/O information for the datastore from the perspective of the virtual machine.

Table Field Hierarchy

Class:	VMware Storage
Subclass:	Datastore by Virtual Machine
IT Resource Name:	/TeamQuest/System/VMware/Virtual Machines/*virtualmachinename*
TeamQuest Table Name:	VMware Storage.Datastore by Virtual Machine
Open Table Name:	VMSTORDSBYVM
Collection interval:	Based on the collection period
Default retention:	Based on the collection period
Table type:	3 days at collection period interval 8 days at 10-minute intervals 4 months at 1-hour intervals 9 months at 24-hour intervals
Derived tables using fields from this table:	Storage Datastore by Virtual Machine

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
avgLatency	The average amount of time in milliseconds taken to complete a command request (queue and disk service time) by the host system disk [Sequential = AVG Non-Sequential = AVG]
avgReadLatency	The average amount of time in milliseconds taken by a read operation to complete from the datastore [Sequential = AVG Non-Sequential = AVG]
avgWriteLatency	The average amount of time in milliseconds taken by a write operation to complete from the datastore [Sequential = AVG Non-Sequential = AVG]
cmds	The number of commands (requests) issued per second to the datastore. Calculated as cmds= reads + writes [Sequential = SUM Non-Sequential = SUM]
cmds/s	The number of commands (requests) issued per second to the storage path. This statistic is available for VMware ESX 4.1.0 and later. [Sequential = AVG Non-Sequential = SUM]

highestLatency	The highest latency value across all datastores used by the host [Sequential = MAX Non-Sequential = MAX]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
KB_read/s	The amount of data read per second in kilobytes (KB) by the datastore [Sequential = AVG Non-Sequential = SUM]
KB_write/s	The amount of data written per second in kilobytes (KB) by the datastore [Sequential = AVG Non-Sequential = SUM]
KB/s	The amount of data requests per second in kilobytes (KB) by the datastore. Calculated as KB/s= KB_reads + KB_writes [Sequential = AVG Non-Sequential = SUM]
reads	The number of read requests issued to the datastore during the collection interval [Sequential = SUM Non-Sequential = SUM]
reads/s	The number of read requests issued per second to the datastore [Sequential = AVG Non-Sequential = SUM]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
System	The name of the host system. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
UniqueId	The identifier assigned to the datastore that is unique within a VMware vCenter server [Sequential = ID Non-Sequential = ID]
Virtual_Machine	The name of the virtual machine to which the data applies [Sequential = ID Non-Sequential = ID]
writes	The number of write requests issued per second to the datastore [Sequential = SUM Non-Sequential = SUM]
writes/s	The number of write requests issued to the datastore during the collection interval [Sequential = AVG Non-Sequential = SUM]

17.1.41. VMware Storage.Datastore Summary

The VMware Storage.Datastore Summary table stores I/O information for the datastore.

Table Field Hierarchy

Class:	VMware Storage
Subclass:	Datastore Summary
IT Resource Name:	/TeamQuest/System/VMware/Datastore/*Datastore*
TeamQuest Table Name:	VMware Storage.Datastore Summary
Open Table Name:	VMSTORDSBYDS
Collection interval:	Based on the collection period
Default retention:	Based on the collection period
Table type:	3 days at collection period interval 8 days at 10-minute intervals 4 months at 1-hour intervals 9 months at 24-hour intervals
Derived tables using fields from this table:	Storage Datastore Summary

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
Datastore	The name of the VMware datastore to which the data applies [Sequential = ID Non-Sequential = ID]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
KB_read/s	The amount of data read per second in kilobytes (KB) by the datastore [Sequential = AVG Non-Sequential = SUM]
KB_write/s	The amount of data written per second in kilobytes (KB) by the datastore [Sequential = AVG Non-Sequential = SUM]
KB/s	The amount of data requests per second in kilobytes (KB) by the datastore. Calculated as KB/s= KB_reads + KB_writes [Sequential = AVG Non-Sequential = SUM]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
UniqueId	The identifier assigned to the datastore that is unique within a VMware vCenter server [Sequential = ID Non-Sequential = ID]

17.1.42. VMware Storage.Path by Host System Table

The VMware Storage.Path by Host System table stores storage path I/O operation data by host.

Table Field Hierarchy

Class:	VMware Storage
Subclass:	Path by Host System
IT Resource Name:	/TeamQuest/System/VMware/Host/*systemname*
TeamQuest Table Name:	VMware Storage.Path by Host System
Open Table Name:	VMSTORPATHBYHOST
Collection interval:	Based on the collection period
Default retention:	3 days at collection period interval 8 days at 10-minute intervals 4 months at 1-hour intervals 9 months at 24-hour intervals
Table type:	Performance
Derived tables using fields from this table:	Storage Path by Host System

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
avgReadLatency	The average amount of time in milliseconds taken by a read operation to complete from the perspective of the storage path. This statistic is available for VMware ESX 4.1.0 and later. [Sequential = AVG Non-Sequential = AVG]
avgWriteLatency	The average amount of time in milliseconds taken by a write operation to complete from the perspective of the storage path. This statistic is available for VMware ESX 4.1.0 and later. [Sequential = AVG Non-Sequential = AVG]
busRst/s	The number of SCSI bus resets per second that occurred on the storage path. This statistic is available for VMware ESX 5.0.0 and later. [Sequential = AVG Non-Sequential = SUM]
cmds/s	The number of commands (requests) issued per second to the storage path. This statistic is available for VMware ESX 4.1.0 and later. [Sequential = AVG Non-Sequential = SUM]
cmdsAbrt/s	The number of SCSI commands aborted by the storage path per second. This statistic is available for VMware ESX 5.0.0 and later. [Sequential = AVG Non-Sequential = SUM]

Device_Name	The name of the host system device [Sequential = ID Non-Sequential = ID]
Device_ID	The identifier of the host system device [Sequential = ID Non-Sequential = ID]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
KB_read/s	The amount of data read per second in kilobytes (KB). This statistic is available for VMware ESX 4.1.0 and later. [Sequential = AVG Non-Sequential = SUM]
KB_write/s	The amount of data written per second in kilobytes (KB). This statistic is available for VMware ESX 4.1.0 and later. [Sequential = AVG Non-Sequential = SUM]
KB/s	The amount of data read and written per second in kilobytes (KB). This statistic is available for VMware ESX 4.1.0 and later. [Sequential = AVG Non-Sequential = SUM]
reads/s	The total number of read requests per second to the storage path. This statistic is available for VMware ESX 4.1.0 and later. [Sequential = AVG Non-Sequential = SUM]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
Storage_Path	The name of the storage path [Sequential = ID Non-Sequential = ID]
System	The name of the host system. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
throughputContention	The average amount of time in milliseconds for an I/O operation to complete. This statistic is available for VMware ESX 5.0.0 and later. [Sequential = AVG Non-Sequential = AVG]
throughputUsage	The average amount of data transferred per second in kilobytes by the storage path. This statistic is available for VMware ESX 5.0.0 and later. [Sequential = AVG Non-Sequential = SUM]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
writes/s	The total number of write requests per second to the storage path. This statistic is available for VMware ESX 4.1.0 and later. [Sequential = AVG Non-Sequential = SUM]

17.1.43. VMware Storage.Path Summary Table

The VMware Storage.Path Summary table stores I/O operation data summarized by storage paths.

Table Field Hierarchy

Class:	VMware Storage
Subclass:	Path Summary
IT Resource Name:	/TeamQuest/System/VMware/Host/*systemname*
TeamQuest Table Name:	VMware Storage.Path Summary
Open Table Name:	VMSTORPATHSUMMARY
Collection interval:	Based on the collection period
Default retention:	3 days at collection period interval 8 days at 10-minute intervals 4 months at 1-hour intervals 9 months at 24-hour intervals
Table type:	Performance
Derived tables using fields from this table:	Storage Path Summary

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
highestLatency	The highest latency in milliseconds of the storage adapter. This statistic is available for VMware ESX 5.0.0 and later. [Sequential = LST Non-Sequential = SUM]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
System	The name of the host system. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]

17.1.44. VMware Storage.Virtual Disk by Virtual Machine Table

The VMware Storage.Virtual Disk by Virtual Machine table stores I/O operation data on virtual disks by virtual machine.

Table Field Hierarchy

Class:	VMware Storage
Subclass:	Virtual Disk by Virtual Machine
IT Resource Name:	/TeamQuest/System/VMware/Host/*systemname*
TeamQuest Table Name:	VMware Storage.Virtual Disk by Virtual Machine
Open Table Name:	VMSTORVIRTDISKBYVM
Collection interval:	Based on the collection period
Default retention:	3 days at collection period interval 8 days at 10-minute intervals 4 months at 1-hour intervals 9 months at 24-hour intervals
Table type:	Performance
Derived tables using fields from this table:	N/A

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
avgReadLatency	The average amount of time in milliseconds taken by a read operation to complete from the perspective of the virtual disk. This statistic is available for VMware ESX 4.1.0 and later. [Sequential = AVG Non-Sequential = AVG]
avgWriteLatency	The average amount of time in milliseconds taken by a write operation to complete from the perspective of the virtual disk. This statistic is available for VMware ESX 4.1.0 and later. [Sequential = AVG Non-Sequential = AVG]
busRst/s	The number of SCSI bus resets per second that occurred on the storage adapter. This statistic is available for VMware ESX 5.0.0 and later. [Sequential = AVG Non-Sequential = SUM]
capacity	The capacity of the virtual disk in gigabytes. This statistic is available for VMware ESX 4.1.0 and later. [Sequential = LST Non-Sequential = SUM]
cmds/s	The number of commands (requests) issued per second to the virtual disk. This statistic is available for VMware ESX 4.1.0 and later. [Sequential = AVG Non-Sequential = SUM]

cmdsAbrt/s	The number of SCSI commands aborted by the storage adapter per second. This statistic is available for VMware ESX 5.0.0 and later. [Sequential = AVG Non-Sequential = SUM]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
KB_read/s	The amount of data read per second in kilobytes (KB). This statistic is available for VMware ESX 4.1.0 and later. [Sequential = AVG Non-Sequential = SUM]
KB_write/s	The amount of data written per second in kilobytes (KB). This statistic is available for VMware ESX 4.1.0 and later. [Sequential = AVG Non-Sequential = SUM]
KB/s	The amount of data read and written per second in kilobytes (KB). This statistic is available for VMware ESX 4.1.0 and later. [Sequential = AVG Non-Sequential = SUM]
readLoadMetric	The storage DRS virtual disk statistic for the read workload model. This statistic is available for VMware ESX 5.0.0 and later. [Sequential = LST Non-Sequential = SUM]
readOIO	The number of outstanding read requests to the virtual disk during the collection interval. This statistic is available for VMware ESX 5.0.0 and later. [Sequential = LST Non-Sequential = SUM]
reads/s	The total number of read requests per second to the storage adapter. This statistic is available for VMware ESX 4.1.0 and later. [Sequential = AVG Non-Sequential = SUM]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
System	The name of the host system. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Non-Sequential = ID]
throughputContention	The average amount of time in milliseconds taken by an I/O operation to complete. This statistic is available for VMware ESX 5.0.0 and later. [Sequential = AVG Non-Sequential = AVG]
throughputUsage	The average amount of data transferred per second in kilobytes by the storage adapter. This statistic is available for VMware ESX 5.0.0 and later. [Sequential = AVG Non-Sequential = SUM]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
Virtual_Disk	The name of the virtual disk [Sequential = ID Non-Sequential = ID]
Virtual_Machine	The name of the virtual machine to which the data applies [Sequential = ID Non-Sequential = ID]

writeLoadMetric	The storage DRS virtual disk statistic for the write workload model. This statistic is available for VMware ESX 5.0.0 and later. [Sequential = LST Non-Sequential = SUM]
writeOIO	The number of outstanding write requests to the virtual disk during the collection interval. This statistic is available for VMware ESX 5.0.0 and later. [Sequential = LST Non-Sequential = SUM]
writes/s	The total number of write requests per second to the storage adapter. This statistic is available for VMware ESX 4.1.0 and later. [Sequential = AVG Non-Sequential = SUM]

17.2. Derived Tables

A derived table definition allows multiple stored tables to be brought together into a single logical table. A derived table is created by indicating which fields from one or more stored tables are brought together, and which fields are to be calculated based on values of other fields in the same record when the stored tables have been brought together.

A derived table definition can reference one or more stored tables. A derived table cannot reference another derived table. One of the stored tables referenced by a derived table must be identified as the *primary reference table*. The primary reference table is the table that the other tables are joined to. The other reference tables are referred to as the *secondary reference tables*. One of the reference tables can be flagged as the table to use when determining the selection statements for applying an IT Resource to the derived table. This table is referred to as the *primary selection table*.

The following tables are derived tables and therefore are only available for viewing in TeamQuest Analyzer:

In this subsection, you can find a listing of the derived table statistics collected by the agent:

- Cluster CPU Summary Table (see 17.2.1)
- Cluster Memory Summary Table (see 17.2.2)
- Cluster Resource Allocation Table (see 17.2.3)
- Cluster Virtual Machine Operations Table (see 17.2.4)
- Datastore Cluster File Type Usage Table (see 17.2.5)
- Datastore Cluster Summary Table (see 17.2.6)
- Datastore Cluster Usage by Virtual Machine Table (see 17.2.7)
- Host Block Device Summary Table (see 17.2.8)
- Host Block Device Usage Table (see 17.2.9)
- Host CPU Resource Usage Table (see 17.2.10)
- Host CPU Summary Table (see 17.2.11)
- Host CPU Usage Table (see 17.2.12)

- Host Memory Summary Table (see 17.2.13)
- Host Network Device Summary Table (see 17.2.14)
- Host Network Device Usage Table (see 17.2.15)
- Resource Pool CPU Summary Table (see 17.2.16)
- Resource Pool Memory Summary Table (see 17.2.17)
- Resource Pool Resource Allocation Table (see 17.2.18)
- Storage Adapter by Host System Table (see 17.2.19)
- Storage Adapter Summary Table (see 17.2.20)
- Storage Datastore by Host System Table (see 17.2.21)
- Storage Datastore by Virtual Machine Table (see 17.2.22)
- Storage Datastore Summary Table (see 17.2.23)
- Storage Path by Host System Table (see 17.2.24)
- Storage Path Summary Table (see 17.2.25)
- Virtual Disk by Virtual Machine Table (see 17.2.26)
- Virtual Machine Availability Table (see 17.2.27)
- Virtual Machine Block Device Usage Table (see 17.2.28)
- Virtual Machine Configuration Table (see 17.2.29)
- Virtual Machine CPU Usage Table (see 17.2.30)
- Virtual Machine Memory Usage Table (see 17.2.31)
- Virtual Machine Network Device Usage Table (see 17.2.32)
- Virtual Machine Virtual CPU Usage Table (see 17.2.33)
- Virtual Machine Network vmnic Usage Table (see 17.2.34)
- VMware CPU Relative Performance Table (see 17.2.35)

17.2.1. Cluster CPU Summary Table

The Cluster CPU Summary table is derived from the VMware Cluster.CPU Summary and the VMware.Host Configuration tables. You can view the cluster CPU summary data by cluster, datacenter, or by VMware vCenter server. This table is only available for viewing in TeamQuest Analyzer.

Table Field Hierarchy

Class:	Cluster CPU Summary
Subclass:	
IT Resource Name:	/TeamQuest/System/VMware/Cluster/*Cluster(ClusterId)*
Table type:	Performance
Physical tables used to produce this table:	VMware Cluster.CPU Summary VMware.Host Configuration

Statistic Name	Description
%busy	The percentage of elapsed CPU time the processors were busy across all of the virtual machines in the VMware cluster. A value of <N/A> is displayed when the VMware Distributed Resource Scheduler (DRS) is disabled for the VMware cluster. [Sequential = AVG Non-Sequential = AVG]
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
Cluster	The name of the VMware cluster to which the data applies [Sequential = ID Non-Sequential = ID]
ClusterId	The unique identifier for a cluster provided by the VMware API. This identifier does not change when a VMware cluster is renamed. [Sequential = ID Non-Sequential = ID]
Datacenter	The name of the datacenter to which the host belongs [Sequential = ID Non-Sequential = ID]
DatacenterId	The unique identifier for a datacenter provided by the VMware API. This identifier does not change when a datacenter is renamed. [Sequential = ID Non-Sequential = ID]

effectivecpu	The total amount of available CPU in megahertz (MHz) of all of the hosts within a VMware cluster. A value of <N/A> is displayed when the VMware DRS is disabled for the VMware cluster. Calculated as effectivecpu = aggregate host CPU capacity - (VMKernel + service console CPU + other service CPU) [Sequential = AVG Non-Sequential = AVG]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
reservedCapacity	The total CPU capacity in megahertz (MHz) reserved by all of the virtual machines within a VMware cluster. This statistic is only available for VMware vCenter server statistic level 2. [Sequential = LST Non-Sequential = SUM]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
total(MHz)	The total amount of CPU in megahertz (MHz) of all of the hosts within the VMware cluster. The maximum value is equal to the frequency of the processors multiplied by the number of cores. A value of <N/A> is displayed when the VMware DRS is disabled for the VMware cluster. [Sequential = AVG Non-Sequential = SUM]
usage(MHz)	The CPU usage in megahertz (MHz) of all of the powered-on virtual machines in a VMware cluster. A value of <N/A> is displayed when the VMware DRS is disabled for the VMware cluster. [Sequential = AVG Non-Sequential = SUM]
vCenter	The name of the VMware vCenter server [Sequential = ID Non-Sequential = ID]

17.2.2. Cluster Memory Summary Table

The Cluster Memory Summary table is derived from the VMware Cluster.Memory Summary and the VMware.Host Configuration tables. You can view the cluster memory summary data by cluster, datacenter, or by VMware vCenter server. This table is only available for viewing in TeamQuest Analyzer.

Table Field Hierarchy

Class:	Cluster Memory Summary
Subclass:	
IT Resource Name:	/TeamQuest/System/VMware/Cluster/*Cluster(ClusterId)*
Table type:	Performance
Physical tables used to produce this table:	VMware Cluster.Memory Summary VMware.Host Configuration

Statistic Name	Description
%usage	The percentage of total available memory that is used. A value of <N/A> is displayed when the VMware Distributed Resource Scheduler (DRS) is disabled for the VMware cluster. Calculated as memory usage = (memory consumed + memory overhead) / effectivemem [Sequential = AVG Non-Sequential = AVG]
active	The working set size estimate in megabytes at the end of the interval for the VMware cluster. This statistic is only available for VMware vCenter server statistic level 2. [Sequential = AVG Non-Sequential = SUM]
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
balloon	The amount of memory in megabytes allocated by the virtual machine memory control driver. A value of <N/A> is displayed when the VMware DRS is disabled for the VMware cluster. [Sequential = AVG Non-Sequential = SUM]
consumed	The amount of host memory in megabytes consumed by all of the powered-on virtual machines for guest memory within a VMware cluster [Sequential = AVG Non-Sequential = SUM]
Cluster	The name of the VMware cluster to which the data applies [Sequential = ID Non-Sequential = ID]
ClusterId	The unique identifier for a cluster provided by the VMware API. This identifier does not change when a VMware cluster is renamed. [Sequential = ID Non-Sequential = ID]

Datacenter	The name of the datacenter to which the host belongs [Sequential = ID Non-Sequential = ID]
DatacenterId	The unique identifier for a datacenter provided by the VMware API. This identifier does not change when a datacenter is renamed. [Sequential = ID Non-Sequential = ID]
effectivemem	The total amount of memory in megabytes of all of the hosts within a VMware cluster that are available for the virtual machine memory and the virtual machine overhead memory. A value of <N/A> is displayed when the VMware DRS is disabled for the VMware cluster. [Sequential = AVG Non-Sequential = AVG]
granted	The amount of all granted memory in megabytes for all of the powered-on virtual machines. This statistic is only available for VMware vCenter server statistic level 2. [Sequential = AVG Non-Sequential = SUM]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
overhead	The amount of additional host memory in megabytes allocated to the virtual machine. A value of <N/A> is displayed when the VMware DRS is disabled for the VMware cluster. [Sequential = AVG Non-Sequential = SUM]
reservedCapacity	The amount of memory in megabytes reserved by the virtual machines on a VMware host. This statistic is only available for VMware vCenter server statistic level 2. [Sequential = LST Non-Sequential = SUM]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
shared	The amount of guest physical memory in megabytes shared with other virtual machines. This value includes the amount of zero memory. [Sequential = AVG Non-Sequential = SUM]
swapused	The amount of memory in megabytes that is used by swap. This statistic is only available for VMware vCenter server statistic level 2. A value of <N/A> is displayed when the VMware DRS is disabled for the VMware cluster. [Sequential = AVG Non-Sequential = SUM]
sysUsage	The amount of memory in megabytes used by the VMKernel for core functionality, such as device drivers and other internal usage components. A value of <N/A> is displayed when the VMware DRS is disabled for the VMware cluster. This statistic is only available for VMware vCenter server statistic level 2 and for VMware vCenter Server 4.0 and lower. [Sequential = AVG Non-Sequential = SUM]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]

total	The total amount of memory in megabytes of all of the hosts within a VMware cluster that are available for the virtual machine memory and virtual machine overhead memory. A value of <N/A> is displayed when the VMware DRS is disabled for the VMware cluster. [Sequential = AVG Non-Sequential = SUM]
vCenter	The name of the VMware vCenter server [Sequential = ID Non-Sequential = ID]
zero	The amount of memory in megabytes that only contains 0 values. It is included in shared memory. Through transparent page sharing, zero memory pages can be shared among virtual machines that run the same operating system. A value of <N/A> is displayed when the VMware DRS is disabled for the VMware cluster. [Sequential = AVG Non-Sequential = SUM]

17.2.3. Cluster Resource Allocation Table

The Cluster Resource Allocation table is derived from the VMware Cluster.Resource Allocation and the VMware.Host Configuration tables. You can view the cluster resource allocation data by cluster, datacenter, or by VMware vCenter server. This table is only available for viewing in TeamQuest Analyzer.

Table Field Hierarchy

Class:	Cluster Resource Allocation
Subclass:	
IT Resource Name:	/TeamQuest/System/VMware/luster/*Cluster(ClusterId)*
Table type:	Performance
Physical tables used to produce this table:	VMware Cluster.Resource Allocation VMware.Host Configuration

Statistic Name	Description
activeHosts	The number of active hosts in the VMware cluster [Sequential = LST Non-Sequential = SUM]
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
Cluster	The name of the cluster to which the data applies [Sequential = ID Non-Sequential = ID]
ClusterId	The unique identifier for a cluster provided by the VMware API. This identifier does not change when a cluster is renamed. [Sequential = ID Non-Sequential = ID]

cpuAvailable	The total amount of CPU in megahertz (MHz) available to satisfy a reservation for all of the virtual machines and resource pools in the cluster [Sequential = LST Non-Sequential = SUM]
cpuReserved	The total amount of CPU in megahertz (MHz) that has been used to satisfy the reservation requirements of all of the descendants of the virtual machines and resource pools in the cluster [Sequential = LST Non-Sequential = SUM]
Datacenter	The name of the datacenter to which the host belongs [Sequential = ID Non-Sequential = ID]
DatacenterId	The unique identifier for a datacenter provided by the VMware API. This identifier does not change when a datacenter is renamed. [Sequential = ID Non-Sequential = ID]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
memAvailable	The total amount of memory in megabytes that is available to satisfy the reservation for all of the virtual machines and resource pools in the cluster [Sequential = LST Non-Sequential = SUM]
memOverhead	The total amount of memory in megabytes that has been used to satisfy the reservation requirements of all of the descendants of the running virtual machines in the cluster [Sequential = LST Non-Sequential = SUM]
memReserved	The total amount of memory in megabytes that has been used to satisfy the reservation requirements of all of the descendants of the virtual machines and resource pools in the cluster [Sequential = LST Non-Sequential = SUM]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
totalCpu	The total available CPU in megahertz (MHz) of all of the hosts within the cluster [Sequential = LST Non-Sequential = SUM]
totalMem	The total amount of memory in megabytes of all of the hosts within the cluster that is available for use for virtual machine memory and virtual machine overhead memory [Sequential = LST Non-Sequential = SUM]
vCenter	The name of the VMware vCenter server [Sequential = ID Non-Sequential = ID]

17.2.4. Cluster Virtual Machine Operations Table

The Cluster Virtual Machine Operations table is derived from the VMware Cluster.Virtual Machine Operations and the VMware.Host Configuration tables. You can view the cluster virtual machine operations data by cluster, datacenter, or by VMware vCenter server. This table is only available for viewing in TeamQuest Analyzer.

Table Field Hierarchy

Class:	Cluster Virtual Machine Operations
Subclass:	
IT Resource Name:	/TeamQuest/System/VMware/Cluster/*Cluster(ClusterId)*
Table type:	Performance
Physical tables used to produce this table:	VMware Cluster.Virtual Machine Operations VMware.Host Configuration

Statistic Name	Description
activeVMs	The number of active virtual machines in the VMware cluster [Sequential = LST Non-Sequential = SUM]
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
clone	The number of virtual machine clone operations [Sequential = SUM Non-Sequential = SUM]
Cluster	The name of the cluster to which the data applies [Sequential = ID Non-Sequential = ID]
ClusterId	The unique identifier for a cluster provided by the VMware API. This identifier does not change when a cluster is renamed. [Sequential = ID Non-Sequential = ID]
create	The number of virtual machine create operations [Sequential = SUM Non-Sequential = SUM]
Datacenter	The name of the datacenter to which the host belongs [Sequential = ID Non-Sequential = ID]
DatacenterId	The unique identifier for a datacenter provided by the VMware API. This identifier does not change when a datacenter is renamed. [Sequential = ID Non-Sequential = ID]
datastoreChange	The number of datastore change operations for powered-off and suspended virtual machines [Sequential = SUM Non-Sequential = SUM]
delete	The number of virtual machine delete operations [Sequential = SUM Non-Sequential = SUM]
failover	The number of virtual machine failover operations. This statistic is only available for clusters with VMware High Availability (HA) on. [Sequential = LST Non-Sequential = SUM]

guestReboot	The number of virtual machine guest reboot operations [Sequential = SUM Non-Sequential = SUM]
guestShutdown	The number of virtual machine guest shutdown operations [Sequential = SUM Non-Sequential = SUM]
hostChange	The total number of host change operations for powered-down and suspended virtual machines [Sequential = SUM Non-Sequential = SUM]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
powerOff	The number of virtual machine power-off operations [Sequential = SUM Non-Sequential = SUM]
powerOn	The number of virtual machine power-on operations [Sequential = SUM Non-Sequential = SUM]
reconfigure	The number of virtual machine reconfigure operations [Sequential = SUM Non-Sequential = SUM]
register	The number of virtual machine register operations [Sequential = SUM Non-Sequential = SUM]
reset	The number of virtual machine reset operations [Sequential = SUM Non-Sequential = SUM]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
standByGuest	The number of virtual machine standby guest operations [Sequential = SUM Non-Sequential = SUM]
storageMotion	The number of migrations with storage vMotion or datastore change operations for all of the powered-on virtual machines [Sequential = SUM Non-Sequential = SUM]
suspend	The number of virtual machine suspend operations [Sequential = SUM Non-Sequential = SUM]
templateDeploy	The number of virtual machine template deploy operations [Sequential = SUM Non-Sequential = SUM]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
unregister	The number of virtual machine unregister operations [Sequential = SUM Non-Sequential = SUM]
vCenter	The name of the VMware vCenter server [Sequential = ID Non-Sequential = ID]
vMotion	The number of migrations with vMotion for powered-on virtual machines [Sequential = SUM Non-Sequential = SUM]

17.2.5. Datastore Cluster File Type Usage Table

The Datastore Cluster File Type Usage table is derived from the VMware.Datastore File Type Usage and the VMware.Storage Configuration tables. You can view the datastore summary data by datacenter, by datastore, or by VMware vCenter server. This table is only available for viewing in TeamQuest Analyzer.

Table Field Hierarchy

Class:	Datastore Cluster File Type Usage
Subclass:	
IT Resource Name:	/TeamQuest/System/VMware/Datastore/*Datastore*
Table type:	Performance
Physical tables used to produce this table:	VMware Datastore.File Type Usage by Datacenter VMware.Storage Configuration

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
capacity	The configured size of the VMware datastore in gigabytes (GB) [Sequential = LST Non-Sequential = SUM]
Datacenter	The name of the datacenter to which the host belongs [Sequential = ID Non-Sequential = ID]
DatacenterId	The unique identifier for a datacenter provided by the VMware API. This identifier does not change when a datacenter is renamed. [Sequential = ID Non-Sequential = ID]
Datastore	The name of the VMware datastore to which the data applies [Sequential = ID Non-Sequential = ID]
Datastore_Cluster	The name of the VMware datastore cluster to which the data applies [Sequential = ID Non-Sequential = ID]
Datastore_ClusterId	The identifier assigned to the VMware datastore cluster that is unique within a VMware vCenter server [Sequential = ID Non-Sequential = ID]
free	The amount of free physical VMware datastore space in gigabytes (GB) [Sequential = LST Non-Sequential = SUM]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
other	The amount of disk space used by all other non-virtual machine files in gigabytes (GB), such as documentation files and backup files [Sequential = LST Non-Sequential = SUM]

other_vm_files	The amount of disk space used by all other virtual machine files [Sequential = ID Non-Sequential = ID]
provisioned	The amount of physical space in gigabytes (GB) provisioned by an administrator for the VMware datastore. This value is the maximum storage size to which files on the VMware datastore can grow. [Sequential = LST Non-Sequential = SUM]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
snapshots	The amount of disk space in gigabytes (GB) used by virtual machine snapshot files. A snapshot state file stores the running state of the virtual machine at the time of the snapshot. The virtual machine snapshot files have the extension of .vmsn. [Sequential = LST Non-Sequential = SUM]
swapfiles	The amount of disk space in gigabytes (GB) used by swap files. Swap files are used to back up the virtual machine physical memory. [Sequential = LST Non-Sequential = SUM]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
UniqueId	The identifier assigned to a datastore that is unique within a VMware vCenter server [Sequential = ID Non-Sequential = ID]
used	The amount of physical VMware datastore space in use in gigabytes (GB) [Sequential = LST Non-Sequential = SUM]
vCenter	The name of the VMware vCenter server [Sequential = ID Non-Sequential = ID]
virtual_disks	The amount of disk space in gigabytes (GB) used by virtual disk files and delta disk files. Virtual disk files store the contents of the virtual machines hard disk drive, including information that is written to virtual machines hard disk (the operating system, program files, and data files). The virtual disk files have the file extension of .vmdk and appear as a physical disk drive on a guest operating system. Delta disk files store the updates made by the virtual machine to the virtual disks after a snapshot is taken. [Sequential = LST Non-Sequential = SUM]

17.2.6. Datastore Cluster Summary Table

The Datastore Cluster Summary table is derived from the VMware.Datastore Summary and the VMware.Storage Configuration tables. You can view the datastore summary data by datacenter, by datastore, or by VMware vCenter server. This table is only available for viewing in TeamQuest Analyzer.

Table Field Hierarchy

Class:	Datastore Cluster Summary
Subclass:	
IT Resource Name:	/TeamQuest/System/VMware/Datastore/*Datastore*
Table type:	Performance
Physical tables used to produce this table:	VMware Datastore.Summary VMware.Storage Configuration

Statistic Name	Description
%free	The percentage of free physical VMware datastore space [Sequential = LST Non-Sequential = SUM]
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
capacity	The configured size of the VMware datastore in gigabytes (GB) [Sequential = LST Non-Sequential = SUM]
Datacenter	The name of the datacenter to which the host belongs [Sequential = ID Non-Sequential = ID]
DatacenterId	The unique identifier for a datacenter provided by the VMware API. This identifier does not change when a datacenter is renamed. [Sequential = ID Non-Sequential = ID]
Datastore	The name of the VMware datastore to which the data applies [Sequential = ID Non-Sequential = ID]
Datastore_Cluster	The name of the VMware datastore cluster to which the data applies [Sequential = ID Non-Sequential = ID]
Datastore_ClusterId	The identifier assigned to the VMware datastore cluster that is unique within a VMware vCenter server [Sequential = ID Non-Sequential = ID]
free	The amount of free physical VMware datastore space in gigabytes (GB) [Sequential = LST Non-Sequential = SUM]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]

Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
UniqueId	The identifier assigned to a datastore that is unique within a VMware vCenter server [Sequential = ID Non-Sequential = ID]
used	The amount of physical VMware datastore space in use in gigabytes (GB) [Sequential = LST Non-Sequential = SUM]
vCenter	The name of the VMware vCenter server [Sequential = ID Non-Sequential = ID]

17.2.7. Datastore Cluster Usage by Virtual Machine Table

The Datastore Cluster Usage by Virtual Machine table is derived from the VMware.Datastore Usage by Virtual Machine and the VMware.Storage Configuration tables. You can view the datastore summary data by datacenter, by datastore, or by VMware vCenter server. This table is only available for viewing in TeamQuest Analyzer.

Table Field Hierarchy

Class:	Datastore Cluster Usage by Virtual Machine
Subclass:	
IT Resource Name:	/TeamQuest/System/VMware/Datastore/*Datastore*
Table type:	Performance
Physical tables used to produce this table:	VMware Datastore.Usage by Virtual Machine VMware.Storage Configuration

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
Datacenter	The name of the datacenter to which the host belongs [Sequential = ID Non-Sequential = ID]
DatacenterId	The unique identifier for a datacenter provided by the VMware API. This identifier does not change when a datacenter is renamed. [Sequential = ID Non-Sequential = ID]
Datastore	The name of the VMware datastore to which the data applies [Sequential = ID Non-Sequential = ID]
Datastore_Cluster	The name of the VMware datastore cluster to which the data applies [Sequential = ID Non-Sequential = ID]

Datastore_ClusterId	The identifier assigned to the VMware datastore cluster that is unique within a VMware vCenter server [Sequential = ID Non-Sequential = ID]
Host	The name of the host system. This field is limited to 51 characters. Any system name longer than 51 characters is truncated. [Sequential = ID Non-Sequential = ID]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
provisioned	The amount of storage space in gigabytes (GB) provisioned by an administrator for the virtual machine [Sequential = LST Non-Sequential = SUM]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
UniqueId	The identifier assigned to a datastore that is unique within a VMware vCenter server [Sequential = ID Non-Sequential = ID]
unshared	The amount of storage space in gigabytes (GB) associated exclusively with a virtual machine [Sequential = LST Non-Sequential = SUM]
used	The amount of physical VMware datastore space in use in gigabytes (GB) by the virtual machine [Sequential = LST Non-Sequential = SUM]
vCenter	The name of the VMware vCenter server [Sequential = ID Non-Sequential = ID]
Virtual_Machine	The name of the virtual machine to which the data applies [Sequential = ID Non-Sequential = ID]

17.2.8. Host Block Device Summary Table

The Host Block Device Summary table is derived from the Block Device.VMware Summary and the VMware.Host Configuration tables. You can view the host block device summary data by cluster, datacenter, or by VMware vCenter server. This table is only available for viewing in TeamQuest Analyzer.

Table Field Hierarchy

Class:	Host Block Device Summary
Subclass:	
IT Resource Name:	/TeamQuest/System/VMware/Host/*systemname*
Table type:	Performance
Physical tables used to produce this table:	Block Device.VMware Summary VMware.Host Configuration

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
Cluster	The name of the cluster to which the host belongs. This field contains <N/A> if the host does not belong to a VMware cluster. [Sequential = ID Non-Sequential = ID]
ClusterId	The unique identifier for a cluster provided by the VMware API. This identifier does not change when a cluster is renamed. This field contains <N/A> if the host does not belong to a VMware cluster. [Sequential = ID Non-Sequential = ID]
cmds/s	The total number of read and write command requests per second [Sequential = AVG Non-Sequential = SUM]
Datacenter	The name of the datacenter to which the host belongs [Sequential = ID Non-Sequential = ID]
DatacenterId	The unique identifier for a datacenter provided by the VMware API. This identifier does not change when a datacenter is renamed. [Sequential = ID Non-Sequential = ID]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
KB_read/s	The amount of data read per second in kilobytes (KB) for all of the disk instances of the host system [Sequential = AVG Non-Sequential = SUM]
KB_write/s	The amount of data written per second in kilobytes (KB) for all of the disk instances of the host system [Sequential = AVG Non-Sequential = SUM]

KB/s	The amount of data read and written per second in kilobytes (KB) for all of the disk instances of the host system [Sequential = AVG Non-Sequential = SUM]
reads/s	The total number of read requests per second for all of the disk instances of the host system [Sequential = AVG Non-Sequential = SUM]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
System	The name of the host system. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
writes/s	The total number of write requests per second for all of the disk instances of the host system [Sequential = AVG Non-Sequential = SUM]
vCenter	The name of the VMware vCenter server [Sequential = ID Non-Sequential = ID]

17.2.9. Host Block Device Usage Table

The Host Block Device Usage table is derived from the Block Device.by Host System Device and the VMware.Host Configuration tables. You can view the host block device usage data by cluster, datacenter, or by VMware vCenter server. This table is only available for viewing in TeamQuest Analyzer.

Table Field Hierarchy

Class:	Host Block Device Usage
Subclass:	
IT Resource Name:	/TeamQuest/System/VMware/Host/*systemname*
Table type:	Performance
Physical tables used to produce this table:	Block Device.by Host System Device VMware.Host Configuration

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
avgDeviceLatency	The average amount of time in milliseconds taken to complete a command to the physical device [Sequential = AVG Non-Sequential = AVG]
avgDeviceReadLatency	The average amount of time in milliseconds taken to complete a read operation from the physical device [Sequential = AVG Non-Sequential = AVG]
avgDeviceWriteLatency	The average amount of time in milliseconds taken to complete a write to the physical device [Sequential = AVG Non-Sequential = AVG]
avgKernelLatency	The average amount of time in milliseconds spent in the ESX Server VMKernel per command [Sequential = AVG Non-Sequential = AVG]
avgKernelReadLatency	The average amount of time in milliseconds spent in the ESX Server VMKernel per read [Sequential = AVG Non-Sequential = AVG]
avgKernelWriteLatency	The average amount of time in milliseconds spent in the ESX Server VMKernel per write [Sequential = AVG Non-Sequential = AVG]
avgLatency	The average amount of time in milliseconds taken to complete a command request (queue and disk service time) by the host system disk [Sequential = AVG Non-Sequential = AVG]

avgQueueLatency	The average amount of time in milliseconds spent in the ESX Server VMKernel queue per command [Sequential = AVG Non-Sequential = AVG]
avgQueueReadLatency	The average amount of time in milliseconds spent in the ESX Server VMKernel queue per read [Sequential = AVG Non-Sequential = AVG]
avgQueueWriteLatency	The average amount of time in milliseconds spent in the ESX Server VMKernel queue per write [Sequential = AVG Non-Sequential = AVG]
avgReadLatency	The average amount of time in milliseconds taken by a read operation to complete from the perspective of a guest operating system [Sequential = AVG Non-Sequential = AVG]
avgWriteLatency	The average amount of time in milliseconds taken by a write operation to complete from the perspective of a guest operating system [Sequential = AVG Non-Sequential = AVG]
busRst/s	The number of bus resets per second that occurred on the host system disk [Sequential = AVG Non-Sequential = SUM]
cmds/s	The number of commands (requests) issued per second to the host system disk [Sequential = AVG Non-Sequential = SUM]
cmdsAbrt/s	The number of commands aborted by the host system disk per second [Sequential = AVG Non-Sequential = SUM]
Cluster	The name of the cluster to which the host belongs. This field contains <N/A> if the host does not belong to a VMware cluster. [Sequential = ID Non-Sequential = ID]
ClusterId	The unique identifier for a cluster provided by the VMware API. This identifier does not change when a cluster is renamed. This field contains <N/A> if the host does not belong to a VMware cluster. [Sequential = ID Non-Sequential = ID]
Datacenter	The name of the datacenter to which the host belongs [Sequential = ID Non-Sequential = ID]
DatacenterId	The unique identifier for a datacenter provided by the VMware API. This identifier does not change when a datacenter is renamed. [Sequential = ID Non-Sequential = ID]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
KB_read/s	The amount of data read per second in kilobytes (KB) by the host system disk [Sequential = AVG Non-Sequential = SUM]

KB_write/s	The amount of data written per second in kilobytes (KB) by the host system disk [Sequential = AVG Non-Sequential = SUM]
KB/s	The amount of data transferred per second in kilobytes (KB) by the host system disk [Sequential = AVG Non-Sequential = SUM]
reads/s	The number of read requests issued per second to the host system disk [Sequential = AVG Non-Sequential = SUM]
Resource	The name of the disk device [Sequential = ID Non-Sequential = ID]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
shares	This statistic is not available for the VMware Infrastructure Agent. The value is reported as <N/A>. [Sequential = LST Non-Sequential = SUM]
System	The name of the host system. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
totalTime	The total time in milliseconds for all command requests on a VMware host [Sequential = SUM Non-Sequential = SUM]
vCenter	The name of the VMware vCenter server [Sequential = ID Non-Sequential = ID]
writes/s	The number of write requests issued per second to the host system disk [Sequential = AVG Non-Sequential = SUM]

17.2.10. Host CPU Resource Usage Table

The Host CPU Resource Usage table is derived from the CPU.by VMware Resource and the VMware.Host Configuration tables. You can view the host CPU resource usage data by cluster, datacenter, or by VMware vCenter server. This table is only available for viewing in TeamQuest Analyzer.

Table Field Hierarchy

Class:	Host CPU Resource Usage
Subclass:	
IT Resource Name:	/TeamQuest/System/VMware/Host/*systemname*
Table type:	Performance
Physical tables used to produce this table:	CPU.by VMware Resource VMware.Host Configuration

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
Cluster	The name of the cluster to which the host belongs. This field contains <N/A> if the host does not belong to a VMware cluster. [Sequential = ID Non-Sequential = ID]
ClusterId	The unique identifier for a cluster provided by the VMware API. This identifier does not change when a cluster is renamed. This field contains <N/A> if the host does not belong to a VMware cluster. [Sequential = ID Non-Sequential = ID]
Datacenter	The name of the datacenter to which the host belongs [Sequential = ID Non-Sequential = ID]
DatacenterId	The unique identifier for a datacenter provided by the VMware API. This identifier does not change when a datacenter is renamed. [Sequential = ID Non-Sequential = ID]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
Object	The name of the object for the host system [Sequential = ID Non-Sequential = ID]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]

System	The name of the host system. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
usage(MHz)	The CPU usage in megahertz (MHz) over the collection interval [Sequential = AVG Non-Sequential = SUM]
vCenter	The name of the VMware vCenter server [Sequential = ID Non-Sequential = ID]

17.2.11. Host CPU Summary Table

The Host CPU Summary table is derived from the CPU.VMware Summary and the VMware.Host Configuration tables. You can view the host CPU summary data by cluster, datacenter, or by VMware vCenter server. This table is only available for viewing in TeamQuest Analyzer.

Table Field Hierarchy

Class:	Host CPU Summary
Subclass:	
IT Resource Name:	/TeamQuest/System/VMware/Host/*systemname*
Table type:	Performance
Physical tables used to produce this table:	CPU.VMware Summary VMware.Host Configuration

Statistic Name	Description
%busy	The percentage of the CPU used [Sequential = AVG Non-Sequential = SUM]
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
Cluster	The name of the cluster to which the host belongs. This field contains <N/A> if the host does not belong to a VMware cluster. [Sequential = ID Non-Sequential = ID]
ClusterId	The unique identifier for a cluster provided by the VMware API. This identifier does not change when a cluster is renamed. This field contains <N/A> if the host does not belong to a VMware cluster. [Sequential = ID Non-Sequential = ID]
Datacenter	The name of the datacenter to which the host belongs [Sequential = ID Non-Sequential = ID]

DatacenterId	The unique identifier for a datacenter provided by the VMware API. This identifier does not change when a datacenter is renamed. [Sequential = ID Non-Sequential = ID]
idle	The amount of processor time in seconds that is spent in an idle state [Sequential = SUM Non-Sequential = SUM]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
online_cpus	The number of logical CPUs that were online [Sequential = LST Non-Sequential = SUM]
online_cpus_physical	The number of physical CPUs that were online [Sequential = LST Non-Sequential = SUM]
reservedCapacity	The total CPU capacity in megahertz (MHz) reserved by all of the virtual machines [Sequential = LST Non-Sequential = SUM]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
System	The name of the host system. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
uptime_t	The total time in days elapsed since the last VMware host reboot [Sequential = LST Non-Sequential = SUM]
usage(MHz)	The CPU usage in megahertz (MHz) over the collected interval [Sequential = AVG Non-Sequential = SUM]
vCenter	The name of the VMware vCenter server [Sequential = ID Non-Sequential = ID]

17.2.12. Host CPU Usage Table

The Host CPU Usage table is derived from the CPU.by Host Processor and the VMware.Host Configuration tables. You can view the host CPU usage data by cluster, datacenter, or by VMware vCenter server. This table is only available for viewing in TeamQuest Analyzer.

Table Field Hierarchy

Class:	Host CPU Usage
Subclass:	
IT Resource Name:	/TeamQuest/System/VMware/Host/*systemname*
Table type:	Performance
Physical tables used to produce this table:	CPU.by Host Processor VMware.Host Configuration

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
Cluster	The name of the cluster to which the data applies [Sequential = ID Non-Sequential = ID]
ClusterId	The unique identifier for a cluster provided by the VMware API. This identifier does not change when a cluster is renamed. [Sequential = ID Non-Sequential = ID]
Datacenter	The name of the datacenter to which the host belongs [Sequential = ID Non-Sequential = ID]
DatacenterId	The unique identifier for a datacenter provided by the VMware API. This identifier does not change when a datacenter is renamed. [Sequential = ID Non-Sequential = ID]
idle	The amount of processor time in seconds that is spent in an idle state [Sequential = SUM Non-Sequential = SUM]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
Object	The name of the CPU object [Sequential = ID Non-Sequential = ID]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
System	The name of the host system. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]

Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
usage	The percentage of time the CPU is in use over the collection interval [Sequential = AVG Non-Sequential = SUM]
usedsec	The processor time in seconds consumed by the VMware host [Sequential = SUM Non-Sequential = SUM]
vCenter	The name of the VMware vCenter server [Sequential = ID Non-Sequential = ID]

17.2.13. Host Memory Summary Table

The Host Memory Summary table is derived from the Memory.VMware Summary and the VMware.Host Configuration tables. You can view the host memory summary data by cluster, datacenter, or by VMware vCenter server. This table is only available for viewing in TeamQuest Analyzer.

Table Field Hierarchy

Class:	Host Memory Summary
Subclass:	
IT Resource Name:	/TeamQuest/System/VMware/Host/*systemname*
Table type:	Performance
Physical tables used to produce this table:	Memory.VMware Summary VMware.Host Configuration

Statistic Name	Description
%usage	The percentage of memory usage over the collection interval [Sequential = AVG Non-Sequential = SUM]
active	The working set size estimate in megabytes at the end of the interval for the host [Sequential = AVG Non-Sequential = SUM]
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
Cluster	The name of the cluster to which the host belongs. This field contains <N/A> if the host does not belong to a VMware cluster. [Sequential = ID Non-Sequential = ID]
ClusterId	The unique identifier for a cluster provided by the VMware API. This identifier does not change when a cluster is renamed. This field contains <N/A> if the host does not belong to a VMware cluster. [Sequential = ID Non-Sequential = ID]

consumed	The amount of memory in megabytes used on the host. It includes service console memory, VMKernel memory, VMware Infrastructure services memory, and VM memory. [Sequential = AVG Non-Sequential = SUM]
Datacenter	The name of the datacenter to which the host belongs [Sequential = ID Non-Sequential = ID]
DatacenterId	The unique identifier for a datacenter provided by the VMware API. This identifier does not change when a datacenter is renamed. [Sequential = ID Non-Sequential = ID]
free_mem	The amount of memory in megabytes currently available to be used by the host system [Sequential = LST Non-Sequential = SUM]
heap	The amount of memory in megabytes allocated for the heap [Sequential = AVG Non-Sequential = SUM]
heapfree	The amount of free space in megabytes in the memory heap [Sequential = AVG Non-Sequential = SUM]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
managed_mem	This statistic is not available for the VMware Infrastructure Agent. The value is reported as <N/A>. [Sequential = LST Non-Sequential = SUM]
overhead	The amount of additional host memory in megabytes allocated to the virtual machine [Sequential = AVG Non-Sequential = SUM]
reservedCapacity	The amount of memory in megabytes reserved by the virtual machines on a VMware host [Sequential = AVG Non-Sequential = SUM]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
shared	The amount of memory in megabytes shared between the virtual machines on a VMware host [Sequential = AVG Non-Sequential = ID]
shared_comm_mem	The total amount of shared common memory in megabytes on the host system [Sequential = LST Non-Sequential = SUM]
size	The amount of memory in megabytes granted [Sequential = AVG Non-Sequential = SUM]
state	The VMKernel threshold for the amount of free memory on the host [Sequential = LST Non-Sequential = SUM]
swapin	The total amount of memory in megabytes that is swapped in on a VMware host [Sequential = AVG Non-Sequential = SUM]
swapout	The total amount of memory in megabytes that is swapped out on a VMware host [Sequential = AVG Non-Sequential = SUM]

swapused	The amount of memory in megabytes that is used by swap [Sequential = AVG Non-Sequential = SUM]
System	The name of the host system. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
sysUsage	The amount of memory in megabytes used by the VMKernel for core functionality, such as device drivers and other internal usage [Sequential = AVG Non-Sequential = SUM]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
total_mem	The total amount of physical memory in megabytes on the host system [Sequential = LST Non-Sequential = SUM]
unreserved	The amount of memory in megabytes that is unreserved [Sequential = AVG Non-Sequential = SUM]
vCenter	The name of the VMware vCenter server [Sequential = ID Non-Sequential = ID]
vmmemctl	The amount of memory in megabytes used by memory control [Sequential = LST Non-Sequential = SUM]
zero	The amount of memory in megabytes that is zeroed out [Sequential = AVG Non-Sequential = SUM]

17.2.14. Host Network Device Summary Table

The Host Network Device Summary table is derived from the Network Device.VMware Summary and the VMware.Host Configuration tables. You can view the host network device summary data by cluster, datacenter, or by VMware vCenter server. This table is only available for viewing in TeamQuest Analyzer.

Table Field Hierarchy

Class:	Host Network Device Summary
Subclass:	
IT Resource Name:	/TeamQuest/System/VMware/Host/*systemname*
Table type:	Performance
Physical tables used to produce this table:	Network Device.VMware Summary VMware.Host Configuration

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
Cluster	The name of the cluster to which the host belongs. This field contains <N/A> if the host does not belong to a VMware cluster. [Sequential = ID Non-Sequential = ID]
ClusterId	The unique identifier for a cluster provided by the VMware API. This identifier does not change when a cluster is renamed. This field contains <N/A> if the host does not belong to a VMware cluster. [Sequential = ID Non-Sequential = ID]
Datacenter	The name of the datacenter to which the host belongs [Sequential = ID Non-Sequential = ID]
DatacenterId	The unique identifier for a datacenter provided by the VMware API. This identifier does not change when a datacenter is renamed. [Sequential = ID Non-Sequential = ID]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
KBRx/s	The amount of data received per second in kilobytes (KB) [Sequential = AVG Non-Sequential = SUM]
KBTx/s	The amount of data transmitted per second in kilobytes (KB) [Sequential = AVG Non-Sequential = SUM]
KBx/s	The amount of data transferred per second in kilobytes (KB) [Sequential = AVG Non-Sequential = SUM]
packets/s	The total number of packets transferred per second [Sequential = AVG Non-Sequential = SUM]

pktsRx/s	The total number of packets received per second [Sequential = AVG Non-Sequential = SUM]
pktsTx/s	The total number of packets transmitted per second [Sequential = AVG Non-Sequential = SUM]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
System	The name of the host system. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
vCenter	The name of the VMware vCenter server [Sequential = ID Non-Sequential = ID]

17.2.15. Host Network Device Usage Table

The Host Network Device Usage table is derived from the Network Device.by Host System Device and the VMware.Host Configuration tables. You can view the host network device usage data by cluster, datacenter, or by VMware vCenter server. This table is only available for viewing in TeamQuest Analyzer.

Table Field Hierarchy

Class:	Host Network Device Usage
Subclass:	
IT Resource Name:	/TeamQuest/System/VMware/Host/*systemname*
Table type:	Performance
Physical tables used to produce this table:	Network Device.by Host System Device VMware.Host Configuration

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
Cluster	The name of the cluster to which the host belongs. This field contains <N/A> if the host does not belong to a VMware cluster. [Sequential = ID Non-Sequential = ID]
ClusterId	The unique identifier for a cluster provided by the VMware API. This identifier does not change when a cluster is renamed. This field contains <N/A> if the host does not belong to a VMware cluster. [Sequential = ID Non-Sequential = ID]
Datacenter	The name of the datacenter to which the host belongs [Sequential = ID Non-Sequential = ID]
DatacenterId	The unique identifier for a datacenter provided by the VMware API. This identifier does not change when a datacenter is renamed. [Sequential = ID Non-Sequential = ID]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
KBRx/s	The amount of data received per second in kilobytes (KB) by the host system interface [Sequential = AVG Non-Sequential = SUM]
KBTx/s	The amount of data transmitted per second in kilobytes (KB) by the host system interface [Sequential = AVG Non-Sequential = SUM]
KBx/s	The amount of data transferred per second in kilobytes (KB) by the host system interface [Sequential = AVG Non-Sequential = SUM]

packets/s	The total number of packets transferred per second by the host system interface [Sequential = AVG Non-Sequential = SUM]
pktsRx/s	The number of packets received per second by the host system interface [Sequential = AVG Non-Sequential = SUM]
pktsTx/s	The number of packets transmitted per second by the host system interface [Sequential = AVG Non-Sequential = SUM]
Resource	The name of the host system interface [Sequential = ID Non-Sequential = ID]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
System	The name of the host system. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
vCenter	The name of the VMware vCenter server [Sequential = ID Non-Sequential = ID]

17.2.16. Resource Pool CPU Summary Table

The Resource Pool CPU Summary table is derived from the VMware Resource Pool.CPU Summary and the VMware.Host Configuration tables. You can view the resource pool CPU summary data by cluster, datacenter, or by VMware vCenter server. This table is only available for viewing in TeamQuest Analyzer.

Table Field Hierarchy

Class:	Resource Pool CPU Summary
Subclass:	
IT Resource Name:	/TeamQuest/System/VMware/ResourcePool/*Resource_pool(Resource Pool_Id)*
Table type:	Performance
Physical tables used to produce this table:	VMware Resource Pool.CPU Summary VMware.Host Configuration

Statistic Name	Description
%busy	The percentage of elapsed CPU time the processors were busy across all of the virtual machines in the resource pool [Sequential = AVG Non-Sequential = AVG]
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
capacityContention	The percentage of time the virtual machine is unable to run because it is contending for access to the physical CPUs. This statistic is only available for VMware vCenter Server 5.0 and higher. [Sequential = AVG Non-Sequential = SUM]
capacityDemand	The amount of CPU resources a virtual machine would use if there were no CPU contention or CPU limit. This statistic is only available for VMware vCenter Server 5.0 and higher. [Sequential = AVG Non-Sequential = SUM]
capacityEntitlement	The amount of CPU resources devoted by the VMware ESX scheduler to virtual machines and resource pools. This statistic is only available for VMware vCenter Server 5.0 and higher. [Sequential = AVG Non-Sequential = SUM]
Cluster	The name of the cluster to which the resource pool belongs. This field contains <N/A> if the root resource pool is a VMware host. [Sequential = ID Non-Sequential = ID]
ClusterId	The unique identifier for a cluster provided by the VMware API. This identifier does not change when a cluster is renamed. This field contains <N/A> if the host does not belong to a VMware cluster. [Sequential = ID Non-Sequential = ID]

corecountContention	The amount of time the virtual machine was ready to run but was unable to run due to co-scheduling constraints. This statistic is only available for VMware vCenter Server 5.0 and higher. [Sequential = AVG Non-Sequential = SUM]
corecountProvisioned	The number of virtual processors or physical cores provisioned to the entity. This statistic is only available for VMware vCenter Server 5.0 and higher. [Sequential = AVG Non-Sequential = SUM]
Datacenter	The name of the datacenter to which the host belongs [Sequential = ID Non-Sequential = ID]
DatacenterId	The unique identifier for a datacenter provided by the VMware API. This identifier does not change when a datacenter is renamed. [Sequential = ID Non-Sequential = ID]
Host	The name of the host system to which the resource pool belongs. This field contains <N/A> if the root resource pool is a VMware cluster. This field is limited to 51 characters. Any system name longer than 51 characters is truncated. [Sequential = ID Non-Sequential = ID]
ResourcePool	The name of the resource pool to which the data applies [Sequential = ID Non-Sequential = ID]
ResourcePool_Id	The unique identifier for a resource pool provided by the VMware API. This identifier does not change when a resource pool is renamed. [Sequential = ID Non-Sequential = ID]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
usage(MHz)	The CPU usage in megahertz (MHz) over the collection interval [Sequential = AVG Non-Sequential = SUM]
vCenter	The name of the VMware vCenter server [Sequential = ID Non-Sequential = ID]

17.2.17. Resource Pool Memory Summary Table

The Resource Pool Memory Summary table is derived from the VMware Resource Pool.Memory Summary and the VMware.Host Configuration tables. You can view the resource pool memory summary data by cluster, datacenter, or by VMware vCenter server. This table is only available for viewing in TeamQuest Analyzer.

Table Field Hierarchy

Class:	Resource Pool Memory Summary
Subclass:	
IT Resource Name:	/TeamQuest/System/VMware/ResourcePool/*Resource_pool(Resource Pool_Id)*
Table type:	Performance
Physical tables used to produce this table:	VMware Resource Pool.Memory Summary VMware.Host Configuration

Statistic Name	Description
%usage	The percentage of memory usage over the collection interval. This statistic is only available for VMware vCenter Server 5.0 and higher. [Sequential = AVG Non-Sequential = AVG]
active	The working set size estimate in megabytes at the end of the interval for the resource pool [Sequential = AVG Non-Sequential = SUM]
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
balloon	The amount of memory in megabytes allocated by the virtual machine memory control driver (vmmemctl), which is installed with VMware Tools. The vmmemctl is a memory management driver that controls ballooning. [Sequential = AVG Non-Sequential = SUM]
capacityContention	The percentage of time the virtual machine is waiting to access swapped or compressed memory. This statistic is only available for VMware vCenter Server 5.0 and higher. [Sequential = AVG Non-Sequential = SUM]
capacityEntitlement	The amount of host physical memory devoted by the VMware ESX scheduler to the virtual machine. This statistic is only available for VMware vCenter Server 5.0 and higher. [Sequential = AVG Non-Sequential = SUM]
capacityUsage	The amount of physical memory in megabytes used by the virtual machine. This statistic is only available for VMware vCenter Server 5.0 and higher. [Sequential = AVG Non-Sequential = SUM]

Cluster	The name of the cluster to which the resource pool belongs. This field contains <N/A> if the root resource pool is a VMware host. [Sequential = ID Non-Sequential = ID]
ClusterId	The unique identifier for a cluster provided by the VMware API. This identifier does not change when a cluster is renamed. This field contains <N/A> if the host does not belong to a VMware cluster. [Sequential = ID Non-Sequential = ID]
compressed	The amount of memory in megabytes compressed by the VMware ESX Server. This statistic is only available for VMware vCenter Server 5.0 and higher. [Sequential = AVG Non-Sequential = SUM]
compressionRate	The rate of memory compression for the virtual machine. This statistic is only available for VMware vCenter Server 5.0 and higher. [Sequential = AVG Non-Sequential = SUM]
consumed	The amount of memory in megabytes consumed by a resource pool, host, or virtual machine [Sequential = AVG Non-Sequential = SUM]
Datacenter	The name of the datacenter to which the host belongs [Sequential = ID Non-Sequential = ID]
DatacenterId	The unique identifier for a datacenter provided by the VMware API. This identifier does not change when a datacenter is renamed. [Sequential = ID Non-Sequential = ID]
decompressionRate	The rate of memory decompression for the virtual machine. This statistic is only available for VMware vCenter Server 5.0 and higher. [Sequential = AVG Non-Sequential = SUM]
granted	The amount of all granted memory in megabytes for all of the powered-on virtual machines. This statistic is only available for VMware vCenter server statistic level 2. [Sequential = AVG Non-Sequential = SUM]
Host	The name of the host system to which the resource pool belongs. This field contains <N/A> if the root resource pool is a VMware cluster. This field is limited to 51 characters. Any system name longer than 51 characters is truncated. [Sequential = ID Non-Sequential = ID]
overhead	The amount of additional resource pool memory in megabytes allocated to the virtual machine [Sequential = AVG Non-Sequential = SUM]
ResourcePool	The name of the resource pool to which the data applies [Sequential = ID Non-Sequential = ID]
ResourcePool_Id	The unique identifier for a resource pool provided by the VMware API. This identifier does not change when a resource pool is renamed. [Sequential = ID Non-Sequential = ID]

Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
shared	The amount of virtual machine memory in megabytes that is shared with other virtual machines, relative to a single virtual machine or to all powered-on virtual machines on a host [Sequential = AVG Non-Sequential = SUM]
swapped	The amount of memory in megabytes currently swapped to the VMware File System 3 (VMFS3) swap file [Sequential = AVG Non-Sequential = SUM]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
vCenter	The name of the VMware vCenter server [Sequential = ID Non-Sequential = ID]
zero	The amount of memory in megabytes that is zeroed out. This statistic is only available for VMware vCenter Server 5.0 and higher. [Sequential = AVG Non-Sequential = SUM]

17.2.18. Resource Pool Resource Allocation Table

The Resource Pool Resource Allocation table is derived from the VMware Resource Pool.Resource Allocation and the VMware.Host Configuration tables. You can view the resource pool resource allocation data by cluster, datacenter, or by VMware vCenter server. This table is only available for viewing in TeamQuest Analyzer.

Table Field Hierarchy

Class:	Resource Pool Resource Allocation
Subclass:	
IT Resource Name:	/TeamQuest/System/VMware/ResourcePool/*Resource_pool(Resource Pool_Id)*
Table type:	Performance
Physical tables used to produce this table:	VMware Resource Pool.Resource Allocation VMware.Host Configuration

Statistic Name	Description
activeVMs	The number of active virtual machines in a resource pool [Sequential = LST Non-Sequential = SUM]
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
childResourcePool	The number of child resource pools in a resource pool [Sequential = LST Non-Sequential = SUM]
Cluster	The name of the cluster to which the resource pool belongs. This field contains <N/A> if the root resource pool is a VMware host. [Sequential = ID Non-Sequential = ID]
ClusterId	The unique identifier for a cluster provided by the VMware API. This identifier does not change when a cluster is renamed. This field contains <N/A> if the host does not belong to a VMware cluster. [Sequential = ID Non-Sequential = ID]
cpuAvailable	The total amount of CPU in megahertz (MHz) that is available to satisfy a reservation requirement for all virtual machines in a resource pool [Sequential = LST Non-Sequential = LST]
cpuReserved	The total amount of CPU in megahertz (MHz) that is used to satisfy the reservation requirements of all descendants of the resource pools and virtual machines in a resource pool [Sequential = LST Non-Sequential = SUM]
Datacenter	The name of the datacenter to which the host belongs [Sequential = ID Non-Sequential = ID]

DatacenterId	The unique identifier for a datacenter provided by the VMware API. This identifier does not change when a datacenter is renamed. [Sequential = ID Non-Sequential = ID]
Host	The name of the host system to which the resource pool belongs. This field contains <N/A> if the root resource pool is a VMware cluster. This field is limited to 51 characters. Any system name longer than 51 characters is truncated. [Sequential = ID Non-Sequential = ID]
memAvailable	The total amount of memory in megabytes that is available to satisfy the reservation requirements for all virtual machines in a resource pool [Sequential = LST Non-Sequential = LST]
memOverhead	The total amount of memory in megabytes used to satisfy the reservation requirements of all descendants of the virtual machines in a resource pool or any of the child resource pools [Sequential = LST Non-Sequential = SUM]
memReserved	The total amount of memory in megabytes used to satisfy the reservation requirements of all descendants of the resource pools and virtual machines in a resource pool [Sequential = LST Non-Sequential = SUM]
ResourcePool	The name of the resource pool to which the data applies [Sequential = ID Non-Sequential = ID]
ResourcePool_Id	The unique identifier for a resource pool provided by the VMware API. This identifier does not change when a resource pool is renamed. [Sequential = ID Non-Sequential = ID]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
vCenter	The name of the VMware vCenter server [Sequential = ID Non-Sequential = ID]

17.2.19. Storage Adapter by Host System Table

The Storage Adapter by Host System table is derived from the VMware Storage.Adapter by Host System and the VMware.Host Configuration tables. You can view the storage adapter availability data by cluster, datacenter, or by VMware vCenter server. This table is only available for viewing in TeamQuest Analyzer.

Table Field Hierarchy

Class:	Storage Adapter by Host System
Subclass:	
IT Resource Name:	/TeamQuest/System/
Table type:	Performance
Physical tables used to produce this table:	VMware Storage.Adapter by Host System VMware.Host Configuration

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
avgQueueLatency	The average amount of time in milliseconds spent in the ESX Server VMKernel queue per command from the perspective of a storage adapter. This statistic is available for VMware ESX 5.0.0 and later. [Sequential = AVG Non-Sequential = AVG]
avgReadLatency	The average amount of time in milliseconds taken by a read operation to complete from the perspective of a storage adapter. This statistic is available for VMware ESX 4.1.0 and later. [Sequential = AVG Non-Sequential = AVG]
avgWriteLatency	The average amount of time in milliseconds taken by a write operation to complete from the perspective of a storage adapter. This statistic is available for VMware ESX 4.1.0 and later. [Sequential = AVG Non-Sequential = AVG]
Cluster	The name of the cluster to which the host belongs. This field contains <N/A> if the host does not belong to a VMware cluster. [Sequential = ID Non-Sequential = ID]
ClusterId	The unique identifier for a cluster provided by the VMware API. This identifier does not change when a cluster is renamed. This field contains <N/A> if the host does not belong to a VMware cluster. [Sequential = ID Non-Sequential = ID]
cmds/s	The number of commands (requests) issued per second to the storage adapter. This statistic is available for VMware ESX 4.1.0 and later. [Sequential = AVG Non-Sequential = SUM]
Datacenter	The name of the datacenter to which the host belongs [Sequential = ID Non-Sequential = ID]

DatacenterId	The unique identifier for a datacenter provided by the VMware API. This identifier does not change when a datacenter is renamed. [Sequential = ID Non-Sequential = ID]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
KB_read/s	The amount of data read per second in kilobytes (KB) by the storage adapter. This statistic is available for VMware ESX 4.1.0 and later. [Sequential = AVG Non-Sequential = SUM]
KB_write/s	The amount of data written per second in kilobytes (KB) by the storage adapter. This statistic is available for VMware ESX 4.1.0 and later. [Sequential = AVG Non-Sequential = SUM]
KB/s	The amount of data transferred per second in kilobytes (KB) by the storage adapter. This statistic is available for VMware ESX 4.1.0 and later. [Sequential = AVG Non-Sequential = SUM]
oIOsPct	The percentage of I/O operations that have been issued but have not yet completed. This statistic is available for VMware ESX 5.0.0 and later. [Sequential = AVG Non-Sequential = SUM]
outstandingIOs	The number of I/O operations that have been issued but have not yet completed. This statistic is available for VMware ESX 5.0.0 and later. [Sequential = AVG Non-Sequential = SUM]
queued	The number of I/O operations waiting to be issued. This statistic is available for VMware ESX 5.0.0 and later. [Sequential = AVG Non-Sequential = SUM]
queueDepth	The maximum number of I/O operations that can be outstanding at a time. This statistic is available for VMware ESX 5.0.0 and later. [Sequential = AVG Non-Sequential = SUM]
reads/s	The number of read requests issued per second to the storage adapter. This statistic is available for VMware ESX 4.1.0 and later. [Sequential = AVG Non-Sequential = SUM]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
Storage_Adapter	The name of the storage adapter [Sequential = ID Non-Sequential = ID]
System	The name of the host system. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
throughputContention	The average amount of time in milliseconds for an I/O operation to complete. This statistic is available for VMware ESX 5.0.0 and later. [Sequential = AVG Non-Sequential = AVG]
throughputUsage	The average amount of data transferred per second in kilobytes by the storage adapter. This statistic is available for VMware ESX 5.0.0 and later. [Sequential = AVG Non-Sequential = SUM]

Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
writes/s	The total number of write requests issued per second to the storage adapter. This statistic is available for VMware ESX 4.1.0 and later. [Sequential = AVG Non-Sequential = SUM]
vCenter	The name of the VMware vCenter server [Sequential = ID Non-Sequential = ID]

17.2.20. Storage Adapter Summary Table

The Storage Adapter Summary table is derived from the VMware Storage.Adapter Summary and the VMware.Host Configuration tables. You can view the storage adapter availability data by cluster, datacenter, or by VMware vCenter server. This table is only available for viewing in TeamQuest Analyzer.

Table Field Hierarchy

Class:	Storage Adapter Summary
Subclass:	
IT Resource Name:	/TeamQuest/System/
Table type:	Performance
Physical tables used to produce this table:	VMware Storage.Adapter Summary VMware.Host Configuration

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
Cluster	The name of the cluster to which the host belongs. This field contains <N/A> if the host does not belong to a VMware cluster. [Sequential = ID Non-Sequential = ID]
ClusterId	The unique identifier for a cluster provided by the VMware API. This identifier does not change when a cluster is renamed. This field contains <N/A> if the host does not belong to a VMware cluster. [Sequential = ID Non-Sequential = ID]
cmds/s	The number of commands (requests) issued per second to the storage adapter. This statistic is available for VMware ESX 4.1.0 and later. [Sequential = AVG Non-Sequential = SUM]
Datacenter	The name of the datacenter to which the host belongs [Sequential = ID Non-Sequential = ID]
DatacenterId	The unique identifier for a datacenter provided by the VMware API. This identifier does not change when a datacenter is renamed. [Sequential = ID Non-Sequential = ID]

highestLatency	The highest latency in milliseconds of the storage adapter. This statistic is available for VMware ESX 5.0.0 and later. [Sequential = MAX Non-Sequential = MAX]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
System	The name of the host system. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
vCenter	The name of the VMware vCenter server [Sequential = ID Non-Sequential = ID]

17.2.21. Storage Datastore by Host System Table

The Storage Datastore by Host System table is derived from the VMware Storage.Datastore by Host System and the VMware.Storage Configuration tables.

Table Field Hierarchy

Class:	Storage Datastore by Host System
Subclass:	
IT Resource Name:	/TeamQuest/System/VMware/Host/*systemname*
Table type:	Performance
Physical tables used to produce this table:	VMware Storage.Datastore by Host System VMware.Storage Configuration

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
avgLatency	The average amount of time in milliseconds taken to complete a command request (queue and disk service time) by the host system disk [Sequential = AVG Non-Sequential = AVG]
avgReadLatency	The average amount of time in milliseconds taken by a read operation to complete from the datastore [Sequential = AVG Non-Sequential = AVG]
avgWriteLatency	The average amount of time in milliseconds taken by a write operation to complete from the datastore [Sequential = AVG Non-Sequential = AVG]

cmds	The number of commands (requests) issued to the datastore during the collection interval. Calculated as cmds= reads + writes [Sequential = SUM Non-Sequential = SUM]
cmds/s	The number of commands (requests) issued per second to the datastore. Calculated as cmds/s= reads/s + writes/s [Sequential = SUM Non-Sequential = SUM]
Datacenter	The name of the datacenter to which the datastore belongs [Sequential = ID Non-Sequential = ID]
DatacenterId	The unique identifier for a datacenter provided by the VMware API. This identifier does not change when a datacenter is renamed. [Sequential = ID Non-Sequential = ID]
datastoreIops	The aggregated number of storage I/O operations on the datastore [Sequential = AVG Non-Sequential = SUM]
datastoreMaxQueue Depth	The maximum number of storage I/O operations supported by the datastore [Sequential = LST Non-Sequential = LST]
datastoreNormal ReadLatency	The storage DRS normalized read latency for the datastore [Sequential = LST Non-Sequential = LST]
datastoreNormal WriteLatency	The storage DRS normalized write latency for the datastore [Sequential = LST Non-Sequential = LST]
datastoreReadBytes	The number of storage DRS bytes read by the datastore [Sequential = LST Non-Sequential = LST]
datastoreReadIops	The number of storage DRS read I/O operations of the datastore [Sequential = LST Non-Sequential = LST]
datastoreReadLoad Metric	The storage DRS read workload metric of the datastore [Sequential = LST Non-Sequential = LST]
datastoreReadOIO	The number of outstanding read requests by the datastore [Sequential = LST Non-Sequential = LST]
datastoreWriteBytes	The number of storage DRS bytes written to the datastore [Sequential = LST Non-Sequential = LST]
datastoreWriteIops	The number of storage DRS write I/O operations of the datastore [Sequential = LST Non-Sequential = LST]
datastoreWriteLoad Metric	The storage DRS write workload metric of the datastore [Sequential = LST Non-Sequential = LST]
datastoreWriteOIO	The number of outstanding write requests by the datastore [Sequential = LST Non-Sequential = LST]
highestLatency	The highest latency value across all datastores used by the host [Sequential = MAX Non-Sequential = MAX]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]

KB_read/s	The amount of data read per second in kilobytes (KB) by the datastore [Sequential = AVG Non-Sequential = SUM]
KB_write/s	The amount of data written per second in kilobytes (KB) by the datastore [Sequential = AVG Non-Sequential = SUM]
KB/s	The amount of data read and written per second in kilobytes (KB) by the datastore. Calculated as KB/s= KB_reads/s + KB_writes/s [Sequential = AVG Non-Sequential = SUM]
reads	The number of read requests issued to the datastore during the collection interval [Sequential = SUM Non-Sequential = SUM]
reads/s	The number of read requests issued per second to the datastore [Sequential = AVG Non-Sequential = SUM]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
sizeNormalized DatastoreLatency	The normalized latency in microseconds on the datastore. Data for all virtual machines is combined into this statistic. [Sequential = AVG Non-Sequential = SUM]
System	The name of the host system. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
UniqueId	The identifier assigned to a datastore that is unique within a VMware vCenter server [Sequential = ID Non-Sequential = ID]
Virtual_Machine	The name of the virtual machine to which the data applies [Sequential = ID Non-Sequential = ID]
writes	The number of write requests issued to the datastore during the collection interval [Sequential = SUM Non-Sequential = SUM]
writes/s	The number of write requests issued per second to the datastore [Sequential = AVG Non-Sequential = SUM]

17.2.22. Storage Datastore by Virtual Machine Table

The Storage Datastore by Virtual Machine table is derived from the VMware Storage.Datastore by Virtual Machine and the VMware.Storage Configuration tables.

Table Field Hierarchy

Class:	Storage Datastore by Virtual Machine
Subclass:	
IT Resource Name:	/TeamQuest/System/VMware/Virtual Machines/*virtualmachinename*
Table type:	Performance
Physical tables used to produce this table:	VMware Storage.Datastore by Virtual Machine VMware.Storage Configuration

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
avgReadLatency	The average amount of time in milliseconds taken by a read operation to complete from the datastore [Sequential = AVG Non-Sequential = AVG]
avgWriteLatency	The average amount of time in milliseconds taken by a write operation to complete from the datastore [Sequential = AVG Non-Sequential = AVG]
cmds	The number of commands (requests) issued per second to the datastore. Calculated as cmds= reads + writes [Sequential = SUM Non-Sequential = SUM]
Datacenter	The name of the datacenter to which the datastore belongs [Non-Sequential = ID]
DatacenterId	The unique identifier for a datacenter provided by the VMware API. This identifier does not change when a datacenter is renamed. [Non-Sequential = ID]
highestLatency	The highest latency value across all datastores used by the host [Sequential = MAX Non-Sequential = MAX]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
KB_read/s	The amount of data read per second in kilobytes (KB) by the datastore [Sequential = AVG Non-Sequential = SUM]
KB_write/s	The amount of data written per second in kilobytes (KB) by the datastore [Sequential = AVG Non-Sequential = SUM]

KB/s	The amount of data requests per second in kilobytes (KB) by the datastore. Calculated as KB/s= KB_reads + KB_writes [Sequential = AVG Non-Sequential = SUM]
reads	The number of read requests issued to the datastore during the collection interval [Sequential = SUM Non-Sequential = SUM]
reads/s	The number of read requests issued per second to the datastore [Sequential = AVG Non-Sequential = SUM]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
System	The name of the host system. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
UniqueId	The identifier assigned to a datastore that is unique within a VMware vCenter server [Sequential = ID Non-Sequential = ID]
Virtual_Machine	The name of the virtual machine to which the data applies [Sequential = ID Non-Sequential = ID]
writes	The number of write requests issued per second to the datastore [Sequential = SUM Non-Sequential = SUM]
writes/s	The number of write requests issued to the datastore during the collection interval [Sequential = AVG Non-Sequential = SUM]

17.2.23. Storage Datastore Summary Table

The Storage Datastore Summary table is derived from the VMware Storage.Datastore Summary and the VMware.Storage Configuration tables.

Table Field Hierarchy

Class:	Storage Datastore Summary
Subclass:	
IT Resource Name:	/TeamQuest/System/VMware/Datastore/*Datastore*
Table type:	Performance
Physical tables used to produce this table:	VMware Storage.Datastore Summary VMware.Storage Configuration

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
Datacenter	The name of the datacenter to which the datastore belongs [Sequential = ID Non-Sequential = ID]
DatacenterId	The unique identifier for a datacenter provided by the VMware API. This identifier does not change when a datacenter is renamed. [Sequential = ID Non-Sequential = ID]
Datastore	The name of the VMware datastore to which the data applies [Sequential = ID Non-Sequential = ID]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
KB_read/s	The amount of data read per second in kilobytes (KB) by the datastore [Sequential = AVG Non-Sequential = SUM]
KB_write/s	The amount of data written per second in kilobytes (KB) by the datastore [Sequential = AVG Non-Sequential = SUM]
KB/s	The amount of data read and written per second in kilobytes (KB) by the datastore. Calculated as KB/s= KB_reads/s + KB_writes/s [Sequential = AVG Non-Sequential = SUM]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
UniqueId	The identifier assigned to a datastore that is unique within a VMware vCenter server [Sequential = ID Non-Sequential = ID]

17.2.24. Storage Path by Host System Table

The Storage Path by Host System table is derived from the VMware Storage.Path by Host System and the VMware.Host Configuration tables. You can view the storage path availability data by cluster, datacenter, or by VMware vCenter server. This table is only available for viewing in TeamQuest Analyzer.

Table Field Hierarchy

Class:	Storage Path by Host System
Subclass:	
IT Resource Name:	/TeamQuest/System/
Table type:	Performance
Physical tables used to produce this table:	VMware Storage.Path by Host System VMware.Host Configuration

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
avgReadLatency	The average amount of time in milliseconds taken by a read operation to complete from the perspective of the storage path. This statistic is available for VMware ESX 4.1.0 and later. [Sequential = AVG Non-Sequential = AVG]
avgWriteLatency	The average amount of time in milliseconds taken by a write operation to complete from the perspective of the storage path. This statistic is available for VMware ESX 4.1.0 and later. [Sequential = AVG Non-Sequential = AVG]
busRst/s	The number of SCSI bus resets per second that occurred on the storage path. This statistic is available for VMware ESX 5.0.0 and later. [Sequential = AVG Non-Sequential = SUM]
Cluster	The name of the cluster to which the host belongs. This field contains <N/A> if the host does not belong to a VMware cluster. [Sequential = ID Non-Sequential = ID]
ClusterId	The unique identifier for a cluster provided by the VMware API. This identifier does not change when a cluster is renamed. This field contains <N/A> if the host does not belong to a VMware cluster. [Sequential = ID Non-Sequential = ID]
cmds/s	The number of commands (requests) issued per second to the storage path. This statistic is available for VMware ESX 4.1.0 and later. [Sequential = AVG Non-Sequential = SUM]
cmdsAbrt/s	The number of SCSI commands aborted by the storage path per second. This statistic is available for VMware ESX 5.0.0 and later. [Sequential = AVG Non-Sequential = SUM]

Datacenter	The name of the datacenter to which the host belongs [Sequential = ID Non-Sequential = ID]
DatacenterId	The unique identifier for a datacenter provided by the VMware API. This identifier does not change when a datacenter is renamed. [Sequential = ID Non-Sequential = ID]
Device_Name	The name of the host system device [Sequential = ID Non-Sequential = ID]
Device_ID	The identifier of the host system device [Sequential = ID Non-Sequential = ID]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
KB_read/s	The amount of data read per second in kilobytes (KB). This statistic is available for VMware ESX 4.1.0 and later. [Sequential = AVG Non-Sequential = SUM]
KB_write/s	The amount of data written per second in kilobytes (KB). This statistic is available for VMware ESX 4.1.0 and later. [Sequential = AVG Non-Sequential = SUM]
KB/s	The amount of data read and written per second in kilobytes (KB). This statistic is available for VMware ESX 4.1.0 and later. [Sequential = AVG Non-Sequential = SUM]
reads/s	The total number of read requests per second to the storage path. This statistic is available for VMware ESX 4.1.0 and later. [Sequential = AVG Non-Sequential = SUM]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
Storage_Path	The name of the storage path [Sequential = ID Non-Sequential = ID]
System	The name of the host system. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
throughputContention	The average amount of time in milliseconds for an I/O operation to complete. This statistic is available for VMware ESX 5.0.0 and later. [Sequential = AVG Non-Sequential = AVG]
throughputUsage	The average amount of data transferred per second in kilobytes by the storage adapter. This statistic is available for VMware ESX 5.0.0 and later. [Sequential = AVG Non-Sequential = SUM]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
writes/s	The total number of write requests per second to the storage adapter. This statistic is available for VMware ESX 4.1.0 and later. [Sequential = AVG Non-Sequential = SUM]
vCenter	The name of the VMware vCenter server [Sequential = ID Non-Sequential = ID]

17.2.25. Storage Path Summary Table

The Storage Path Summary table is derived from the VMware Storage.Path Summary and the VMware.Host Configuration tables. You can view the storage path availability data by cluster, datacenter, or by VMware vCenter server. This table is only available for viewing in TeamQuest Analyzer.

Table Field Hierarchy

Class:	Storage Path Summary
Subclass:	
IT Resource Name:	/TeamQuest/System/
Table type:	Performance
Physical tables used to produce this table:	VMware Storage.Path Summary VMware.Host Configuration

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
Cluster	The name of the cluster to which the host belongs. This field contains <N/A> if the host does not belong to a VMware cluster. [Sequential = ID Non-Sequential = ID]
ClusterId	The unique identifier for a cluster provided by the VMware API. This identifier does not change when a cluster is renamed. This field contains <N/A> if the host does not belong to a VMware cluster. [Sequential = ID Non-Sequential = ID]
Datacenter	The name of the datacenter to which the host belongs [Non-Sequential = ID]
DatacenterId	The unique identifier for a datacenter provided by the VMware API. This identifier does not change when a datacenter is renamed. [Sequential = ID Non-Sequential = ID]
highestLatency	The highest latency in milliseconds of the storage adapter. This statistic is available for VMware ESX 5.0.0 and later. [Sequential = LST Non-Sequential = SUM]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
System	The name of the host system. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]

Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
vCenter	The name of the VMware vCenter server [Sequential = ID Non-Sequential = ID]

17.2.26. Virtual Disk by Virtual Machine Table

The Virtual Disk by Virtual Machine table is derived from the VMware Storage.Virtual Disk by Virtual Machine and the VMware.Host Configuration tables. You can view the virtual disk availability data by cluster, datacenter, or by VMware vCenter server. This table is only available for viewing in TeamQuest Analyzer.

Table Field Hierarchy

Class:	Virtual Disk by Virtual Machine
Subclass:	
IT Resource Name:	/TeamQuest/System/
Table type:	Performance
Physical tables used to produce this table:	VMware Storage.Virtual Disk by Virtual Machine VMware.Host Configuration

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
avgReadLatency	The average amount of time in milliseconds taken by a read operation to complete from the perspective of the virtual disk. This statistic is available for VMware ESX 4.1.0 and later. [Sequential = AVG Non-Sequential = AVG]
avgWriteLatency	The average amount of time in milliseconds taken by a write operation to complete from the perspective of the virtual disk. This statistic is available for VMware ESX 4.1.0 and later. [Sequential = AVG Non-Sequential = AVG]
busRst/s	The number of SCSI bus resets per second that occurred on the storage adapter. This statistic is available for VMware ESX 5.0.0 and later. [Sequential = AVG Non-Sequential = SUM]
Cluster	The name of the cluster to which the host belongs. This field contains <N/A> if the host does not belong to a VMware cluster. [Sequential = ID Non-Sequential = ID]
ClusterId	The unique identifier for a cluster provided by the VMware API. This identifier does not change when a cluster is renamed. This field contains <N/A> if the host does not belong to a VMware cluster. [Sequential = ID Non-Sequential = ID]

cmdsAbrt/s	The number of SCSI commands aborted by the storage adapter per second. This statistic is available for VMware ESX 5.0.0 and later. [Sequential = AVG Non-Sequential = SUM]
Datacenter	The name of the datacenter to which the host belongs [Sequential = ID Non-Sequential = ID]
DatacenterId	The unique identifier for a datacenter provided by the VMware API. This identifier does not change when a datacenter is renamed. [Sequential = ID Non-Sequential = ID]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
KB_read/s	The amount of data read per second in kilobytes (KB). This statistic is available for VMware ESX 4.1.0 and later. [Sequential = AVG Non-Sequential = SUM]
KB_write/s	The amount of data written per second in kilobytes (KB). This statistic is available for VMware ESX 4.1.0 and later. [Sequential = AVG Non-Sequential = SUM]
KB/s	The amount of data read and written per second in kilobytes (KB). This statistic is available for VMware ESX 4.1.0 and later. [Sequential = AVG Non-Sequential = SUM]
readLoadMetric	The storage DRS virtual disk statistic for the read workload model. This statistic is available for VMware ESX 5.0.0 and later. [Sequential = LST Non-Sequential = SUM]
readOIO	The average number of outstanding read requests to the virtual disk during the collection interval. This statistic is available for VMware ESX 5.0.0 and later. [Sequential = LST Non-Sequential = SUM]
reads/s	The total number of read requests per second to the storage adapter. This statistic is available for VMware ESX 4.1.0 and later. [Sequential = AVG Non-Sequential = SUM]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
System	The name of the host system. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
throughputContention	The average amount of time in milliseconds taken by an I/O operation to complete. This statistic is available for VMware ESX 5.0.0 and later. [Sequential = AVG Non-Sequential = AVG]
throughputUsage	The average amount of data transferred per second in kilobytes by the storage adapter. This statistic is available for VMware ESX 5.0.0 and later. [Sequential = AVG Non-Sequential = SUM]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
vCenter	The name of the VMware vCenter server [Sequential = ID Non-Sequential = ID]

Virtual_Disk	The name of the virtual disk [Sequential = ID Non-Sequential = ID]
Virtual_Machine	The name of the virtual machine to which the data applies [Sequential = ID Non-Sequential = ID]
writeLoadMetric	The storage DRS virtual disk statistic for the write workload model. This statistic is available for VMware ESX 5.0.0 and later. [Sequential = LST Non-Sequential = SUM]
writeOIO	The average number of outstanding write requests to the virtual disk during the collection interval. This statistic is available for VMware ESX 5.0.0 and later. [Sequential = LST Non-Sequential = SUM]
writes/s	The total number of write requests per second to the storage adapter. This statistic is available for VMware ESX 4.1.0 and later. [Sequential = AVG Non-Sequential = SUM]

17.2.27. Virtual Machine Availability Table

The Virtual Machine Availability table is derived from the VMware.Availability by Virtual Machine and the VMware.Host Configuration tables. You can view the virtual machine availability data by cluster, datacenter, or by VMware vCenter server. This table is only available for viewing in TeamQuest Analyzer.

Table Field Hierarchy

Class:	Virtual Machine Availability
Subclass:	
IT Resource Name:	/TeamQuest/System/VMware/Virtual Machines/*virtualmachinename*
Table type:	Performance
Physical tables used to produce this table:	VMware.Availability by Virtual Machine VMware.Host Configuration

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
Cluster	The name of the cluster to which the host belongs. This field contains <N/A> if the host does not belong to a VMware cluster. [Sequential = ID Non-Sequential = ID]
ClusterId	The unique identifier for a cluster provided by the VMware API. This identifier does not change when a cluster is renamed. This field contains <N/A> if the host does not belong to a VMware cluster. [Sequential = ID Non-Sequential = ID]
Datacenter	The name of the datacenter to which the host belongs [Sequential = ID Non-Sequential = ID]

DatacenterId	The unique identifier for a datacenter provided by the VMware API. This identifier does not change when a datacenter is renamed. [Sequential = ID Non-Sequential = ID]
heartbeat	The number of heartbeats in the collection period. The heartbeat represents the overall health of the guest operating system. [Sequential = AVG Non-Sequential = SUM]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
System	The name of the host system. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
uptime_t	The total time in days elapsed since the last virtual machine reboot [Sequential = LST Non-Sequential = SUM]
vCenter	The name of the VMware vCenter server [Sequential = ID Non-Sequential = ID]
Virtual_Machine	The name of the virtual machine to which the data applies [Sequential = ID Non-Sequential = ID]

17.2.28. Virtual Machine Block Device Usage Table

The Virtual Machine Block Device Usage table is derived from the Block Device.by Virtual Machine and the VMware.Host Configuration tables. You can view the virtual machine block device usage data by cluster, datacenter, or by VMware vCenter server. This table is only available for viewing in TeamQuest Analyzer.

Table Field Hierarchy

Class:	Virtual Machine Block Device Usage
Subclass:	
IT Resource Name:	/TeamQuest/System/VMware/Virtual Machines/*virtualmachinename*
Table type:	Performance
Physical tables used to produce this table:	Block Device.by Virtual Machine VMware.Host Configuration

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
avgDeviceLatency	The average amount of time in milliseconds taken to complete a command to the physical device [Sequential = AVG Non-Sequential = AVG]
avgDeviceReadLatency	The average amount of time in milliseconds taken to complete a read from the physical device [Sequential = AVG Non-Sequential = AVG]
avgDeviceWriteLatency	The average amount of time in milliseconds taken to complete a write to the physical device [Sequential = AVG Non-Sequential = AVG]
avgKernelLatency	The average amount of time in milliseconds spent in the ESX Server VMKernel per command [Sequential = AVG Non-Sequential = AVG]
avgKernelReadLatency	The average amount of time in milliseconds spent in the ESX Server VMKernel per read [Sequential = AVG Non-Sequential = AVG]
avgKernelWriteLatency	The average amount of time in milliseconds spent in the ESX Server VMKernel per write [Sequential = AVG Non-Sequential = AVG]
avgLatency	The average amount of time in milliseconds taken to complete a command request (queue and disk service time) by the host system disk [Sequential = AVG Non-Sequential = AVG]
avgQueueLatency	The average amount of time in milliseconds spent in the ESX Server VMKernel queue per command [Sequential = AVG Non-Sequential = AVG]

avgQueueReadLatency	The average amount of time in milliseconds spent in the ESX Server VMKernel queue per read [Sequential = AVG Non-Sequential = AVG]
avgQueueWriteLatency	The average amount of time in milliseconds spent in the ESX Server VMKernel queue per write [Sequential = AVG Non-Sequential = AVG]
avgReadLatency	The average amount of time in milliseconds taken by a read operation to complete from the perspective of a guest operating system [Sequential = AVG Non-Sequential = AVG]
avgWriteLatency	The average amount of time in milliseconds taken by a write operation to complete from the perspective of a guest operating system [Sequential = AVG Non-Sequential = AVG]
avresp	This statistic is not available for the VMware Infrastructure Agent. The value is reported as <N/A>. The average response time is now reported under the avgLatency statistic name. [Sequential = AVG Non-Sequential = AVG]
busRst/s	The number of bus resets per second that occurred on the virtual machine [Sequential = AVG Non-Sequential = SUM]
Cluster	The name of the cluster to which the host belongs. This field contains <N/A> if the host does not belong to a VMware cluster. [Sequential = ID Non-Sequential = ID]
ClusterId	The unique identifier for a cluster provided by the VMware API. This identifier does not change when a cluster is renamed. This field contains <N/A> if the host does not belong to a VMware cluster. [Sequential = ID Non-Sequential = ID]
cmds/s	The number of commands (requests) issued per second to the physical device [Sequential = AVG Non-Sequential = SUM]
cmdsAbrt/s	The number of commands per second that were aborted by the virtual machine [Sequential = AVG Non-Sequential = SUM]
Datacenter	The name of the datacenter to which the host belongs [Sequential = ID Non-Sequential = ID]
DatacenterId	The unique identifier for a datacenter provided by the VMware API. This identifier does not change when a datacenter is renamed. [Sequential = ID Non-Sequential = ID]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
KB_read/s	The amount of data read per second in kilobytes (KB) by the virtual machine [Sequential = AVG Non-Sequential = SUM]
KB_write/s	The amount of data written per second in kilobytes (KB) by the virtual machine [Sequential = AVG Non-Sequential = SUM]

KB/s	The amount of data transferred per second in kilobytes (KB) by the virtual machine [Sequential = AVG Non-Sequential = SUM]
paeCmds/s	This statistic is not available for the VMware Infrastructure Agent. The value is reported as <N/A>. [Sequential = AVG Non-Sequential = SUM]
paeCopies/s	This statistic is not available for the VMware Infrastructure Agent. The value is reported as <N/A>. [Sequential = AVG Non-Sequential = SUM]
reads/s	The number of read requests issued per second to the physical device [Sequential = AVG Non-Sequential = SUM]
Resource	The name of the physical device [Sequential = ID Non-Sequential = ID]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
shares	The number of shares allocated to the virtual machine [Sequential = LST Non-Sequential = SUM]
splitCmds/s	This statistic is not available for the VMware Infrastructure Agent. The value is reported as <N/A>. [Sequential = AVG Non-Sequential = SUM]
splitCopies/s	This statistic is not available for the VMware Infrastructure Agent. The value is reported as <N/A>. [Sequential = AVG Non-Sequential = SUM]
System	The name of the host system. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
totalTime	The total time in milliseconds for all command requests by the virtual machine [Sequential = SUM Non-Sequential = SUM]
vCenter	The name of the VMware vCenter server [Sequential = ID Non-Sequential = ID]
Virtual_Machine	The name of the virtual machine to which the data applies [Sequential = ID Non-Sequential = ID]
writes/s	The total number of write requests issued per second to the physical device [Sequential = AVG Non-Sequential = SUM]

17.2.29. Virtual Machine Configuration Table

The Virtual Machine Configuration table is derived from the VMware.Virtual_Machines and the VMware.Host Configuration tables. You can view the virtual machine configuration data by cluster, datacenter, or by VMware vCenter server. This table is only available for viewing in TeamQuest Analyzer.

Table Field Hierarchy

Class:	Virtual Machine Configuration
Subclass:	
IT Resource Name:	/TeamQuest/System/VMware/Virtual Machines/*virtualmachinename*
Table type:	Event
Physical tables used to produce this table:	VMware.Virtual_Machines VMware.Host Configuration

Statistic Name	Description
Cluster	The name of the cluster to which the host belongs. This field contains <N/A> if the host does not belong to a VMware cluster. [Non-Sequential = ID]
ClusterId	The unique identifier for a cluster provided by the VMware API. This identifier does not change when a cluster is renamed. This field contains <N/A> if the host does not belong to a VMware cluster. [Non-Sequential = ID]
Configuration_File	The configuration file for the virtual machine [Non-Sequential = ID]
CPU_Limit	The cap on the CPU consumption of CPU time by the virtual machine, measured in megahertz (MHz). A value of zero indicates no limit on CPU consumption. [Non-Sequential = SUM]
CPU_Max	This statistic is not available for the VMware Infrastructure Agent. The value is reported as <N/A>. [Non-Sequential = SUM]
CPU_Min	This statistic is not available for the VMware Infrastructure Agent. The value is reported as <N/A>. [Non-Sequential = SUM]
CPU_Reservation	The number of CPU cycles reserved for the virtual machine, measured in megahertz (MHz) [Non-Sequential = SUM]
CPU_Shares	The CPU share allocation for the virtual machine [Non-Sequential = SUM]
Datacenter	The name of the datacenter to which the host belongs [Non-Sequential = ID]
DatacenterId	The unique identifier for a datacenter provided by the VMware API. This identifier does not change when a datacenter is renamed. [Non-Sequential = ID]

Disk_Shares	The disk share allocation for the virtual machine [Non-Sequential = SUM]
ESX_Server	The version of VMware ESX Server [Non-Sequential = ID]
htSharing	Specifies how the VCPUs of a virtual machine are allowed to share physical cores on a hyperthreaded system. Values can be any, internal, or none. [Non-Sequential = ID]
Memory_Limit	The cap on the memory consumption by this virtual machine, measured in megabytes. A value of zero indicates no fixed limit on memory consumption. [Non-Sequential = SUM]
Memory_Max	This statistic is not available for the VMware Infrastructure Agent. The value is reported as <N/A>. [Non-Sequential = SUM]
Memory_Min	This statistic is not available for the VMware Infrastructure Agent. The value is reported as <N/A>. [Non-Sequential = SUM]
Memory_Reservation	The amount of memory reserved for the virtual machine, measured in megabytes [Non-Sequential = SUM]
Memory_Shares	The memory share allocation for the virtual machine [Non-Sequential = SUM]
OS	The virtual machine operating system name [Non-Sequential = ID]
PID	This statistic is not available for the VMware Infrastructure Agent. The value is reported as <N/A>. [Non-Sequential = ID]
System	The name of the host system. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Non-Sequential = ID]
Time	The timestamp of the data sample [Non-Sequential = ID]
vCenter	The name of the VMware vCenter server [Non-Sequential = ID]
VM	The virtual machine name [Non-Sequential = ID]
VMID	The virtual machine identifier [Non-Sequential = ID]
VCPU_Count	The number of virtual processors for the virtual machine [Non-Sequential = SUM]

17.2.30. Virtual Machine CPU Usage Table

The Virtual Machine CPU Usage table is derived from the CPU.by Virtual Machine and the VMware.Host Configuration tables. You can view the virtual machine CPU usage data by cluster, datacenter, or by VMware vCenter server. This table is only available for viewing in TeamQuest Analyzer.

Table Field Hierarchy

Class:	Virtual Machine CPU Usage
Subclass:	
IT Resource Name:	/TeamQuest/System/VMware/Virtual Machines/*virtualmachinename*
Table type:	Performance
Physical tables used to produce this table:	CPU.by Virtual Machine VMware.Host Configuration

Statistic Name	Description
%busy	The percentage of the server processor or processors that the virtual machine used [Sequential = AVG Non-Sequential = SUM]
%vcpu_busy	The percentage of the virtual machines virtual processors used [Sequential = AVG Non-Sequential = SUM]
%vcpu_ready	The percentage of time the virtual machine was ready to perform an operation but had to wait for a processor [Sequential = AVG Non-Sequential = SUM]
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
Cluster	The name of the cluster to which the host belongs. This field contains <N/A> if the host does not belong to a VMware cluster. [Sequential = ID Non-Sequential = ID]
ClusterId	The unique identifier for a cluster provided by the VMware API. This identifier does not change when a cluster is renamed. This field contains <N/A> if the host does not belong to a VMware cluster. [Sequential = ID Non-Sequential = ID]
Datacenter	The name of the datacenter to which the host belongs [Sequential = ID Non-Sequential = ID]
DatacenterId	The unique identifier for a datacenter provided by the VMware API. This identifier does not change when a datacenter is renamed. [Sequential = ID Non-Sequential = ID]
emin	This statistic is not available for the VMware Infrastructure Agent. The value is reported as <N/A>. [Sequential = MIN Non-Sequential = SUM]

extrasec	This statistic is not available for the VMware Infrastructure Agent. The value is reported as <N/A>. [Sequential = SUM Non-Sequential = SUM]
guaranteed	This statistic is not available for the VMware Infrastructure Agent. The value is reported as <N/A>. [Sequential = LST Non-Sequential = SUM]
host_uptime	The elapsed time in seconds between two samples that the host or virtual machine was powered on [Sequential = SUM Non-Sequential = SUM]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
max	This statistic is not available for the VMware Infrastructure Agent. The value is reported as <N/A>. [Sequential = MAX Non-Sequential = SUM]
min	This statistic is not available for the VMware Infrastructure Agent. The value is reported as <N/A>. [Sequential = MIN Non-Sequential = SUM]
ready	The amount of time in seconds the virtual machine was ready to perform an operation but had to wait for a processor [Sequential = SUM Non-Sequential = SUM]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
shares	The number of CPU shares allocated to the virtual machine [Sequential = LST Non-Sequential = SUM]
syssec	The amount of system time in seconds consumed by the virtual machine [Sequential = SUM Non-Sequential = SUM]
System	The name of the host system. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
uptime	The elapsed time in seconds between two samples that the host or virtual machine was powered on [Sequential = SUM Non-Sequential = SUM]
usage(MHz)	The CPU usage in megahertz (MHz) over the collected interval [Sequential = AVG Non-Sequential = SUM]
usedsec	The processor time in seconds consumed by the virtual machine [Sequential = SUM Non-Sequential = SUM]
vCenter	The name of the VMware vCenter server [Sequential = ID Non-Sequential = ID]
Virtual_Machine	The name of the virtual machine to which the data applies [Sequential = ID Non-Sequential = ID]
waitsec	The virtual CPU wait time in seconds [Sequential = SUM Non-Sequential = SUM]

17.2.31. Virtual Machine Memory Usage Table

The Virtual Machine Memory Usage table is derived from the Memory.by Virtual Machine and the VMware.Host Configuration tables. You can view the virtual machine memory usage data by cluster, datacenter, or by VMware vCenter server. This table is only available for viewing in TeamQuest Analyzer.

Table Field Hierarchy

Class:	Virtual Machine Memory Usage
Subclass:	
IT Resource Name:	/TeamQuest/System/VMware/Virtual Machines/*virtualmachinename*
Table type:	Performance
Physical tables used to produce this table:	Memory.by Virtual Machine VMware.Host Configuration

Statistic Name	Description
%usage	The percentage of total available memory that is used [Sequential = AVG Non-Sequential = SUM]
active	The working set size estimate in megabytes at the end of the interval for the virtual machine [Sequential = AVG Non-Sequential = SUM]
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
Cluster	The name of the cluster to which the host belongs. This field contains <N/A> if the host does not belong to a VMware cluster. [Sequential = ID Non-Sequential = ID]
ClusterId	The unique identifier for a cluster provided by the VMware API. This identifier does not change when a cluster is renamed. This field contains <N/A> if the host does not belong to a VMware cluster. [Sequential = ID Non-Sequential = ID]
consumed	The amount of host memory in megabytes consumed by the virtual machine for guest memory [Sequential = AVG Non-Sequential = SUM]
cptread	This statistic is not available for the VMware Infrastructure Agent. The value is reported as <N/A>. [Sequential = LST Non-Sequential = SUM]
cpttgt	This statistic is not available for the VMware Infrastructure Agent. The value is reported as <N/A>. [Sequential = LST Non-Sequential = SUM]
Datacenter	The name of the datacenter to which the host belongs [Sequential = ID Non-Sequential = ID]

DatacenterId	The unique identifier for a datacenter provided by the VMware API. This identifier does not change when a datacenter is renamed. [Sequential = ID Non-Sequential = ID]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
max	This statistic is not available for the VMware Infrastructure Agent. The value is reported as <N/A>. [Sequential = MAX Non-Sequential = SUM]
memctl	The amount of memory in megabytes currently reclaimed using vmmemctl for the virtual machine [Sequential = AVG Non-Sequential = SUM]
memctlgt	The target memory size in megabytes to reclaim using vmmemctl for the virtual machine [Sequential = AVG Non-Sequential = SUM]
min	This statistic is not available for the VMware Infrastructure Agent. The value is reported as <N/A>. [Sequential = MIN Non-Sequential = SUM]
overhd	The amount of extra memory the virtual machine process is using, in addition to the amount of memory allocated to it in megabytes [Sequential = LST Non-Sequential = SUM]
ovhdmax	This statistic is not available for the VMware Infrastructure Agent. The value is reported as <N/A>. [Sequential = MAX Non-Sequential = SUM]
ovhdpeak	This statistic is not available for the VMware Infrastructure Agent. The value is reported as <N/A>. [Sequential = MAX Non-Sequential = SUM]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
shared	The amount of memory in megabytes shared between all running virtual machines and within a virtual machine in megabytes [Sequential = AVG Non-Sequential = SUM]
shares	The number of memory shares allocated to the virtual machine [Sequential = LST Non-Sequential = SUM]
size	The amount of memory in megabytes currently allocated to the virtual machine [Sequential = AVG Non-Sequential = SUM]
sizetgt	This statistic is not available for the VMware Infrastructure Agent. The value is reported as <N/A>. [Sequential = AVG Non-Sequential = SUM]
swapin	The total amount of memory in megabytes that has been read from the virtual machine's swap file to the machine memory by the VMKernel during the interval [Sequential = AVG Non-Sequential = SUM]

swapout	The total amount of memory in megabytes that has been transferred from the virtual machine's swap file to the machine memory by the VMKernel during the interval [Sequential = AVG Non-Sequential = SUM]
swapped	The amount of memory in megabytes currently swapped to the VMware File System 3 (VMFS3) swap file [Sequential = LST Non-Sequential = SUM]
swaptgt	The target size in megabytes to swap to the VMware File System 3 (VMFS3) swap file for the virtual machine [Sequential = LST Non-Sequential = SUM]
System	The name of the host system. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
vCenter	The name of the VMware vCenter server [Sequential = ID Non-Sequential = ID]
Virtual_Machine	The name of the virtual machine to which the data applies [Sequential = ID Non-Sequential = ID]
zero	The amount of memory in megabytes that is zeroed out [Sequential = AVG Non-Sequential = SUM]

17.2.32. Virtual Machine Network Device Usage Table

The Virtual Machine Network Device Usage table is derived from the Network Device.by Virtual Machine and the VMware.Host Configuration tables. You can view the virtual machine network device usage data by cluster, datacenter, or by VMware vCenter server. This table is only available for viewing in TeamQuest Analyzer.

Table Field Hierarchy

Class:	Virtual Machine Network Device Usage
Subclass:	
IT Resource Name:	/TeamQuest/System/VMware/Virtual Machines/*virtualmachinename*
Table type:	Performance
Physical tables used to produce this table:	Network Device.by Virtual Machine VMware.Host Configuration

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
Cluster	The name of the cluster to which the host belongs. This field contains <N/A> if the host does not belong to a VMware cluster. [Sequential = ID Non-Sequential = ID]
ClusterId	The unique identifier for a cluster provided by the VMware API. This identifier does not change when a cluster is renamed. This field contains <N/A> if the host does not belong to a VMware cluster. [Sequential = ID Non-Sequential = ID]
Datacenter	The name of the datacenter to which the host belongs [Sequential = ID Non-Sequential = ID]
DatacenterId	The unique identifier for a datacenter provided by the VMware API. This identifier does not change when a datacenter is renamed. [Sequential = ID Non-Sequential = ID]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
KBRx/s	The amount of data received per second in kilobytes (KB) by the virtual machine [Sequential = AVG Non-Sequential = SUM]
KBTx/s	The amount of data transmitted per second in kilobytes (KB) by the virtual machine [Sequential = AVG Non-Sequential = SUM]
KBx/s	The amount of data transferred per second in kilobytes (KB) by the virtual machine [Sequential = AVG Non-Sequential = SUM]
packets/s	The number of packets transferred per second by the virtual machine [Sequential = AVG Non-Sequential = SUM]

pktsRx/s	The number of packets received per second by the virtual machine [Sequential = AVG Non-Sequential = SUM]
pktsTx/s	The number of packets transmitted per second by the virtual machine [Sequential = AVG Non-Sequential = SUM]
Resource	The name of the host system interface [Sequential = ID Non-Sequential = ID]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
System	The name of the host system. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
vCenter	The name of the VMware vCenter server [Sequential = ID Non-Sequential = ID]
Virtual_Machine	The name of the virtual machine to which the data applies [Sequential = ID Non-Sequential = ID]

17.2.33. Virtual Machine Virtual CPU Usage Table

The Virtual Machine Virtual CPU Usage table is derived from the CPU.by Virtual CPU and the VMware.Host Configuration tables. You can view the virtual machine virtual CPU usage data by cluster, datacenter, or by VMware vCenter server. This table is only available for viewing in TeamQuest Analyzer.

Table Field Hierarchy

Class:	Virtual Machine Virtual CPU Usage
Subclass:	
IT Resource Name:	/TeamQuest/System/VMware/Virtual Machines/*virtualmachinename*
Table type:	Performance
Physical tables used to produce this table:	Network Device.by Virtual Machine VMware.Host Configuration

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = AVG]
Cluster	The name of the cluster to which the host belongs. This field contains <N/A> if the host does not belong to a VMware cluster. [Sequential = ID Non-Sequential = ID]
ClusterId	The unique identifier for a cluster provided by the VMware API. This identifier does not change when a cluster is renamed. This field contains <N/A> if the host does not belong to a VMware cluster. [Sequential = ID Non-Sequential = ID]
Datacenter	The name of the datacenter to which the host belongs [Sequential = ID Non-Sequential = ID]
DatacenterId	The unique identifier for a datacenter provided by the VMware API. This identifier does not change when a datacenter is renamed. [Sequential = ID Non-Sequential = ID]
extrasec	This statistic is not available for the VMware Infrastructure Agent. The value is reported as <N/A>. [Sequential = SUM Non-Sequential = SUM]
guaranteed	This statistic is not available for the VMware Infrastructure Agent. The value is reported as <N/A>. [Sequential = LST Non-Sequential = SUM]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
Object	The name of the CPU object [Sequential = ID Non-Sequential = ID]
ready	The virtual CPU time that is spent in the ready state in seconds [Sequential = SUM Non-Sequential = SUM]

Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
syssec	The virtual CPU time that is spent on system processes in seconds [Sequential = SUM Non-Sequential = SUM]
System	The name of the host system. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
usage(MHz)	The CPU usage in megahertz (MHz) over the collection interval [Sequential = AVG Non-Sequential = SUM]
usedsec	The virtual CPU time that is used in seconds [Sequential = SUM Non-Sequential = SUM]
vCenter	The name of the VMware vCenter server [Sequential = ID Non-Sequential = ID]
Virtual_Machine	The name of the virtual machine to which the data applies [Sequential = ID Non-Sequential = ID]
waitsec	The virtual CPU wait time in seconds [Sequential = SUM Non-Sequential = SUM]

17.2.34. Virtual Machine Network vmnic Usage Table

The Virtual Machine Network vmnic Usage table is derived from the Network Device.vmnic by Virtual Machine and the VMware.Host Configuration tables. You can view the virtual machine network vmnic usage data by cluster, by datacenter, or by VMware vCenter server. This table is only available for viewing in TeamQuest Analyzer.

Table Field Hierarchy

Class:	Virtual Machine Network vmnic Usage
Subclass:	
IT Resource Name:	/TeamQuest/System/VMware/Virtual Machines/*virtualmachinename*
Table type:	Performance
Physical tables used to produce this table:	Network Device.vmnic by Virtual Machine VMware.Host Configuration

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Non-Sequential = AVG]
Cluster	The name of the cluster to which the host belongs. This field contains <N/A> if the host does not belong to a VMware cluster. [Sequential = ID Non-Sequential = ID]
ClusterId	The unique identifier for a cluster provided by the VMware API. This identifier does not change when a cluster is renamed. This field contains <N/A> if the host does not belong to a VMware cluster. [Sequential = ID Non-Sequential = ID]
Datacenter	The name of the datacenter to which the host belongs [Non-Sequential = ID]
DatacenterId	The unique identifier for a datacenter provided by the VMware API. This identifier does not change when a datacenter is renamed. [Sequential = ID Non-Sequential = ID]
Host	The name of the host system. This field is limited to 51 characters. Any system name longer than 51 characters is truncated. [Non-Sequential = ID]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = AVG]
KBRx/s	The amount of data received per second in kilobytes (KB) by the virtual machine [Sequential = AVG Non-Sequential = SUM]
KBTx/s	The amount of data transmitted per second in kilobytes (KB) by the virtual machine [Sequential = AVG Non-Sequential = SUM]

KBx/s	The amount of data transferred per second in kilobytes (KB) by the virtual machine [Sequential = AVG Non-Sequential = SUM]
packets/s	The number of packets transferred per second by the virtual machine [Sequential = AVG Non-Sequential = SUM]
pktsRx/s	The number of packets received per second by the virtual machine [Sequential = AVG Non-Sequential = SUM]
pktsTx/s	The number of packets transmitted per second by the virtual machine [Sequential = AVG Non-Sequential = SUM]
Resource	The name of the host system interface [Sequential = ID Non-Sequential = ID]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
System	The name of the host system. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
vCenter	The name of the VMware vCenter server [Sequential = ID Non-Sequential = ID]
Virtual_Machine	The name of the virtual machine to which the data applies [Sequential = ID Non-Sequential = ID]

17.2.35. VMware CPU Relative Performance Table

The VMware CPU Relative Performance table is derived from the CPU.Relative Performance and the VMware.Storage Configuration tables. You can view the CPU relative performance by cluster, by datacenter, or by VMware vCenter server. This table is only available for viewing in TeamQuest Analyzer.

Table Field Hierarchy

Class:	VMware CPU Relative Performance
Subclass:	
IT Resource Name:	/TeamQuest/System/VMware/Host/*systemname*
Table type:	Performance
Physical tables used to produce this table:	CPU.Relative Performance VMware.Storage Configuration

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = ID]
Cluster	The name of the cluster to which the host belongs. This field contains <N/A> if the host does not belong to a VMware cluster. [Sequential = ID Non-Sequential = ID]
ClusterId	The unique identifier for a cluster provided by the VMware API. This identifier does not change when a cluster is renamed. This field contains <N/A> if the host does not belong to a VMware cluster. [Sequential = ID Non-Sequential = ID]
cpu_relative_ performance	The relative performance of the CPU on a common scale [Sequential = AVG Non-Sequential = SUM]
Datacenter	The name of the datacenter to which the host belongs [Sequential = ID Non-Sequential = ID]
DatacenterId	The unique identifier for a datacenter provided by the VMware API. This identifier does not change when a datacenter is renamed. [Sequential = ID Non-Sequential = ID]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = ID]
relative_unused	The amount of CPU resources not used based on a common, relative scale [Sequential = AVG Non-Sequential = SUM]
rel_used	The amount of CPU resources used based on a common, relative scale [Sequential = AVG Non-Sequential = SUM]

System	The name of the system where the data is collected. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
vCenter	The name of the VMware vCenter server [Sequential = ID Non-Sequential = ID]

Section 18
Web Server

The Web Server Agent (**tqwsp**) gathers performance information about Web server instances running on your system and stores the information in the aggregation sets of the TeamQuest performance database. It also maintains lists of the top files accessed in the Web File Access table of the performance database.

Statistics are collected on overall connection and error rates, throughput, maximum and average transfer sizes, and average request times. Response codes per second for each category of response code are also stored. In addition, statistics are collected by transfer size, file type, and request type.

This section contains a listing of the statistics collected by the agent:

- Web Server Statistics (see 18.1)
- Top File Access Statistics (see 18.2)

Note: *At the end of each statistic description, you will see a notation in brackets indicating the method that is used for data consolidation (for example,* [Sequential = SUM Non-Sequential = SUM]). *Sequential means that the field is consolidated over time. Non-Sequential means that the field is consolidated within a specified time interval.*

The following notations are used:

AVG = Average
DIV = Weight
FST = First
ID = Identifier
LST = Last
MAX = Maximum
MIN = Minimum
NON = None or no method was used
SUM = Summation

If you are using TeamQuest View to view aggregation set data, the sequential method is used for data consolidation.

Because derived statistics are not stored in the performance database, the data consolidation method is not shown in the description of a derived statistic.

18.1. Web Server Statistics

The following statistics are stored in the TeamQuest performance database by the Web Server Agent (**tqwsp**). The Resource portion of each parameter name is the *webservername*. The *webservernames* used are those that have been defined in the Web Server Agent configuration file. For more information on configuring the Web Server Agent, see the *TeamQuest Performance Software Administration Guide*.

Note: *The following statistics are only available for the TeamQuest database architecture. If the open database architecture is used, a record for each agent using these statistics is created in the TQ.Agent Interval table.*

Class:	TQ
Subclass:	N/A
IT Resource Name:	N/A
TeamQuest Table Name:	N/A
Open Table Name:	N/A
Statistic Name:	
tqwsp_end_time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
tqwsp_interval	The number of seconds elapsed between the end of data collection for the previous sample and the end of data collection for the current sample [Sequential = SUM Non-Sequential = ID]
wsp interval	The number of seconds elapsed between two samples of the Web Server Agent [Sequential = SUM Non-Sequential = ID]

Table Field Hierarchy

Class:	TQ
Subclass:	Agent Interval
IT Resource Name:	/TeamQuest/System/*systemname*
TeamQuest Table Name:	TQ.Agent Interval
Open Table Name:	AGENTINTERVAL
Collection interval:	Based on the collection period
Default retentions:	8 hours at collection period interval 8 days at 10-minute intervals 35 days at 1-hour intervals 400 days at 8-hour intervals
Table type:	Performance
Derived tables using fields from this table:	N/A

Statistic Name	Description
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = ID]
Agent	The name of the agent that is collecting data. This field is limited to 52 characters. Any agent name longer than 52 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Instance	The instance name of the agent that is collecting data. This field is limited to 52 characters. Any instance name longer than 52 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = ID]
PID	The process identifier of the agent instance that is collecting data [Sequential = ID Non-Sequential = ID]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
System	The name of the system where the data is collected. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential LST Non-Sequential = ID]

Parameter Hierarchy

Class:	Web Server
Subclass:	File Types.Bitmap File Types.ColdFusion File Types.Compressed File Types.Document File Types.Dynamic File Types.HTML File Types.Image File Types.Java File Types.Other File Types.PHP File Types.Sound File Types.Video
IT Resource Name:	/TeamQuest/System/*systemname*/Web Server/*webservername*
TeamQuest Table Name:	Web Server.File Types.Bitmap Web Server.File Types.ColdFusion Web Server.File Types.Compressed Web Server.File Types.Document Web Server.File Types.Dynamic Web Server.File Types.HTML Web Server.File Types.Image Web Server.File Types.Java Web Server.File Types.Other Web Server.File Types.PHP Web Server.File Types.Sound Web Server.File Types.Video
Open Table Name:	WSVRFILETYPESBITMAP WSVRFILETYPESCOLDFUS WSVRFILETYPESCOMPRES WSVRFILETYPESDOCUMEN WSVRFILETYPESDYN WSVRFILETYPESHTML WSVRFILETYPESIMAGE WSVRFILETYPESJAVA WSVRFILETYPESOTHER WSVRFILETYPESPHP WSVRFILETYPESSOUND WSVRFILETYPESVIDEO
Resource:	webserver1, webserver2, ...
Statistic Name:	
% of bytes	The percentage of the total bytes transferred on behalf of connections that requested files of this type [Sequential = AVG Non-Sequential = AVG] View Report: /report/webserv/filetype/bytedist.rpt

% of conn	The percentage of the total connections requesting files of this type [Sequential = AVG Non-Sequential = AVG] View Report: /report/webserv/filetype/conndist.rpt
avg req time (secs)	The average number of seconds required to process requests for files of this type (or zero if not available in access log) [Sequential = AVG Non-Sequential = AVG] View Report: /report/webserv/filetype/reqtime.rpt
avg xfer size (kbytes)	The average transfer size for files of this type [Sequential = AVG Non-Sequential = AVG] View Report: /report/webserv/filetype/xfersize.rpt
max xfer size (kbytes)	The largest transfer size for files of this type [Sequential = MAX Non-Sequential = SUM] View Report: /report/webserv/filetype/xfersize.rpt
xfers/sec	The number of transfers per second for files of this type [Sequential = AVG Non-Sequential = SUM] View Report: /report/webserv/filetype/xferrate.rpt

Class:	Web Server
Subclass:	Request Types.Delete Request Types.Get Request Types.Head Request Types.Option Request Types.Other Request Types.Post Request Types.Put Request Types.Trace
IT Resource Name:	/TeamQuest/System/*systemname*/Web Server/*webservername*
TeamQuest Table Name:	Web Server.Request Types.Delete Web Server.Request Types.Get Web Server.Request Types.Head Web Server.Request Types.Option Web Server.Request Types.Other Web Server.Request Types.Post Web Server.Request Types.Put Web Server.Request Types.Trace
Open Table Name:	WSREQTYPESDELETE WSREQTYPESGET WSREQTYPESHEAD WSREQTYPESOPTION WSREQTYPESOTHER WSREQTYPESPOST WSREQTYPESPUT WSREQTYPESTRACE
Resource:	webserver1, webserver2, ...
Statistic Name:	
% of conn	The percentage of the total connections using this HTTP request type [Sequential = AVG Non-Sequential = AVG] View Report: /report/webserv/reqtypes.rpt
avg req time (secs)	The average number of seconds required to process requests using this HTTP request type [Sequential = AVG Non-Sequential = AVG] View Report: /report/webserv/reqtime.rpt
reqs/sec	The number of connections per second using this HTTP request type [Sequential = AVG Non-Sequential = SUM] View Report: /report/webserv/reqrates.rpt

Class:	Web Server
Subclass:	Response Codes.Client error Response Codes.Information Response Codes.Redirection Response Codes.Server error Response Codes.Success
IT Resource Name:	/TeamQuest/System/*systemname*/Web Server/*webservername*
TeamQuest Table Name:	Web Server.Response Codes.Client error Web Server.Response Codes.Information Web Server.Response Codes.Redirection Web Server.Response Codes.Server error Web Server.Response Codes.Success
Open Table Name:	WSRSPCODESCLIERROR WSRSPCODESINFORMATIO WSRSPCODESREDIRECTIO WSRSPCODESSERVERROR WSRSPCODESSUCCESS
Resource:	webserver1, webserver2, ...
Statistic Name:	
codes/sec	The number of this type of HTTP response codes sent per second [Sequential = AVG Non-Sequential = SUM] View Report: /report/webserv/err-rate.rpt

Class:	Web Server
Subclass:	Summary
IT Resource Name:	/TeamQuest/System/*systemname*/Web Server/*webservername*
TeamQuest Table Name:	Web Server.Summary
Open Table Name:	WSVRSUM
Resource:	webserver1, webserver2, ...
Statistic Name:	
active sessions	The number of unique IP addresses that were active during the interval [Sequential = AVG Non-Sequential = SUM]
avg req time (secs)	The average number of seconds required to process an HTTP request (or zero if not available in access log) [Sequential = AVG Non-Sequential = AVG] View Report: /report/webserv/websumm.rpt
avg xfer size (kbytes)	The average transfer size for files of this type [Sequential = AVG Non-Sequential = AVG] View Report: /report/webserv/websumm.rpt

connections/sec	The number of HTTP requests per second [Sequential = AVG Non-Sequential = SUM] View Reports: /report/webserv/webrates.rpt /report/webserv/websumm.rpt
errors/sec	The number of HTTP client or server errors per second [Sequential = AVG Non-Sequential = SUM] View Reports: /report/webserv/webrates.rpt /report/webserv/websumm.rpt
max xfer size (kbytes)	The size of the largest transfer in kilobytes [Sequential = MAX Non-Sequential = SUM] View Report: /report/webserv/websumm.rpt
throughput (kbytes/sec)	The number of kilobytes transferred per second [Sequential = AVG Non-Sequential = SUM] View Reports: /report/webserv/webrates.rpt /report/webserv/websumm.rpt
visit count	The number of unique IP addresses whose sessions timed out during the interval [Sequential = SUM Non-Sequential = SUM]

Class:	Web Server
Subclass:	Transfer Sizes.to4KB Transfer Sizes.4to16KB Transfer Sizes.16to64KB Transfer Sizes.64to256KB Transfer Sizes.ov256KB
IT Resource Name:	/TeamQuest/System/*systemname*/Web Server/*webservername*
TeamQuest Table Name:	Web Server.Transfer Sizes.to4KB Web Server.Transfer Sizes.4to16KB Web Server.Transfer Sizes.16to64KB Web Server.Transfer Sizes.64to256KB Web Server.Transfer Sizes.ov256KB
Open Table Name:	WSTRSZSTO4KB WSTRSZS4TO16KB WSTRSZS16TO64KB WSTRSZS64TO256KB WSTRSZSOV256KB
Resource:	webserver1, webserver2, ...
Statistic Name:	
% of bytes	The percentage of the total bytes transferred on behalf of connections that requested files of this size [Sequential = AVG Non-Sequential = AVG] View Report: /report/webserv/xfersize/bytedist.rpt
% of conn	The percentage of the total connections requesting files of this size [Sequential = AVG Non-Sequential = AVG] View Report: /report/webserv/xfersize/conndist.rpt
avg req time (secs)	The average number of seconds required to process requests for files of this size (or zero if not available in access log) [Sequential = AVG Non-Sequential = AVG] View Report: /report/webserv/xfersize/reqtime.rpt
xfers/sec	The number of transfers per second for files of this size [Sequential = AVG Non-Sequential = SUM] View Report: /report/webserv/xfersize/xferrate.rpt

18.2. Top File Access Statistics

The Web Server Agent maintains lists of the files being accessed the most on your Web server. The TopN file lists are stored in the TeamQuest performance database tables. A set of file access records is written to the table at each sample period. The maximum number of records to be written at each sample is specified in the Web Server Agent configuration file. The default Web Server Agent configuration file setting saves information on the top 100 files accessed during each sample. If there is no activity on the Web server during a sample period, no records are written.

Table Field Hierarchy

Class:	Web
Subclass:	File Accesses
IT Resource Name:	/TeamQuest/System/*systemname*/Web Server/*webservername*
TeamQuest Table Name:	Web.File Accesses
Open Table Name:	WEBFILEACCESSES
Collection interval:	Based on the primary aggregation set
Default retention:	1 day at the primary collection interval 1 month at the secondary 1-hour interval
Table type:	Performance

Statistic Name	Description
accesses	The number of connections that requested the file during the sample period [Sequential = SUM Non-Sequential = SUM]
Actual_Interval	The elapsed time between two samples in seconds. This value may not be the same as the Interval statistic value in all samples because data collection can sometimes take longer than expected or because the associated database became active within the given sample interval. [Sequential = SUM Non-Sequential = ID]
avg_reqtime	The average request time (in seconds) for accesses to the file during the sample period. The value is zero if request time is not available in the access log. [Sequential = AVG Non-Sequential = AVG]
file	The name of the file [Sequential = ID Non-Sequential = ID]
Interval	The expected sampling interval in seconds [Sequential = SUM Non-Sequential = ID]
kbytes	The maximum number of kilobytes transferred for a single access to the file during the sample period [Sequential = MAX Non-Sequential = MAX]

max_reqtime	The longest request time (in seconds) for accesses to the file during the sample period. The value is zero if request time is not available in the access log. [Sequential = MAX Non-Sequential = MAX]
min_reqtime	The shortest request time (in seconds) for accesses to the file during the sample period. The value is zero if request time is not available in the access log. [Sequential = MIN Non-Sequential = MIN]
Sample_End_Time	The timestamp of the actual end of data collection for the current sample [Sequential = LST Non-Sequential = ID]
stddev_reqtime	The standard deviation of the request time (in seconds) for accesses to the file during the sample period. The value is zero if request time is not available in the access log. [Sequential = NON Non-Sequential = NON]
sumsqrs_reqtime	The sum of the squares of the request time (in seconds) for accesses to the file during the sample period. The value is zero if request time is not available in the access log. This is a hidden statistic and is for internal use only. [Sequential = SUM Non-Sequential = SUM]
System	The name of the system on which the Web server resides. This field is limited to 51 characters. Any system name longer than 51 characters will be truncated. [Sequential = ID Non-Sequential = ID]
Time	The timestamp of the data sample [Sequential = LST Non-Sequential = ID]
type	The file type (for example, HTML, Image, Sound, Video, Dynamic, Document, Compressed, Bitmap, Java, or Other). Up to 16 characters are displayed. [Sequential = ID Non-Sequential = ID]
webserver	The Web server name as specified in the Web Server Agent configuration file. Up to 52 characters are displayed. [Sequential = ID Non-Sequential = ID]

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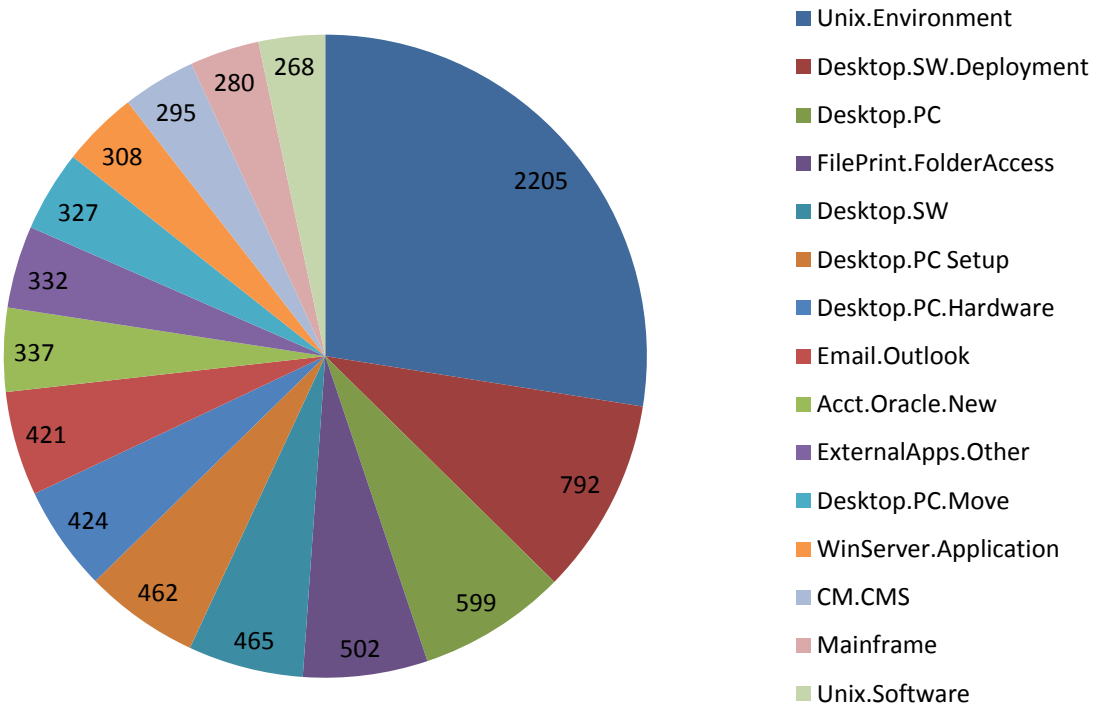
Top Fifteen Request Areas - 2014

Closeout: December 31, 2014

Summary:

This report contains the top fifteen Request and Incident areas reported in CA Service Desk during 2014. Each category was queried, documented, and noted with a brief analysis.

The Top 15 Year to Date Request Areas



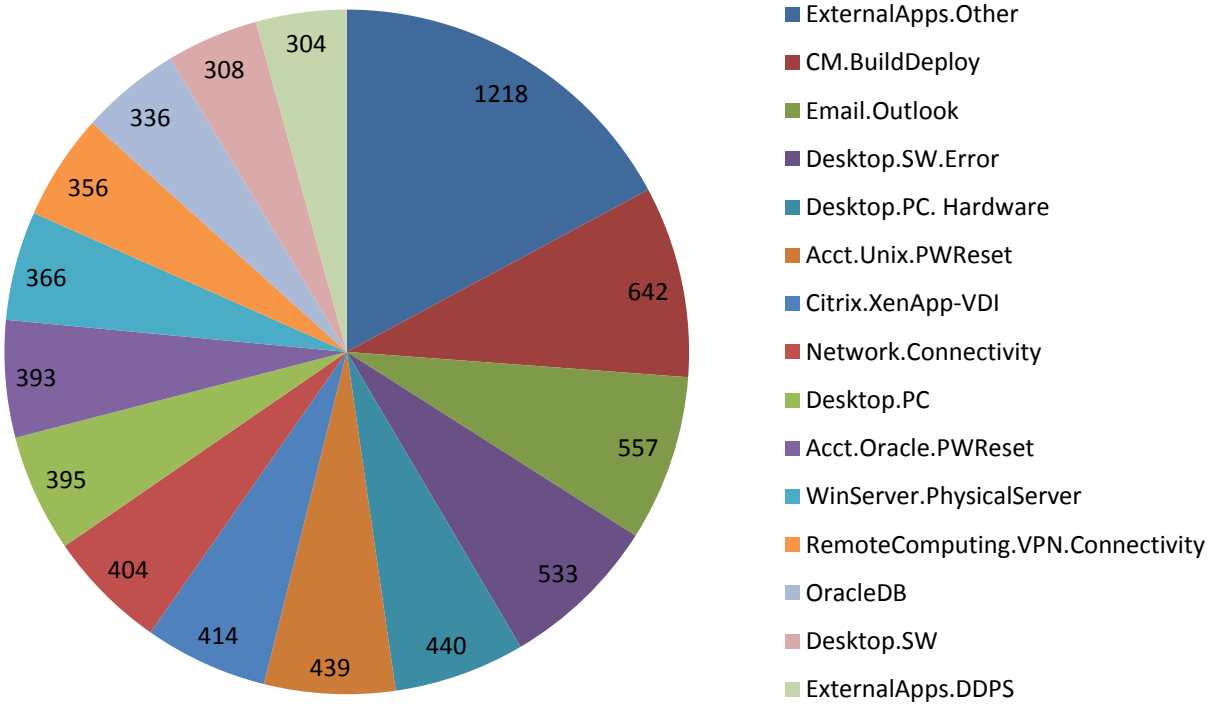
Analysis:

The top fifteen request areas made up 26% of the total reported tickets within CA Service Desk. Individual percentages for each request area are documented below. Percentages within the posted chart indicate percentages within the top fifteen request areas only.

Request Area	Analysis
Unix.Environment – 7.2%	The majority of these requests were for space additions; server restarts due to unreachable servers, accessibility/login issues, or software installs needed for backup; and requests to apply OS patches. Patch related prep-work requests also made up a fair amount of the Unix.Environment requests.
Desktop.SW.Deployment – 2.6%	The majority of these requests were for users that did not have necessary software available in their software catalogs and reinstalling software that was lost following PC re-images.
Desktop.PC – 2%	There were various PC related issues logged under this request. These requests consisted of and were not limited to PC and PC peripheral device replacements, PC re-images, picking up and securing Systems FedEx packages, PC inventory and part recovery, access to virtual machines, installing second hard drives.
FilePrint.FolderAccess – 1.6%	The majority of these requests were for server, directory, and folder access. Organization email mailboxes also require approved File Access Action Forms and made up some of these requests.
Desktop.SW – 1.5%	The majority of these requests were individual user software deployment requests and were accompanied with the proper approved Software Request Form when approval was required. This request area also served as a catch all for several issues ranging from vulnerability scans to PC re-imaging requests and software updates.
Desktop.PC.Setup – 1.5%	The majority of these requests were for PC upgrades, PC images and deployments for desk sharing/hot-desking at the Mark Center, PC images for Ft. Knox, and visitor offices setups.
Email.Outlook – 1.4%	The majority of these requests were distribution list modifications (adding/removing list members), recovering certificates following CAC card replacements, adding mailboxes to user profiles, setting up new user profiles, and creating new organization mailboxes and distribution lists as a result of the DMDC Re-organization.
Desktop.PC.Hardware – 1.4%	This request area was a catch all for various PC hardware requests. Requests consisted of

	second hard drives (most of these users are developers), PC re-imaging, additional memory, keyboard and monitor replacements, and second monitors. Several requests were also logged to track DRMO preparations and the replacement of defective APC power strips.
Acct.Oracle.New – 1%	The majority of these requests stemmed from the DSC migration from Beauregard to Ft. Knox. DSC Ft. Knox personnel require Oracle AUSR accounts in order to perform their job functions.
Desktop.PC.Move – 1%	The majority of these requests were due to the Mark Center desk sharing/hot-desking project, Lorton PC migration onto the DMDC network, asset moves for DRMO, and tracking the movement of equipment from the loading dock and other storage areas.
ExternalApps.Other – 1%	The majority of these tickets were requests for manual web application deployments, bouncing/restarting web applications due to errors or accessibility issues, and log level modifications. These requests were made across all environments.
WinServer.Application – 1%	The majority of these requests were WinServer patches, software install requests on various servers, assists with remediating vulnerabilities on WinServers, capturing shares and share permissions, and removal of backup agents.
CM.CMS – 0.9%	The majority of these requests were CMS access requests, CMS release modification forms, and prototype requests.
Mainframe – 0.9%	The majority of these tickets are RACF permissions requests. The majority of the permissions requests were for read only or update/alert permissions within various groups and files.
Unix.Software - 0.8%	The majority of these requests were for updating Linux and Solaris servers with current recommended OS patches and TeamQuest startups and upgrade/installations. Several requests were also submitted requesting SCC scans and executing SCC tool on JPAS servers.

The Top 15 Year to Date Incident Areas



Analysis:

The top fifteen incident areas made up 23% of the total reported tickets within CA Service Desk. Individual percentages for each request area are documented below. Percentages within the posted chart indicate percentages within the top fifteen incident areas only.

Incident Area	Analysis
ExternalApps.Other – 3.8%	This incident area served as a catch all for various errors, outages, and application issues reported within the Model Office, Test, Demo, and Production environments. The majority of these issues are assigned to and resolved by the Production Support team.
CM.BuildDeploy – 2.1%	The majority of these incidents were CM notifications of web application build and deployment failures. These issues were reported to and resolved by the DMDC CM Team.
Email.Outlook – 1.8%	The majority of these incidents were issues with sending and opening encrypted email, profile configuration issues, and DISA related outages. In 2014, there was a huge decrease in overall latency and “Not responding” issues in comparison to 2013.
Desktop.SW.Error – 1.7%	This incident area served as a catch-all for a broad range of issues, and there is not a specific incident that stands out as a majority. Issues range from but are not limited to users unable to sign or open PDF documents, Corestreet Validation errors, and application login errors.
Desktop.PC.Hardware – 1.4%	The majority of these incidents reported PCs that would not boot, PC latency, hibernation/sleep mode issues, issues with peripheral devices (CAC reader, mouse, keyboard, monitor), and toner replacements.
Acct.Unix.PWReset – 1.4%	All tickets submitted under this incident area were for Unix account password resets within various Unix servers. Resets were due to password expirations, forgotten passwords, and failed password attempts. Resetting the passwords restored user access.
Citrix.XenApp-VDI – 1.4%	The majority of these incidents were for hung sessions and users that were unable to access or launch the VDI portal. There was an influx of VDI users stemming from the DSC migration from Beauregard to Ft. Knox. Ft. Knox was not on the DMDC domain, and remote access was required in order for DSO, DSC, and PSA users at Ft. Knox to access the DMDC network. There were repeat reports of Ft. Knox users’ inability to access VDI (connecting via terminal servers was a successful workaround). The root cause was found to be a policy change or update at the Ft. Knox site for McAfee. Ports were opened,

	and the number of VDI access issues decreased significantly.
Network.Connectivity – 1.3%	The majority of these incidents were caused by tripped port security, VLAN moves, a west coast proxy device issue, and route table issue at Beauregard.
Desktop.PC – 1.3%	This incident area served as a catch-all for a broad range of issues, and there is not a specific incident that stands out as a majority. Issues range from but are not limited to Corestreet Validation errors, application login errors, PC login errors, scanner and printer issues, and hibernation/sleep mode issues.
Acct.Oracle.PWReset – 1.3%	All tickets submitted under this incident were for Oracle account password resets within various Oracle databases. Resets were due to password expirations, forgotten passwords, and failed password attempts. Resetting the passwords restored user access.
WinServer.PhysicalServer – 1.2%	The majority of these incidents were unreachable servers that required restarts, hung user session terminations, reports of low space on network drives in which additional space was released to resolve, and repeat issues with Hobbes.
RemoteComputing.VPN.Connectivity – 1.2%	The majority of these incidents were due to VPN outages and reports of latency. A Remote Computing Questionnaire was established to capture user feedback. The Questionnaire is available on SharePoint.
OracleDB – 1.1%	The majority of these incidents were to report databases that were down, database access issues, and Oracle account password resets.
Desktop.SW – 1%	This incident area served as a catch-all for a broad range of issues, and there is not a specific incident that stands out as a majority. Issues range from but are not limited to users unable to sign or open PDF documents, run time errors, application login errors, and missing network drives
ExternalApps.Other – 0.9%	This incident area served as a catch all for various errors, outages, and application issues reported within the Model Office, Test, Demo, and Production environments. The majority of these issues are assigned to and resolved by the Production Support team.

Experience and Knowledge Requirements
Appendix C

DMDC requires contractor support with experienced personnel in the use of the newest technologies, systems and application software. Contractors are required to use technologies and standards approved by DMDC. It is the Contractor's responsibility to ensure that all personnel assigned to this task maintain technical currency associated with their labor category and specialty. All costs associated with maintaining technical currency will be at the Contractor's expense. Training unique to DMDC will be provided by DMDC. Extensive experience and knowledge is required but not limited to the following:

General Experience and Knowledge

- Microsoft Office products
- Microsoft Project or recommended program
- DoD Information Assurance software products and tools (HBSS, Retina, DISA Gold Disk, and DISA Security Technical Implementation Guides (STIGs))
- Computer Associates Unicenter Ticketing System and Configuration Management Database (CMDB) or other Recommended Tool

Project Mgmt.

- Direct and Manage IT Enterprise Projects with 100% on-time completion using latest techniques and knowledge's.

ITIL

- Provide a comprehensive and coherent set of Best Practices focused on the management of IT service processes throughout the IT OPS Enterprise.
- Provide an Incident Management Team capable of resolving Production Outages within our environments with minimum downtime
- Provide Problem Management capability of analyzing Root Cause Analysis within 24 hours of major Production Outages.
- Provide Change Management exercising timely request and meeting "Need by Date".
- Provide Release Management ensuring that Change and Release is met with all the build in "QA" essentials.
- Provide Capacity Management within all of our IT Operations including Data Center, all Team Levels.

- Service Delivery will include but not limited to:
    - Service level agreement
    - Management Portfolio
    - Event and Availability
    - Service Catalogue
- Provide IT Service Continuity Management (Disaster Recovery Plan) for the Enterprise Systems.
- Provide Help Desk (Service Desk) that is capable of performing First Call Resolution to industry standard and be able to trouble-shoot remote into site computers resolving current Incidents.
- Provide Knowledge Management for Data Articles, How Tos, Policy, Procedures and etc.

Asset Management

- Provide Asset Management Life Cycle for all IT Equipment, including CI and Relationships.
    - Procurements start to end
    - Maintenance Contracts
    - DRMO processes
    - CMDB
- Use latest recommended Tools

Network & Telecom

- Solarwinds Network Monitoring
- IP Management
    - IPv4
    - IPv6
- F5 Load Balancer LTM/GTM
    - I-Rules Scripting
    - OS Configuration
    - DOD PKI Certificate Processing
- Interasys Switches
- NEXXUS switches
- Junniper Switches
- CISCO UCS Enclosures
- CISCO Access Control Server
- CISCO IOS
- Web Proxy Server
- WAN Optimization
- Wireless Access Points
- ASA Firewalls
- Network Analysis Module

- Remote VPN Technologies
- WAN/Telecommunication Services
- Avaya PBX
- Virtual ACD
- SIP (Session Initiated Protocol)
- Cable Management
    - Twisted Pair
    - Fiber Optics
- UPS Technology
- IDS (Intrusion Detection Systems)
- Port Taps/Port Aggregators
- Cisco Switch VLAN and Router VPN implementation.

Desktop & Software Distribution

- Microsoft Desktop Operating Systems (Windows 7 and future releases)
- Smartcard middleware software

Mobile Platforms

- Laptop/Tablets/Smartphones
- OS: Windows, Linux, RIM (BlackBerry), iOS (Apple), Android

Windows Servers, Tools and Virtualization

- Microsoft Windows Server 2008 and 2012 operating systems (and future releases), including designing and deploying IIS, directory and security services
- Microsoft Windows Pre-installation Environment (WinPE) and Microsoft Windows Automated Installation Kit (AIK)
- Virtual Machine (VM) Operating Language
- Structured Query Language (SQL, PL/SQL)
- VMWare virtualization products
- Microsoft Server products (SQL Server, WSUS)
- Virtual Storage Access Method (VSAM)

Data Center

- Cognos SDK (8.4 or most current version)
- Cognos Framework Manager

- Cognos Transformer
- Cognos Query and Analysis Studios
- Cognos BI Admin studio
- Cognos Powerplay
- Unix (SUN Solaris, LINUX)
- Java and Java 2 Enterprise Edition (J2EE) language technologies (including, but not limited to Enterprise Java Bean (EJB), Java Server Pages (JSP), Java Servlets, Java Database Connectivity (JDBC), and Web Services and Web Services Definition Language (WSDL)) , as well as java open source components.
- Maven and Ant Frameworks
- DBUNIT, HTTPUnit, Jprobe, JMeter development and performance analysis tools
- Web development frameworks including, but not limited to, STRUTS, SPRING, Java Server Faces
- Logging framework mechanisms (e.g. LOG4J, LOG4J 2)
- Development of JSR 168/268 portlets that are WSRP 2.0/3.0 compliant
- Statistical Analysis System (SAS) programming language
- Structured Query Language (SQL, PL/SQL)
- Microsoft C/C++
- Microsoft Visual Basic/Visual Basic .NET
- Mobile Device Development on Microsoft Windows CE 5.0, Mobile 5.0 and future releases
- Unix scripting (e.g. PERL, PYTHON, RUBY)
- Web Logic Scripting Tool (WLST)
- AionDS (currently versions 6.4, 7.0, 8) (Trinsic, Platinum Solutions, Computer Associates)
- Demonstrated experience developing applications against large Oracle 10g or 11g databases that are person centric (1.5 terabytes plus, 39+ million people) requiring sub second response times, and high volumes (2.7million transactions per day)
- Oracle Products and services (currently versions 10g, 11g and future Oracle releases) (including but not limited to Structured Query Language (SQL) and Procedural Language (PL/SQL), Jdeveloper, Designer, Oracle SOA Suite
- Oracle Data Warehouse concepts and technology
- Oracle Web Center Portal
- Oracle Web Servers
- Oracle, Sun, WebLogic, Resin and Tomcat Application Servers

- Monitoring Tools including Teamquest, CA Wiley-Interscope, Oracle Enterprise Manager
- Data Warehousing Techniques
- Java Card Virtual Machine Code
- Extensible Markup Language (XML) (including but not limited to Sun Microsystems XML Pack, Sun's Multi-Schema Validator (MSV), Simple Object Access Protocol (SOAP), and others), Extensible Schema Documents (XSD), and Document Type Definition (DTD)
- Security Assertion Markup Language (SAML) - an XML standard for exchanging authentication and authorization data between security domains, that is, between an identity provider and a service provider
- Secure Socket Layer (SSL) security on UNIX platforms
- Secure Shell (SSH) client (such as Reflections for IT)
- Secure File Transfer Protocol (SFTP)
- Time Sharing Option (TSO)
- Job Control Language (JCL)
- Messaging Service Software (eg: IBM MQ, JMS)
- Jaspersoft and Crystal Reports reporting tools
- Subversion Source Control
- Collabnet Subversion Edge
- Apache http modules

Mainframe

- Time Sharing Option (TSO)
- Virtual Machine (VM) Operating Language
- Job Control Language (JCL)
- Secure File Transfer Protocol (SFTP)
- Cyberfusion
- CA Products – CA7, CA-View, CA-Opera, Mainframe VM Product Manager, VMTAPE, VMBackup
- IBM Z10 Mainframe Configurations, Logical Partitions (LPARS), z/OS, z/VM, Unix, Linux
- IBM Application Software
- Software installation
- Systems Lifecycle Management
- Resource Access Control Facility (RACF)

- Removable Media Manager (RMM)
- Systems Backup Software
- Tape Recycling
- Connect Direct
- Statistical Analysis System (SAS) programming language
- Batch Processing for Mainframe
- Secure Shell (SSH), Secure Sockets Layer (SSL), Secure Copy (SCP) & Virtual Private Network (VPN) Tunnels for Mainframe
- Data Facility Storage Management System (DFSMS)
- Transmission Control Protocol/Internet Protocol (TCP/IP)
- Restructured Extended Executor (REXX) Language For Mainframe
- z/VM Pipelines For Mainframe
- z/VM Mini-disks For Mainframe
- VM-Schedule For Mainframe
- Management Of VM Accounts For Mainframe
- SUSE Enterprise Linux & Networking
- RPM Package Manager
- Virtual Private Network (VPN)
- Remote Spooling Communications Subsystems (RSCS) Networking System
- Virtual Telecommunications Access Method (VTAM)
- Data Facility Storage Management System/Removable Media Services (DFSMS/RMS) for Mainframe VM

Testing Environments

- All deployable technologies should be able to be tested in a DMDC-hosted testing environment prior to deployment to the DMDC Enterprise

Resources are required on the contract with the following certifications:

- Security + (or above) certification
- SCRUM Certified resources
- Java J2EE Certified resources
- Java Web Certified resources
- IAT and IAM certifications as required by DOD 8570.01

It is highly desirable for contractor support personnel to have subject matter expertise in the following subjects:

- Serena Configuration and Change Management

- DoD Benefits Eligibility concepts and systems (e.g. DEERS)
- Policy Decision Point Concepts and Software
- DoD Common Access Card (CAC) system including interfaces with the National Security Administration (NSA) and Defense Information Systems Agency (DISA) Certification Authority (CA) system, and Biometric Management Office
- Public Key Infrastructure (PKI) concepts and interfaces with the DISA systems
- PIV Compliant Credential Issuance (e.g Real-time Automated Personnel Identification System (RAPIDS))
- Beneficiary requirements for U.S. Uniformed Services members and their families in accordance with Federal Law
- Military Health System (MHS)
- TRICARE claims processing concepts
- Family Service Members Group Life Insurance
- Immunization Compliance within DoD
- Concepts of creating reporting extracts from large Oracle Databases
- User provisioning concepts and processes
- Defense Finance and Accounting Service (DFAS) DFAS Personal Identification Number (PIN) and User Id/Password concepts
- Montgomery GI Bill (MGIB), Post 9/11 GI Bill, and other educational benefit programs
- Self Service Portal/portlet development
- Unmanned Biometrically Verified CAC Reissuance
- Test labs for verification of devices and remote applets (e.g. CAC Applet Test Lab)
- Standards for XML, Java, Java Card, IEF, PKCS, Global Platform and Biometrics
- Physical Security Access Systems (e.g. Defense Biometric Identification System (DBIDS))
- DoD Non-Combatant Evacuation Operations and Repatriation
- Archival concepts and Records Management
- J2EE technologies, EJB, Application Server Maintenance
- Analysis of DoD Unit Personnel Readiness for activations and deployments

- Microsoft Team Foundation Server and/or Source Safe version control
- Concurrent Versioning System (CVS)
- Common Open Policy Service for Policy Based Management (PDP, PEP…)
- JIRA Issue Tracking
- *Test Director or similar Test creation and execution software*
- *Information Assurance expertise*
- SCRUM Methodology, Rational Unified Process Methodology, and Unified Modeling Language (UML)
- JITC 5015.2 Compliant Records Management Software
- Compuware Optimal Trace for Requirement Documentation
- Wireless technologies (802.11a/b/g)
- Disk and data transmission encryption techniques and technologies
- Disk imaging technologies
- *Electronic Key Management Systems*
- Biometric product and software integration (Fingerprint (single print and ten print), Hand Geometry, Iris, Photo)
- Privacy Act of 1974 requirements

APPENDIX D
DMDC Sites and Users

List of all DMDC Enterprise sites

1) **Defense Human Resources Activity (DHRA) Headquarters office**
    a. Mission - supports the overarching mission by formulating, executing, and overseeing DoD-mandated Human Resource Programs, Budgets, Policies, and Initiatives; and by providing resources and guidance to all DHRA components and programs. The Director of DMDC reports to the Director of DHRA Headquarters.
    b. DMDC IT responsibilities - DMDC provides network infrastructure, Active Directory, video teleconferencing and security services. Mark Center owns and operates physical network, server and building infrastructure.
    c. Address - 4800 Mark Center Drive, Suite 06J25-01, Alexandria, VA 22350-0001
    d. Number of users – 95
2) **Defense Manpower Data Center, Mark Center, Alexandria, Virginia (includes P&RIM)**
    a. Description – DMDC's East Coast Government offices.
    b. DMDC IT responsibilities – DMDC runs the full scope of IT services except Mark Center owns and operates physical network, server and building infrastructure.
    c. Address - 4800 Mark Center Drive, Suite 06J25-01 & Suite 05E22, Alexandria, VA 22350-0001
    d. Number of users – 228
3) **Defense Manpower Data Center, Seaside, California**
    a. Description – DMDC's West Coast Government offices.
    b. DMDC IT responsibilities – DMDC runs the full scope of IT services, including a datacenter running mid-range infrastructure.
    c. Address – 400 Gigling Rd, Seaside CA, 93955
    d. Number of users – 667
4) **Defense Manpower Data Center, Columbus, Ohio**
    a. Description – DISA DECC Datacenter site hosting mid-range systems. IT equipment is government furnished.
    b. DMDC responsibilities – DMDC runs the full scope of IT services except building services.
    c. Address – 1990 East Broad St, Bldg 23, Columbus, OH 43213
    d. Number of users – 2
5) **Defense Manpower Data Center, Alexandria, Virginia ("Beauregard")**
    a. Description – Contractor owned and operated site supporting DMDC contracts. IT equipment is government furnished.
    b. DMDC responsibilities – DMDC runs the full scope of IT services except building services.
    c. Address – 1600 N. Beauregard St Suite 100, Alexandria , VA
    d. Number of users – 331
6) **Defense Manpower Data Center, Ashburn, Virginia**
    a. Description – Contractor owned and operated site supporting DMDC contracts. IT equipment is government furnished.
    b. DMDC responsibilities – DMDC runs the full scope of IT services except building services.
    c. Address – 19886 Ashburn Road, Ashburn, VA 20147
    d. Number of users – 14
7) **Defense Manpower Data Center, Boyers, Pennsylvania**
    a. Description – Contractor owned and operated site supporting DMDC contracts. IT equipment is government furnished.
    b. DMDC responsibilities – DMDC runs the full scope of IT services except building services.
    c. Address – 1137 Branchton Rd, Iron Mountain Facility, Boyers, PA 16020

d. Number of users – 20

8) Defense Manpower Data Center, Arlington, Virginia

a. Description – Support personnel for the Computer Assistance Program (CAP) and the Transition to Veterans Program Office (TVPO) Personnel is mixed between government and contract personnel.
b. DMDC IT responsibilities - DMDC provides network infrastructure, Active Directory, video teleconferencing and security services. Mark Center owns and operates physical network, server and building infrastructure. IT equipment is government furnished and contractor supported.
c. Address – 1700 N Moore Street Suites 1000, 1410, 1125, Arlington, VA 22209
d. Number of users – 50

9) Defense Manpower Data Center, Crystal City, Virginia

a. Description – Support personnel for the Joint Advertising Market Research & Studies. Personnel are mixed between government and contract personnel.
b. DMDC IT responsibilities - DMDC provides network infrastructure, Active Directory, video teleconferencing and security services. Mark Center owns and operates physical network, server and building infrastructure. IT equipment is government furnished and contractor supported.
c. Address – 1919 Eads Street, Suite 100, Arlington, VA 22202
d. Number of users – 19

10) Defense Manpower Data Center, Lorton, Virginia

a. Description – QA environment supporting DMDC business. Contractor owned and operated site supporting DMDC contracts. IT equipment is government furnished.
b. DMDC responsibilities – DMDC runs the full scope of IT services except building services.
c. Address – 10430 Furnace Road Suite 203, Lorton, VA 22079
d. Number of users – 38

11) Defense Manpower Data Center, Ft. Knox, Kentucky

a. Description – DMDC's Consolidated Contact Center location, which includes a Virtual Automated Call Distributor System. IT equipment is government furnished.
b. DMDC responsibilities – DMDC runs the full scope of IT services except building services.
c. Address – 75 6th Ave, Ft. Knox, KY 40121
d. Number of users – 300

12) Defense Civilian Personnel Advisory Service (DCPAS)

a. Description – Defense Civilian Personnel Advisory Service (DCPAS) which provides civilian personnel policies, HR solutions, and advisory services. DCPAS has a workforce of approximately 650 staff, with 420 located at the Mark Center, 110 at the remote offices in Texas, Massachusetts, Ohio, Georgia, California, and Florida, while the remaining 120 are full time teleworkers.
b. DMDC responsibilities – DMDC provides network infrastructure, Active Directory, video teleconferencing and security services. Mark Center owns and operates physical network, server and building infrastructure.
c. Address – Various locations
d. Number of users - 650

Project Management
Appendix E

This report document the Project Management Intake Priorization and as of As of January 20, 2015.

Intake Prioritization

No #	Title	Date Submitted	Government Approval (Y/N)	In Process (Y/N)	Driving Factors/Comments	Priority (1-5)
1	UESC Datacenter Layout Change	9/26/14		Y	Contracts already in place, already in process.	1
2	VMware Upgrade & Enhancements	11/10/14		Y	Existing contract with VMware in place, already in process.	1
3	Implement IEEE 802.1X	11/19/14			DoD Mandate and CIO Office Mandate. Already failed 2 audits.	5
4	Enterprise Directory Services (EDS)	10/27/14			DoD Mandate. Wade stated that MS was out and owe DMDC a report.	5
5	Implement New CT and Stress Test	9/10/14		Y	Customer has purchased equipment and timeline on warranties has begun. Wade stated that hardware was here, racked & powered on. Need to utilize and not let equipment sit.	1
6	SPOT Migration to SIPRNet				IT Ops ownership of SPOT ES SIPR environment. Second Phase suspended. Waiting on government data. Note: Phase 1 almost done, Phase 2 is a 5.	Phase 1 – 1 Phase 2 – 5
7	Volga Server Upgrade-CR49953	1/7/15			Wade stated that we don't have the hardware to do either of these. Form was asking to do virtualization. Wants to do #5-Implement New CT and Stress Test before any virtualization. Agree is a problem but is on hold now. Do we want to	4

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					virtualize or cluster first?	
8	Ganges Upgrade-CR50321	1/7/15			Ditto #7. Wade stated that we don't have the hardware to do either of these. Form was asking to do virtualization. Wants to do #5-Implement New CT and Stress Test before any virtualization. Agree is a problem but is on hold now. Do we want to virtualize or cluster first?	4
9	SS Physical Servers Conversion CR50323	1/8/15			Wade stated that we have servers that are old and out of date and we should virtualize. Bigger question around SRM, bigger issue for improving disaster recovery. Can we virtualize 20 remaining servers? If yes, what is the impediment? SRM – is this part of project #2? Break into 2 projects.	3/3
10	SS Physical Window Servers Backups to Netapps and T950 Tape Unit-CR50322	1/8/15			Wade asked, are a large number of window's servers not being backed up. How did we get in that situation? Answer: DMDC did not have the licenses. Wade stated that we need a solution and need to move forward.]	1
11	ADRW	1/8/15			Government may have contract for development in place. Need to define System's responsibility. New instance of a database? Wade to have follow-up conversation. More discussion.	TBD
12	PEGA 6.3	12/8/14		Y	Part of Aion migration. Coordination to improve deployment planning. Small LOE but High Visibility if problems occur.	1
13	DMZ Virtualization		N		IA Policy implementation. Columbus RAPIDS infrastructure replacement. Wade stated this one can be cancelled from a	Cancelled as a project

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					project point of view.	
14	HBSS Consolidation				Effort is IA & IT Ops Coordination & Communication. Managing by Exception.	
15	Backup Plan		N		Looking at organizational backup policy. Backup retention, storage etc. Wade thought this should be part of policy proposal. Not a project issue but an operational issue.	Cancelled as a project - operational
16	Stand Up SWFT Developers System	10/31/14			Related to Electronic Fingerprint Project. Not urgent, may be integrated into EFP or other related project. What are triggers that would make it a priority?	
17	RADIUS	12/10/14			Software implementation of backup policy. Lower priority. 2003 go end of support, replace with RADIUS solution. Is there another approach that would extend? Could upgrade servers. Wade this is a priority-5 unless someone can make justification for making it a higher priority effort.	5
18	Modernize Backup Infrastructure & License	12/10/14			Consolidating backup infrastructure. Lower priority. (Same as #10- SS Physical Window Servers Backups to Netapps and T950 Tape Unit-CR50322.)	

1 - High Priority, 5-Lower Priority

Project Management
Appendix E

Current Project Intake and Backlog

Current Projects	Phase	DMI 11/04/2014 Status	DMI 12/04/2014 Status	Estimated Completion Date
AH and Seaside T950/Brocade/HUS150 Installation	Execution	On Track	On Track	03/15/2015
Three Server RAC Cluster	Planning & Initiation	On Track	On Track	04/22/2015
Ft. Knox CCC	Execution	On Track	On Track	02/01/2015
ACES Modernization (includes PERSEREC v3)	Execution	On Track	On Track	07/30/2015
iIRR	Analysis & Design	On Track	On Track	02/28/2015
UESC Support for Seaside Datacenter Layout Changes	Planning & Initiation	On Track	On Track	07/30/2015
Contractor Stress Test (Touches ACES)	Planning & Initiation	On Track	On Track	01/30/2015
Web Optimization	Execution	Will Miss	Will Miss	04/30/2015
DMDC Reorganization	Execution	On Track	On Track	02/28/2015
Stand Up Storage	Execution	On Track	On Track	03/13/2015
Rhett / Butler	Execution	Will Miss	Will Miss	10/11/2014
VLER: Test ENV (Silver/Gold)	Execution	Will Miss	Will Miss	10/15/2014
Classified IT Enterprise	Execution	Will Miss	Will Miss	01/30/2015

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ChangeGear Implementation	Execution	On Track	At Risk	01/30/2015
ETL	Execution	Will Miss	On Track	01/30/2015
ACAS Implementation	Execution	Will Miss	Will Miss	10/31/2014
CLAB SPOT	Planning & Initiation		On Track	01/30/2015
Pega 6.3	Planning & Initiation		Start-Up	04/30/2015
VDI Phase 4	Execution	At Risk	At Risk	01/15/2015
Systems Tools Analysis	Execution	Will Miss	Will Miss	10/24/2014
Electronic Finger Printing	Execution	At Risk	At Risk	02/15/2015
SCCM – Microsoft Licensing Tracking	Completed	On Track	Closed	N/A
Consolidating H Drives & Redirecting My Documents Folder	Analysis & Design	On Track	On Track	03/13/2015
Vmware Upgrade and Enhancements	Analysis & Design			11/30/2015
11g to 12c Upgrade	Planning & Initiation	Start-Up	Start-Up	12/15/2015
Stand Up SWFT Developers System	Planning & Initiation			02/27/2015
SPOT Migration to SIPRNet	Planning & Initiation			N/A
Project Backlog				

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DISS IDS/ODS Data Migration				N/A
Virtual in the DMZ				04/30/2015
Enterprise Directory Services (EDS)				N/A
Implement IEEE 802.1X NAC Across DMDC Enterprise Network				06/15/2015
RADIUS Authentication				N/A
Modernize Backup Infrastructure & License Required Modules				03/15/2015
HBSS Consolidation				N/A
Project Through Intake Process	**Intake Status**			
UESC Datacenter Layout change	Project			
Enterprise Directory (EDS)	Intake Completed			
Implement new CT and Stress test environments	Project			
Backup Plan				
SPOT Migration to SIPRNet	Project			
VMWare Upgrade & Enhancements	Project			

Project Management
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Implement IEEE 802.1X NAC Across DMDC Enterprise Network	Intake Completed			
Stand Up SWFT Developers System	Project			
RADIUS Authentication	Intake Completed			
Modernize Backup Infrastructure & License Required Modules	Intake Completed			
PEGA 6.3	Project			
DMZ Virtualization	Intake Completed			
HBSS Consolidation	Scheduled for Intake			

Asset Management

This report outlines the Asset Inventory managed and tracked by the DMDC IT Operations Division. The Asset views provided in this report are:

Hardware

- Asset Management Snapshot – Overall Inventory
- DMDC Data Center – Seaside
- Data Center – DISA-DECC Columbus
- Blackberry
- Laptops
- Tablets
- Printers
- Mainframe Hardware
- Asset Disposal – DRMO for 2014
- Consumables Tracking Snapshot- Overall Inventory

Software

- Software List
- Mainframe Software List

Databases

- Database Count/Type

Historical Information

- Last Asset Inventory and general disposition of current ITAM maintenance

Asset Management

Asset Management Snapshot – Overall Inventory

As of December 31, 2014

Asset Type	Asset Count Total	DMDC Seaside (including Labs)	NPS	Beau	DMDC Mark Center	CAP/ TVPO	TELOS	DHRA	Boyers	Fort Knox	PRIM	Lorton	Seaside Data Center	AH--> Columbus Data Center
Monitor	2581	1613	13	222	255	52	18	-	33	335	-	31	9	-
Workstation	2737	1563	13	205	340	51	15	124	49	335	-	37	5	-
Printer	168	104	4	13	20	3	-	-	22	-	-	-	2	-
Laptop/ Tablet	554	315	-	28	171	33	-	-	6	-	-	1	-	-
Blackberry/ MiFi	296	183	-	1	96	16	-	-	-	-	-	-	-	-
Virtual Server *	531	-	-	8	37	-	-	4	-	-	4	-	404	74
Windows Server	132	20	-	17	1	-	-	1	3	2	-	-	72	16
Sun Server	156	2	-	1	-	-	-	-	4	-	-	-	120	29
UNIX Server	43	22	-	-	-	-	-	-	1	-	-	-	18	2
Linux Server	106	-	-	-	-	-	-	-	3	-	-	-	93	10
ESXi Server	87	-	-	7	-	-	-	-	-	-	-	-	65	15
Exadata Server	6	-	-	-	-	-	-	-	-	-	-	-	4	2
Blade Enclosure	17	1	-	1	-	-	-	-	-	-	-	-	14	1
Mainframe	1	-	1	-	-	-	-	-	-	-	-	-	-	-
Network switch/router	106	49	-	7	-	-	4	1	11	3	-	-	19	12
Network Frontend	53	26	-	1	-	-	-	-	2	-	-	-	13	11

Network IP Phone *	673	419	-	249	-	-	5	-	-	-	-	-	-	-
Total Assets by Site	8247	4317	31	760	920	155	42	130	134	675	4	69	838	172

Notes:

* Virtual servers are 38% Windows and 62% Linux

* Numbers reflect deployed assets only

DMDC Data Center – Seaside

Asset Type/Class/Model	Available	Deployed	Grand Total
Hardware.Monitor		9	9
Flat Screen		9	9
Hardware.Printer		2	2
Laser		2	2
Hardware.Server	11	430	441
Sun	8	112	120
220R		1	1
M3000		1	1
M4000		2	2
M5000		6	6
M9000		2	2
Netra v120	1		1
SPARC Enterprise T2000		2	2
Sparc T4-1		3	3
Sparc T4-4 server	2		2
Sun Fire V240		1	1
Sun Microsystems Sun Fire E6900		1	1
Sun Microsystems SUNW,SPARC-Enterprise		2	2

Asset Management

SunFire E4900		1	1
SunFire E6900		3	3
SunFire T1000		10	10
SunFire V120	1	1	2
SunFire V125	1	11	12
SunFire V210		1	1
SunFire V240		1	1
SunFire V245	1	13	14
SunFire V440		2	2
SunFire V490	1	10	11
SunFire X4100		2	2
SunFire X4170		8	8
T5120	1		1
T5240		13	13
T5440		5	5
X2200		6	6
X4150		4	4
(blank)			
Blade Enclosure		14	14
c3000		2	2
c7000		5	5
UCS 5108		7	7
Database Machine		4	4
Exadata X2-2		2	2
Exadata X4-2		2	2
ESXi Server		36	36
Proliant BL460c G6		32	32
Proliant BL460c G7		4	4
Linux		143	143
Locate 911		1	1

Asset Management

PowerEdge R410		2	2
ProLiant DL360 G5		15	15
Proliant DL360 G7		5	5
ProLiant DL560 G8		5	5
SunFire E6900		1	1
SunFire V245		1	1
SunFire X4100		27	27
SunFire X4170		10	10
SunFire X4500		2	2
VMware, Inc. VMware Virtual Platform		49	49
X2200		3	3
X4150		22	22
Unix		18	18
ArcSight C5100		1	1
ArcSight L7100		1	1
PowerEdge 2650		1	1
PowerEdge 2950		1	1
PowerEdge R720		8	8
ProLiant DL380		1	1
T5140		3	3
T5240		2	2
Windows	3	103	106
Microsoft Corporation Virtual Machine		1	1
PowerEdge 2950		1	1
PowerEdge R300		1	1
PowerEdge R310		1	1
ProLiant DL180 G6		3	3
ProLiant DL320 G2		1	1
ProLiant DL360 G5		9	9
ProLiant DL360 G6		4	4

Asset Management

ProLiant DL360p G8		3	3
ProLiant DL380 G4		5	5
ProLiant DL380 G5		27	27
ProLiant DL380 G6		5	5
ProLiant DL380 G7		4	4
ProLiant DL380p G8		3	3
ProLiant DL385 G1		1	1
ProLiant DL580 G5		2	2
VMware, Inc. VMware Virtual Platform	3	32	35
(blank)			
Hardware.Storage	7	46	53
Disk Array	3	26	29
DS14MK4	1		1
DS4246	1		1
StorageWorks MSA50	1	2	3
StorageWorks MSA60		1	1
StorEdge 3100		15	15
StorEdge 3120		7	7
StorEdge 3300		1	1
Storage Area Network	1	12	13
9985		2	2
9990v		1	1
E5500 Storage System	1		1
FAS2020A		3	3
FAS250		1	1
FAS3140		1	1
FAS3140A		3	3
FAS2020		1	1
Storage Array	3	1	4
FAS2520	1		1

Asset Management

HUS 150	2	1	3
Tape Library		5	5
PX502		1	1
StorageTek L80 Tape Library		1	1
StorageWorks MSL4048		1	1
StorEdge L700E		1	1
T950		1	1
Storage Controller		2	2
NAS 3080		2	2
Hardware.Workstation		5	5
Workstation		5	5
OptiPlex 755		3	3
OptiPlex 760		1	1
OptiPlex 960		1	1
Network.Frontend		13	13
Firewall		2	2
ASA 5580 Series Adaptive Security Appliance		2	2
Load Balancer		9	9
1600 GTM		1	1
6400 LTM		7	7
EM 500		1	1
VPN		2	2
ASA 5510		2	2
Network.Router	1		1
Router	1		1
Mediant 800 MSBR	1		1
Network.Switch	2	10	12
Network Switch	2	10	12
Catalyst 2960G		1	1
Catalyst 2960-S		2	2

Catalyst 3560-X	2		2
Catalyst 6509		1	1
Nexus 5010		2	2
Nexus 7018		2	2
Nexus C5020P		1	1
PowerConnect 2824		1	1
SAN.Switch		4	4
Switch		4	4
DCX 8510		2	2
MDS 9124		2	2
(blank)			
Grand Total	21	519	540

Data Center – DISA-DECC Columbus

Asset Type/Class/Model	Deployed	Grand Total
Hardware.Server	**78**	**78**
Sun	**29**	**29**
Blade Enclosure	**1**	**1**
c7000	1	1
Database Machine	**2**	**2**
Exadata X2-2	2	2
ESXi Server	**14**	**14**
Proliant BL460c G7	14	14
Linux	**10**	**10**
SunFire X4150	10	10
Unix	**2**	**2**
PowerEdge R320	1	1
PowerEdge R420	1	1

Asset Management

Windows	**20**	**20**
PowerEdge 2950	1	1
ProLiant DL360 G6	1	1
ProLiant DL380 G4	3	3
ProLiant DL380 G5	6	6
ProLiant DL380 G6	1	1
ProLiant DL385 G1	2	2
VMware, Inc. VMware Virtual Platform	6	6
Network.Frontend	**11**	**11**
Load Balancer	**5**	**5**
1600 GTM	1	1
6400 LTM	4	4
VPN	**6**	**6**
ASA 5510	2	2
ASA 5540	2	2
ASA 5550	2	2
Network.Router	**6**	**6**
Router	**6**	**6**
3845	3	3
3945	1	1
ASR1002-X	1	1
Cisco 3800 Series	1	1
Grand Total	**101**	**101**

Asset Management

Blackberry

Division \ Location	CAP	Beau	DMDC Seaside	DMDC Mark Center	Offsite-CA	TVPO	Total
(available)			8	41			49
(excess)			6	11			17
(new)			87	37			124
CAP	4			2			**6**
CIO			1				**1**
CIO-ARCH			2				**2**
CIO-IA			1				**1**
CIO-ITO		1	8				**9**
CIO-QA			1				**1**
DIR			2	1			**3**
EBM-ACQ			2	1			**3**
EBM-HR&F			8	4			**12**
EBO-CRED			1	5			**6**
EBO-E&B			16	3	4		**23**
EBO-PA			2				**2**
EBO-PS&LE			6				**6**
EBO-PSA			5				**5**
EDO-DA			1				**1**

EDO-DD&DS			2	1			**3**
EDO-DPAC			4				**4**
EDO-EDS			6		1		**7**
EDO-PSRC			7				**7**
HRSAP			1	1			**2**
ITO			12	1			**13**
TVPO				2		8	**10**
(blank)				1			**1**
Total	**4**	**1**	**189**	**111**	**5**	**8**	**318**

Laptops

Division \ Location	**Boyers**	**CAP**	**Beau**	**DMDC Seaside**	**DMDC Seaside Labs**	**Lorton**	**Mark Center**	**Offsite**	**TVPO**	**Total**
(available)	2	3	2	105			30		1	139
CAP		21								**21**
CIO				2						**2**
CIO-ARCH				2			1			**3**
CIO-IA				12						**12**
CIO-ITO			5	66			10	1		**82**
DBIDS					25					**25**
DIR				3			1			**4**

Asset Management

EBM-ACQ				5			9	1		**15**
EBM-HR&F				10			6			**16**
EBM-RM				2						**2**
EBO-CCC				1						**1**
EBO-CRED			1	9			10	2		**22**
EBO-E&B			1	24			2	3		**30**
EBO-EDS				1						**1**
EBO-PA				2						**2**
EBO-PS&LE				22						**22**
EBO-PSA	3			11			1	1		**16**
EDO-DA				5						**5**
EDO-DD&DS				8			4			**12**
EDO-DPAC				5						**5**
EDO-EDS			14	9			1	1		**25**
ES (former)			1			1				**2**
HRSAP							20	1		**21**
IS (former)			1	2			1			**4**
pending reconciliation			1	2			2			**9**
TVPO							1		2	**3**
Total	**5**	**24**	**26**	**309**	**25**	**1**	**99**	**10**	**3**	**501**

Asset Management

Tablets

Division \ Location	DMDC Seaside	DMDC Mark Center	TVPO	Total
(available)	7	62		69
CIO-ITO	1			**1**
DIR	1	1		**2**
EBM-ACQ		6		**6**
EBM-HR&F		1		**1**
EBO-CRED		1		**1**
EBO-PS&LE	1			**1**
EDO-DD&DS	1			**1**
HRSAP		2		**2**
TVPO			6	**6**
Total	**11**	**73**	**6**	**90**

Asset Management

Printers

DMDC-Seaside
400 Gigling Rd. Seaside, CA.

1st Floor

W1-DMDC1	Canon 5020 copier/printer	Black & White	Room 1241
W1-DMDC-Copy 1	Ricoh MP 7001	Black & White	Room 1230

2st Floor

W1-DMDC-2300	HP	Black & White	
W1-DMDC2CAT	HP LaserJet 4000, being temporarily replaced	Black & White	
W1-DMDC2CATC	HP LaserJet 4700, replacing with 4650	Color Room	
W1-DMDC2	HP	Black & White	
W1-1DMDC2SOC	HP LaserJet 3525	Color	
	Canon 5055 copier/printer	Black & White	Room 2038
	Canon 5055 copier/printer	Black & White	Room 2063
	HP Color Laserjet 4700	Color	Room 2063
	HP Laserjet 4350	Black & White	CIF Lab

4th Floor

W1-DMDC4S	Xerox Phaser 5550	Black & White	Between Rooms 4024/4026

Asset Management

W1-DMDC4W	Xerox Phaser 5550	Black & White	Across Room 4048
W1-DMDCW-CATLAB	HP LaserJet 4300	Black & White	
W1-DMDCW-ConfCtr	HP LaserJet 9500	Color	Conference Center Reception Area
5th Floor			
W1-CSO	HP LaserJet P2035	Black & White	
W1-DC	HP LaserJet 4000	Black & White	
W1-DMDC-5073	Xerox Phaser 5550	Black & White	Room 5073
W1-DMDC5W	Xerox Phaser 5550	Black & White	Between Rooms 5042/5044
W1-DMDC5W2	Xerox Phaser 5550	Black & White	Between Rooms 5050/5052
W1-DSOADMIN	HP LaserJet 6P	Black & White	Room 5004
W1-RA10	HP LaserJet 5100	Black & White	Room 5000
W1-RA2	Xerox Phaser 5550	Black & White	Room 5020
W1-RA4	HP LaserJet 9000	Black & White	Room 5022
W1-RA5	Xerox Phaser 7760	Color	Room 5024
W1-RA6	Xerox Phaser 5550	Black & White	Room 5016
W1-TC1	HP LaserJet 9000	Black & White	Room 5034
W1-TC2	HP LaserJet 5100	Black & White	Room 5034
W1-TC3	HP LaserJet 5100	Black & White	Room 5034

Asset Management

W1-DMDCW5077	HP LaserJet 4SI	Black & White	Room 5077
W1-COPY5	Ricoh MP 7001	Black & White	Room 5003
6th Floor			
W1-DMDC6040-Test	HP LaserJet 4600	Color	Room 6040
W1-DMDC6000	Xerox Phaser 7760	Color	Room 6000
W1-DMDC6040	HP LaserJet 9000	Black & White	Room 6040
W1-DMDC6076	Xerox Phaser 5550	Black & White	Room 6076
W1-DMDC6E	Xerox Phaser 5550	Black & White	Between Rooms 6024/6026
W1-DMDC6N	HP LaserJet 5M	Color	Room 6000
W1-DMDC6S	Xerox Phaser 5550	Black & White	Between Rooms 6092/6094
W1-DMDC6W	Xerox Phaser 5550	Black & White	Room 6034
W1-DMDC6WC	Xerox Phaser 7760	Color	Room 6036
W1-DMDC-COPY6	Ricoh MP 7001	Black & White	Room 6036
W1-DMDC-Milcon	Epson Stylus 9880	Color	Room 6000
7th Floor			
W1-Director	HP LaserJet 5100	Black & White	Room 7058
W1-DirectorC	HP LaserJet 4550	Color	Room 7058
W1-DMDC7018	HP LaserJet 2840	Color	Room 7018

W1-DMDC7E	Xerox Phaser 5550	Black & White	Room 7038
W1-DMDC7W	Xerox Phaser 5550	Black & White	Room 7073
W1-DMDC-COPY7	Ricoh MP C7501	Color	Room 7073

8th Floor

W1-DMDC8000	HP LaserJet PS	Color	Room 8000
W1-DMDC8E	Xerox Phaser 5550	Black & White	Between Rooms 8024/8026
W1-DMDC8W	Xerox Phaser 5550	Black & White	Between Rooms 8052/8054
W1-DMDC8WC	Xerox Phaser 7760	Color	Room 8038
W1-DMDC-COPY8	Ricoh MP 7001	Black & White	Room 8040

Mainframe Printers: There are 5 Lexmark T652dn printers located on 5 different floors

Mark Center
4800 Mark Center Drive, Suite 06J25-01, Alexandria, VA 22350-0001

BOM1-color	HP color LaserJet 4600	Color	Enterprise Business Mgmt. Division
West 1	Xerox Phaser 5550	Black & White	Enterprise Business Mgmt. Division
Director-color	Xerox Phaser 7760	Color	Executive Division
Director	Xerox Phaser 5550	Black & White	Executive Division
Admin1-color	Xerox Phaser 7760	Color	Executive Business Operation Division

Asset Management

Admin 1	Savin 9080	Black & White	Executive Business Operations Division
West 2	Xerox Phaser 5550	Black & White	BOM1 / Admin Support area
Admin 5	Xerox Phaser 5550	Black & White	
Admin4-color	HP Color LaserJet 4700	Color	HRSAP Division
Admin 4	Xerox Phaser 5550	Black & White	HRSAP Division
Admin 3-color	Xerox Phaser 7760	Color	HRSAP/DEERS Division
Admin 3	Savin	Black & White	HRSAP/DEERS Division
Admin 2-color	Xerox Phaser 7760	Color	Near IT Operation Division

CAP

1700 N Moore Street Suites 1000, 1410, 1125, Arlington, VA 22209

CAP1	Savin 9080	All in One	Suite 1000
CAP2-COLOR	HP Color LaserJet 4700	Color	Suite 1000
CAP3-COLOR	HP Color LaserJet CP5520	Color	Suite 1000

CAPTEC

1400 Defense Pentagon Arlington, Va.

CAPTEC	HP Color LaserJet CP3525	Color	Room 2D1049

Asset Management

JAMRS
1919 Eads Street, Suite 100, Arlington, VA 22202

JAMRS-Color	HP 4650	Color	Suite 100
JAMRS-Copier	Savin 9060	All in One	Suite 100

Beauregard Site
1600 N. Beauregard St Suite 100, Alexandria, VA

B1-Xerox 1stFlr- Front	Xerox Phaser 5550	Black & White	First Floor
B1-Xerox-1stFlr-Rear	Xerox Phaser 5550	Black & White	First Floor
B1-Xerox-Rapids	Xerox Phaser 5550	Black & White	First Floor
B1-Xerox-RapLeads	Xerox Phaser 5550	Black & White	First Floor
B1-Xerox-ComEng	Xerox Phaser 5550	Black & White	Second Floor
B1-Xerox-2ndFloor copier room	Xerox Phaser 5550	Black & White	Second Floor
B1-Xerox-DRAC	Xerox Phaser 5550	Black & White	Basement (room B132)
B1-Xerox-Network	Xerox Phaser 5550	Black & White	Basement

Asset Management

PRIM
4800 Mark Center Drive, Suite 05E22, Alexandria, VA 22350-0001

J1-Biloxi-LJ4250	HP Laser Jet 4250	Black & White	05E21-19
J1-Boston-CL4700	HP Color Laser Jet 4700	Color	05D19-01
J1-Boston-LJ5200	HP Laser Jet 5200	Black & White	05D19-01
J1-Bosto-SV9080	Ricoh Savin 9080	Copier	05D19-01
J1-Chicago-CL4700	HP Color Laser Jet 4700	Color	05D24-03
J1-Chicago-LJ5200	HP Laser Jet 5200	Black & White	05D24-03
J1-Topeka-CL5550	HP Color Laser Jet 5550	Color	Library/05C24
J1-Topeka-CL4700	HP Color Laser Jet 4700	Color	Library/05C24
J1-Topeka-LJ5200	HP Laser Jet 5200	Black & White	Library/05C24
J1-Topeka-SV9080	Ricoh Savin 9080	Copier	Library/05C24
J1-Topeka-DJ510	HP Design Jet 510	Color	Library/05C24
J1-Seattle-CL4700	HP Color Laser Jet 4700	Color	05A427-01
J1-Seattle-LJ5200	HP Laser Jet 5200	Black & White	05A427-01
J1-Seattle-SV9155	Ricoh Savin 9080	Copier	05A427-01
J1-Tucson-LJ5100	HP Laser Jet 5100	Black & White	05F26-08
J1-Tucson-LJ5550	HP Laser Jet 5550	Black & White	05F26-08

Asset Management

J1-Tucson-Sv9080	Ricoh Savin 9080	Copier	05F26-08

Mainframe Hardware

Manufacturer	Name	Type / Model/ Feature Codes	Serial Number	Barcode	Quantity	Description / Features
IBM	System z10 Business Class	2098-E10	023A4C6	1001131		O03 processor
IBM	BPD-G Baffle	FBB273			2	
IBM	BPD-F Baffle	FBB272			6	
IBM	DCA CAYUGA	FBB382			4	
IBM	BPF-E	FBB401			2	
IBM	BPH-E	FBB402			2	
IBM	BPC-EZ	FBB403			2	
IBM	BPD-EZ	FBB404			2	
IBM	BPR-E	FBB405			2	
IBM	DCA-EZ	FBB411			3	
IBM	BPE-E	FBB412			2	
IBM	UPIC Cable for A06 CAYU	FCCA06			1	

Asset Management

IBM	UPIC Cable for A11 CAYU	FCCA11	1
IBM	Internal IB 2M Cable	FCI220	4
IBM	Oscillator ETR Card	FPH602	2
IBM	MCM/Memory LIC-CC	FPL340	1
IBM	Memory Airflow	MEMAFW	16
IBM	319E 2G Memory DIMM	MEM200	16
IBM	MFG Alteration Control	0PD806	1
IBM	SMC Switch	0089	1
IBM	HMC w/dual EN	0090	1
IBM	Air Flow Filler Cards	0114	2
IBM	CEC	FBB272	6
IBM	CEC	0157	2
IBM	295B RANGER-C Hub Card	0162	4
IBM	MBA Fan-Out Airflow	0165	4
IBM	IB-MBA Card Skipper	0326	2
IBM	STI-A8 Card	0327	2
IBM	Y4 Crypto Express 3	0864	2
IBM	ZPAIAZZI Book 12 way A-CHA	1123	1
IBM	Memory DIMM Top Hat	1642	4

Asset Management

IBM	16 Port ESCON Card	2323	3
IBM	Total ESCON Active	2324	11
IBM	24GB Memory	2406	1
IBM	FICON Express	3318	7
IBM	OSA Express 3 100BASE-T ET	3367	1
IBM	OSA-Express	3369	1
IBM	OSA Express	3373	2
IBM	Common Service Lift Tool	3759	1
IBM	CPACF Enablement	3863	1
IBM	CAYUGA	4000	2
IBM	Frame	4001	1
IBM	3-WAY Processor o03	5086	1
IBM	22 Inch Monitor	6096	1
IBM	IFL	6650	1
IBM	ZAAP	6653	1
IBM	CP-O	6670	3
IBM	o03 Capacity Marker	6916	1
IBM	Migration Offering		1
IBM	14ft 3ph Cord	8987	1

IBM	MFG Combined Order Flag	9000			1	
IBM	Downgrade PUS per Request	9004			1	
IBM	Site Tool Kit	9969			1	
IBM	System x3200 M2	4367-PAM	KQYNNLF	1001377	1	HMC server
Lenova	ThinkVision L2251x Wide	2578-HB6	V609941	1001376	1	HMC monitor
DASD --- System Storage DS8800						
IBM	System Storage DS8800	2423-951	75XB280	1003150		32 TB raw capacity
IBM	Eligible for EU Shipment	0100			1	
IBM	OEL Indicator	0700			1	
IBM	FICON Attach Indicator	0703			1	
IBM	25.1 to 50.0 TB capacity	0815			1	
IBM	Non-Standby CoD	0900			1	
IBM	IBM System z Indicator	0934			1	
IBM	Battery Assembly	1050			2	
IBM	Line Cord (US/LA/AP/Canada)	1090			1	
IBM	Management Console - English Laptop Int	1120			1	
IBM	HD Disk Enclosure Pair	1241			2	

Asset Management

IBM	HD Disk Drive Cable Group 1	1246	1
IBM	I/O Enclosure Pair PCIE	1301	1
IBM	PCI-E Cable Group 1	1320	1
IBM	50 um Fibre Cable (LC)	1410	8
IBM	DS8000 Licensed Machine Code R6.0	1721	1
IBM	450 GB 10K Drive Set	2608	5
IBM	Disk Enclosure Filler	2999	1
IBM	Device Adapter Pair 1	3053	2
IBM	8 Gb 4 port FCP/FICON Adapter PCIE	3153	2
IBM	32 GB Processor Memory (2-Way)	4212	1
IBM	2 Way Processor Card	4301	1
IBM	OEL - 1 TB	7031	1
IBM	OEL - 10 TB	7033	1
IBM	OEL - 25 TB	7034	1
IBM	OEL - 10 Value Unit	7053	2
IBM	OEL - 25 Value Unit	7054	1
IBM	FICON Indicator	7091	1
IBM	DS8000 Function Authorization	2398-LFA	1
IBM	IBM System z Indicator	0934	1

IBM	OEL - 1 TB	7031			1	
IBM	OEL - 10 TB	7033			1	
IBM	OEL - 25 TB	7034			1	
IBM	OEL - 10 Value Unit	7053			2	
IBM	OEL - 25 Value Unit	7054			1	
IBM	FICON Attachment	7091			1	
IBM	System x3550 M3	2805-MC5	7512576			HMC server
IBM	KVM	1723-HC1	23HP531	1003151		HMC monitor
System Consoles						
IBM	ThinkCentre A50	8090-11U	KCTY0XM	1001138		PC, Pent4, 256M RAM
IBM	ThinkCentre A50	8090-11U	KCDD9HH	1001139		PC, Pent4, 256M RAM
IBM	ThinkCentre A50	8090-11U	KCTX9WF	1001330		PC, Pent4, 256M RAM
IBM	ThinkCentre A50	8090-11U	KCKX6HG	1001331		PC, Pent4, 256M RAM
IBM	ThinkCentre A50	8090-11U	KCLR6PN	1001332		PC, Pent4, 256M RAM
IBM	ThinkCentre A50	8090-11U	KCKX6H	1001333		PC, Pent4, 256M

Asset Management

			K		RAM
IBM	ThinkCentre A50	8183-21U	KLXG031	1001370	PC, Pent4, 256M RAM
IBM	ThinkCentre A50	8183-21U	KLXF994	1001371	PC, Pent4, 256M RAM
IBM	ThinkCentre A50	8183-21U	KCLM41 Y	1001372	PC, Pent4, 256M RAM
IBM	ThinkCentre S50	8183-21U	KLXF811	1001373	PC, Pent4, 256M RAM
IBM	ThinkCentre S50	8183-21U	KLXG090	1001375	PC, Pent4, 256M RAM
IBM	ThinkCentre S50	8183-21U	KLXF844	1001374	PC, Pent4, 256M RAM
IBM	ThinkVision L200p	6736-HC9	66M3930	1001135	Monitor, 20", flatscreen
IBM	ThinkVision L200p	6736-HC9	66M3936	1001137	Monitor, 20", flatscreen
IBM	ThinkVision L200p	6736-HC9	66M3928	1001134	Monitor, 20", flatscreen
IBM	ThinkVision L200p	6736-HC9	66M3932	1001136	Monitor, 20", flatscreen
IBM	ThinkVision L200p	6736-HC9	VB14629	1001133	Monitor, 20", flatscreen

IBM	ThinkVision L200p	6736-HC9	66M3934	1001132	Monitor, 20", flatscreen
IBM	ThinkVision L200p	6736-HC9	66N2681	1001334	Monitor, 20", flatscreen
IBM	ThinkVision L200p	6736-HC9	66M4218	1001335	Monitor, 20", flatscreen
IBM	ThinkVision L200p	6736-HC9	66M4223	1001336	Monitor, 20", flatscreen
IBM	ThinkVision L200p	6736-HC9	66L6655	1001337	Monitor, 20", flatscreen
IBM	ThinkVision L200p	6736-HC9	66M3926	1001338	Monitor, 20", flatscreen
IBM	ThinkVision L200p	6736-HB0	66F2638	1001339	Monitor, 20", flatscreen
3COM	Super Stack 3	3C16470	Z0048741	16 Port, 10/100 baseline switch	Actual SN LV4G2Z0048741
3COM	Super Stack 3	3C16470	40052145	16 Port, 10/100 baseline switch	Actual SN LV4G340052145
LIBATL2 zOS --- IBM TotalStorage Enterprise Tape Library 3494					
IBM	3494 Base Frame Model L14	1313934	1003137	1003133	Frame, LM, dual gripper,10 slot IO,

					2 drives
IBM	3494 Drive Frame Model D14	1320875	1003135	1003134	Frame, Controller, 4 drives
IBM	3494 Drive Frame Model D14	1325209	1003138	1003136	Frame, Controller, 4 drives
IBM	3494 Drive Frame Model D12	1331982	1003139	1003137	Frame, 2 drives
IBM	3494 Drive Frame Model D12	7888392	1003140	1003135	Frame, Storage cells only
IBM	3494 Drive Frame Model D12	7881205	1003141	1003138	Frame, Storage cells only
IBM	3494 Drive Frame Model D12	7881236	1341889	1003139	Frame, Storage cells only
IBM	3494 Drive Frame Model D12	7882807	7845703	1003140	Frame, Storage cells only
IBM	3494 Drive Frame Model D12	7836684	1341748	1003141	Frame, Storage cells only
IBM	3494 Storage Frame Model S10	3494-S10	7846577		Frame
IBM	3494 Storage Frame Model S10	3494-S10	78C3550		Frame
IBM	3494 Storage Frame Model S10	3494-S10	78C3686		Frame
IBM	3494 Storage Frame Model S10	3494-S10	1003137		Frame
IBM	Tape Controller 3592 Model J70	3592-J70	1003135		Tape drive, 384 tracks

IBM	Tape Controller 3592 Model J70	3592-J70	1003138		Tape drive, 384 tracks
IBM	Magstar 3590 Model H	3590-H1A	78BF610		Tape drive, 384 tracks
IBM	Magstar 3590 Model H	3590-H1A	78BF593		Tape drive, 384 tracks
IBM	Magstar 3590 Model H	3590-H1A	1323871		Tape drive, 384 tracks
IBM	Magstar 3590 Model H	3590-H1A	78FA671		Tape drive, 384 tracks
IBM	Magstar 3590 Model H	3590-H1A	78CB076		Tape drive, 384 tracks
IBM	Magstar 3590 Model H	3590-H1A	78CB083		Tape drive, 384 tracks
IBM	Magstar 3590 Model H	3590-H1A	78AA794		Tape drive, 384 tracks
IBM	Magstar 3590 Model H	3590-H1A	78B6017		Tape drive, 384 tracks
LIBATL3 zOS --- System Storage TS3500 Tape Library					
IBM	3953 Model F05 Tape Controller Frame	3953-F05	7802893	1003145	Frame, LM, TSSC, Controller
IBM	3953 Library Manager Model L05	3953-L05	7833123		Library manager
IBM	Tape Controller 3592 Model C06	3592-C06	78C6930		System p5, Tape Control device

Asset Management

IBM	System x3550	7978-P1A	KQNRKTF		TS3000 server
IBM	KVM	1723-HC1	23ED913		TS3000 monitor
IBM	3584 Base Frame Model L23	3584-L23	78A3376	1003142	Frame, LC, dual gripper, 16 slot IO, 7 drives
IBM	3584 Expansion Frame Model D23	3584-D23	78D0500	1003143	Frame, 7 drives
IBM	TS-1130 Model E06	3592-E06	78A2ADE		Encrypted tape drive
IBM	TS-1130 Model E06	3592-E06	78A238E		Encrypted tape drive
IBM	TS-1130 Model E06	3592-E06	78A24BC		Encrypted tape drive
IBM	TS-1130 Model E06	3592-E06	78A2489		Encrypted tape drive
IBM	TS-1130 Model E06	3592-E06	78A2A73		Encrypted tape drive
IBM	TS-1130 Model E06	3592-E06	78A23A8		Encrypted tape drive
IBM	TS-1130 Model E06	3592-E06	78A248D		Encrypted tape drive
IBM	TS-1130 Model E06	3592-E06	78A2A29		Encrypted tape drive

IBM	TS-1130 Model E06	3592-E06	78A2BE7		Encrypted tape drive
IBM	TS-1130 Model E06	3592-E06	78A269B		Encrypted tape drive
IBM	TS-1130 Model E06	3592-E06	78A268B		Encrypted tape drive
IBM	TS-1130 Model E06	3592-E06	78A25C9		Encrypted tape drive
IBM	TS-1130 Model E06	3592-E06	7857650		Encrypted tape drive
LIBATL3 zVM --- IBM TotalStorage Enterprise Tape Library 3494					
IBM	3494 Base Frame Model L12	3494-L12	7817435	1003131	Frame, LM, dual gripper, 30 slot IO
IBM	3494 Drive Frame Model D14	3494-D14	1321541	1003132	Frame, Controller, 4 drives
IBM	Tape Controller 3590 Model A60	3590-A60	7848481		Tape control device
IBM	Magstar 3590 Model H	3590-H1A	78C6015		Tape drive, 384 tracks
IBM	Magstar 3590 Model H	3590-H1A	78BA173		Tape drive, 384 tracks
IBM	Magstar 3590 Model H	3590-H1A	78C4419		Tape drive, 384 tracks

IBM	Magstar 3590 Model H	3590-H1A	78C4318		Tape drive, 384 tracks
External Tape Drives					
IBM	9309 Rack Enclosure	9309-2	185303	1B5303	
IBM	Tape Controller 3590 Model A50	3590-A50	1342777		Tape control device
IBM	Magstar 3590 Model E	3590-E11	1321152		Tape drive, 256 tracks
IBM	Magstar 3590 Model E	3590-E11	78C6247		Tape drive, 256 tracks
IBM	Magstar 3590 Model E	3590-E11	78D4554		Tape drive, 256 tracks
IBM	Magstar 3590 Model E	3590-E11	78D3038		Tape drive, 256 tracks
Printers					
Lexmark	T652dn	4062-23A	7957HY2	1003155	Laser printer
IBM	Infoprint 1352	4528-N01	9917PVL	1003152	Laser printer
IBM	Infoprint 1145	4545-N01	153742	1003153	Laser printer
IBM	Infoprint 1145	4545-N01	152158	1003154	Laser printer
IBM	Infoprint 1145 Finisher	GF01-400	101891		Paper stacker
IBM	Infoprint 1145 Finisher	GF01-400	101940		Paper stacker

Asset Disposal (DRMO) for 2014

Asset Management

Item \ Site	Seaside	Mark Center	Columbus	Grand Total
Laptop	1			1
Monitor	69	44	1	114
Printer	13	26		39
Server	95		1	96
Storage	32		3	35
Workstation	134	182		316
Other	2		3	5
Grand Total	**346**	**252**	**8**	**606**

Consumable Tracking Snapshot – Overall Inventory

INVENTORY PICK BIN

DMDC Consumable Inventory List

TOTAL INVENTORY VALUE:		BIN COUNT:	INVENTORY ITEMS:
$0.00	1	95	

SUB-COMPONENT DESCRIPTION	PARENT DESCRIPTION	LOCATION	QTY	REORDER QTY	COST	INVENTORY VALUE	REORDER
CAC Reader	CAC Reader	Desktop	145	50	$0.00	$0.00	0
Maintenance Kit	5500	Warehouse	2	1	$0.00	$0.00	0
Drums	5500	Warehouse	2	1	$0.00	$0.00	0
Toners	5500	Warehouse	5	1	$0.00	$0.00	0
Fuser Exit Sensor Kit	5500	Warehouse	8	1	$0.00	$0.00	0

Asset Management

Ius	5500		Warehouse	7	1	$0.00	$0.00	0
Toner Blue	Hp LJ 9500 (color)		Warehouse	1	1	$0.00	$0.00	0
Toner Red	Hp LJ 9500 (color)		Warehouse	0	1	$0.00	$0.00	0
IU black	Hp LJ 9500 (color)		Warehouse	1	1	$0.00	$0.00	0
IU blue	Hp LJ 9500 (color)		Warehouse	1	1	$0.00	$0.00	0
IU red	Hp LJ 9500 (color)		Warehouse	1	1	$0.00	$0.00	0
IU yellow	Hp LJ 9500 (color)		Warehouse	0	1	$0.00	$0.00	0
Ius	7760		Warehouse	7	1	$0.00	$0.00	0
Transfer Roller	7760		Warehouse	7	1	$0.00	$0.00	0
Toner Black	7760		Warehouse	2	1	$0.00	$0.00	0
Toner Magenta	7760		Warehouse	2	1	$0.00	$0.00	0
Toner Yellow	7760		Warehouse	3	1	$0.00	$0.00	0
Toner Cyan	7760		Warehouse	0	1	$0.00	$0.00	0
Belt Cleaner	7760		Warehouse	2	1	$0.00	$0.00	0
Fuser	7760		Warehouse	1	1	$0.00	$0.00	0
Xfer Belt?	7760		Warehouse	2	1	$0.00	$0.00	0
Waste Cartridge	7760		Warehouse	0	1	$0.00	$0.00	0
Toner	Ricoh B&W		Warehouse	9	1	$0.00	$0.00	0
Toner Black	Ricoh B&W		Warehouse	5	1	$0.00	$0.00	0
Toner Cyan	Ricoh B&W		Warehouse	3	1	$0.00	$0.00	0
Toner Magenta	Ricoh B&W		Warehouse	3	1	$0.00	$0.00	0
Toner Yellow	Ricoh B&W		Warehouse	2	1	$0.00	$0.00	0
CE505A	P2035, P2055		Warehouse	3	1	$0.00	$0.00	0
Q7553A	P2014, P2015, M2727 MFP		Warehouse	3	1	$0.00	$0.00	0
Q7553X	P2014, P2015, M2727 MFP		Warehouse	3	1	$0.00	$0.00	0
CE255X	P3015, P3016		Warehouse	3	1	$0.00	$0.00	0
Q2610A	2300		Warehouse	1	1	$0.00	$0.00	0

Asset Management

92275A	LJ IIP, IIIP		Warehouse	9	1	$0.00	$0.00	0
C3906A	LJ 5L, 6L, 3100		Warehouse	5	1	$0.00	$0.00	0
Q2612A	HP 1010, 1012, 1015, 3015, 3020, 3030		Warehouse	2	1	$0.00	$0.00	0
Q3961 blue	LJ 2250		Warehouse	1	1	$0.00	$0.00	0
Q3962 yellow	LJ 2251		Warehouse	1	1	$0.00	$0.00	0
Q3963 red	LJ 2252		Warehouse	1	1	$0.00	$0.00	0
964A Drum	LJ 2252		Warehouse	1	1	$0.00	$0.00	0
C3903A	LJ5P, 6P		Warehouse	1	1	$0.00	$0.00	0
C8061X	LJ 4100		Warehouse	2	1	$0.00	$0.00	0
CC364X	4015		Warehouse	3	1	$0.00	$0.00	0
92291A	LJ IIISi, 4Si, 4SiMx		Warehouse	1	1	$0.00	$0.00	0
Fuser Assm 110v	Unknown		Warehouse	1	1	$0.00	$0.00	0
Q2670A Black	HP LJ3500 series (color)		Warehouse	2	1	$0.00	$0.00	0
Q2671A Blue	HP LJ3500 series (color)		Warehouse	2	1	$0.00	$0.00	0
Q2673A Red	HP LJ3500 series (color)		Warehouse	3	1	$0.00	$0.00	0
Q2672A Yellow	HP LJ3500 series (color)		Warehouse	3	1	$0.00	$0.00	0
C4129X	LJ 5000/5100		Warehouse	3	1	$0.00	$0.00	0
Toner Black	Hp LJ 9500 (color)		Warehouse	3	1	$0.00	$0.00	0
Toner yellow	Hp LJ 9500 (color)		Warehouse	3	1	$0.00	$0.00	0
Toner blue	Hp LJ 9500 (color)		Warehouse	1	1	$0.00	$0.00	0
Toner red	Hp LJ 9500 (color)		Warehouse	0	1	$0.00	$0.00	0
Fuser kit	Hp LJ 9500 (color)		Warehouse	1	1	$0.00	$0.00	0
IU black	Hp LJ 9500 (color)		Warehouse	1	1	$0.00	$0.00	0
IU blue	Hp LJ 9500 (color)		Warehouse	1	1	$0.00	$0.00	0
IU red	Hp LJ 9500 (color)		Warehouse	1	1	$0.00	$0.00	0
IU yellow	Hp LJ 9500 (color)		Warehouse	0	1	$0.00	$0.00	0
Q5942X	LJ 4250, 4350		Warehouse	4	1	$0.00	$0.00	0

Asset Management

C4196A transfer kit	Hp color lj 4500/4550		Warehouse	2	1	$0.00	$0.00	0
C4194A toner yellow	Hp color lj 4500/4550		Warehouse	4	1	$0.00	$0.00	0
C4191A toner black	Hp color lj 4500/4550		Warehouse	1	1	$0.00	$0.00	0
C4195A drum black	Hp color lj 4500/4550		Warehouse	1	1	$0.00	$0.00	0
C4192A toner blue	Hp color lj 4500/4550		Warehouse	4	1	$0.00	$0.00	0
C4194A toner yellow	Hp color lj 4500/4550		Warehouse	4	1	$0.00	$0.00	0
C4193A toner red	Hp color lj 4500/4550		Warehouse	3	1	$0.00	$0.00	0
C4197A fuser	Hp color lj 4500/4550		Warehouse	2	1	$0.00	$0.00	0
C9725A fuser	Hp color lj 4600		Warehouse	1	1	$0.00	$0.00	0
C9722A Toner yellow	Hp color lj 4601		Warehouse	2	1	$0.00	$0.00	0
Q5952A toner yellow	Hp color lj 4700		Warehouse	1	1	$0.00	$0.00	0
Q5950A toner black	Hp color lj 4700		Warehouse	3	1	$0.00	$0.00	0
Q5951A,toner blue	Hp color lj 4700		Warehouse	1	1	$0.00	$0.00	0
Q5953A toner red	Hp color lj 4700		Warehouse	2	1	$0.00	$0.00	0
T650H04A Toner	Lexmark t652		Warehouse	4	1	$0.00	$0.00	0
C3909A	lj 5Si, 8000		Warehouse	5	1	$0.00	$0.00	0
Toner yellow	HP color lj CP3525		Warehouse	2	1	$0.00	$0.00	0
Toner red	HP color lj CP3525		Warehouse	2	1	$0.00	$0.00	0
Toner blue	HP color lj CP3525		Warehouse	3	1	$0.00	$0.00	0
Toner black	HP color lj CP3525		Warehouse	4	1	$0.00	$0.00	0
1872B003 GPR-24 toner	Canon 5055		Warehouse	4	1	$0.00	$0.00	0
6707A001 Staple-J1	Canon 5055		Warehouse	2	1	$0.00	$0.00	0
4234A003 GPR-4 toner	Canon 5020		Warehouse	2	1	$0.00	$0.00	0
05251A001 Staple-E1	Canon 5020		Warehouse	2	1	$0.00	$0.00	0
Toner	Lexmark optra S		Warehouse	5	1	$0.00	$0.00	0
Maintenance kits	Hp 9000		Warehouse	5	1	$0.00	$0.00	0
Toner	Hp 9000		Warehouse	4	1	$0.00	$0.00	0
Brother tn460	4100		Warehouse	4	1	$0.00	$0.00	0

Brother tn350	2820/2920		Warehouse	2	1	$0.00	$0.00	0
drum	Panasonic kx-fa86		Warehouse	1	1	$0.00	$0.00	0
toner	Panasonic kx-fa87		Warehouse	4	1	$0.00	$0.00	0
CE285A toner	P1102, M1132, M1212, M1214, M1217		Warehouse	3	1	$0.00	$0.00	0
Tapes	T950 SpectraLogic		Warehouse	200	50	$0.00	$0.00	0
Projector Bulbs	Sanyo		Warehouse	6	4	$0.00	$0.00	0
Projector Bulbs	InFocus "DP9200"		Warehouse	1	1	$0.00	$0.00	0
Tapes	3592 & 3590E		Warehouse	100	50	$0.00	$0.00	0

Software Listing

Publisher	Software Title	Edition	OS	License Model	License Term	License Basis	License Factor	Qty Purchased
IBM	3270 PC file transfer	5665311	z/OS	Maintenance	Term	Processor	Site	1
Rocket Software	ABARS Manager Maintenance	MST-ABAR-MP-100	z/OS	Maintenance	Term	Processor	Site	1
	ABBYY FineReader 6.0 Sprint			Maintenance	Term	Enterprise	Single	2
IBM	ACF/SSP Version 4 MVS	5655041	z/OS	Maintenance	Term	Processor	Site	1
IBM	ACF/VTAM V4 VM/ESA Inter E.	5654010	z/VM	Maintenance	Term	Processor	Site	1
	Acrobat Connect 9.3 Add-In			Maintenance	Term	Enterprise	Single	1
	ActivCard ActivClient - PKI Only			Maintenance	Term	Enterprise	Single	1
	ActivCard USB Reader V2 (2.0.3)			Maintenance	Term	Enterprise	Single	2
	ActivClient CAC 6.1 x64			Maintenance	Term	Enterprise	Single	8
	ActivClient CAC 6.1 x86			Maintenance	Term	Enterprise	Single	8
	ActivClient CAC x64	7.0.1.17	WIN	Maintenance	Term	Enterprise	Single	937
	ActivClient CAC x64			Maintenance	Term	Enterprise	Single	991
	ActivClient CAC x86			Maintenance	Term	Enterprise	Single	14
	ActivClient for CAC - PKI Only	7.0.1.17	WIN	Maintenance	Term	Enterprise	Single	150

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	ActivClient for CAC - PKI Only			Maintenance	Term	Enterprise	Single	3
	ActivClient x64			Maintenance	Term	Enterprise	Single	38
	Active Directory Management Pack Helper Object			Maintenance	Term	Enterprise	Single	1
	ActivePerl 5.10.0 Build 1004			Maintenance	Term	Enterprise	Single	1
	ActivePerl 5.12.2 Build 1202 (64-bit)			Maintenance	Term	Enterprise	Single	1
	ActivePerl 5.12.4 Build 1205 (64-bit)			Maintenance	Term	Enterprise	Single	1
	ActivePerl 5.16.3 Build 1603 (64-bit)			Maintenance	Term	Enterprise	Single	3
	ActivePerl 5.8.8 Build 822			Maintenance	Term	Enterprise	Single	2
	ActivIdentity Device Installer	7.0.1.17	WIN	Maintenance	Term	Enterprise	Single	196
	ActivIdentity Device Installer			Maintenance	Term	Enterprise	Single	4
	AD LDS Instance VMwareVCMSDS			Maintenance	Term	Enterprise	Single	2
	Adaptive Server Enterprise PC Client			Maintenance	Term	Enterprise	Single	2
ADOBE	Adobe Acrobat 8 Standard	8.0	WIN	Maintenance	Term	Enterprise	Single	115
ADOBE	Adobe Acrobat Distiller 10.0	10.0	WIN	Maintenance	Term	Enterprise	Single	31
ADOBE	Adobe Acrobat Distiller 10.0			Maintenance	Term	Enterprise	Single	12
ADOBE	Adobe Acrobat Professional	X1 Pro	WIN	Maintenance	Term	Enterprise	Single	718
ADOBE	Adobe Acrobat Professional			Maintenance	Term	Enterprise	Single	440
ADOBE	Adobe Acrobat Reader	XI	WIN	Maintenance	Term	Enterprise	Single	923
ADOBE	Adobe Acrobat Reader			Maintenance	Term	Enterprise	Single	1083
ADOBE	Adobe Acrobat X (10.1.10) Pro x86 32 EN			Maintenance	Term	Enterprise	Single	74
ADOBE	Adobe Acrobat X (10.1.11) Pro x86 32 EN			Maintenance	Term	Enterprise	Single	59
ADOBE	Adobe Acrobat X (10.1.12) Pro x86 32 EN			Maintenance	Term	Enterprise	Single	141
ADOBE	Adobe Acrobat X (10.1.6) Pro x86 32 EN			Maintenance	Term	Enterprise	Single	1
ADOBE	Adobe Acrobat X (10.1.7) Pro x86 32 EN			Maintenance	Term	Enterprise	Single	9
ADOBE	Adobe Acrobat X (10.1.8) Pro x86 32 EN			Maintenance	Term	Enterprise	Single	1
ADOBE	Adobe Acrobat X (10.1.9) Pro x86 32 EN			Maintenance	Term	Enterprise	Single	12

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ADOBE	Adobe Acrobat X Pro	X Pro	WIN	Maintenance	Term	Enterprise	Single	81
ADOBE	Adobe Acrobat X Pro			Maintenance	Term	Enterprise	Single	114
ADOBE	Adobe Acrobat X Pro x86 32 EN			Maintenance	Term	Enterprise	Single	2
ADOBE	Adobe Acrobat X Pro x86 32 EN (10.1.10)	10.1.10	WIN	Maintenance	Term	Enterprise	Single	256
ADOBE	Adobe Acrobat X Pro x86 32 EN (10.1.7)	10.1.7	WIN	Maintenance	Term	Enterprise	Single	245
ADOBE	Adobe Acrobat X Pro x86 32 EN (10.1.8)	10.1.8	WIN	Maintenance	Term	Enterprise	Single	238
ADOBE	Adobe Acrobat X Pro x86 32 EN (10.1.9)	10.1.9	WIN	Maintenance	Term	Enterprise	Single	309
ADOBE	Adobe Acrobat XI (11.0.03) Pro x86 32 EN			Maintenance	Term	Enterprise	Single	3
ADOBE	Adobe Acrobat XI (11.0.05) Standard x86 32 EN			Maintenance	Term	Enterprise	Single	7
ADOBE	Adobe Acrobat XI (11.0.06) Pro x86 32 EN			Maintenance	Term	Enterprise	Single	2
ADOBE	Adobe Acrobat XI (11.0.06) Standard x86 32 EN			Maintenance	Term	Enterprise	Single	12
ADOBE	Adobe Acrobat XI (11.0.09) Pro x86 32 EN			Maintenance	Term	Enterprise	Single	2
ADOBE	Adobe Acrobat XI (11.0.09) Standard x86 32 EN			Maintenance	Term	Enterprise	Single	88
ADOBE	Adobe Acrobat XI Standard x86 32 EN (11.0.03)	11.0.03	WIN	Maintenance	Term	Enterprise	Single	86
ADOBE	Adobe Acrobat XI Standard x86 32 EN (11.0.05)	11.0.05	WIN	Maintenance	Term	Enterprise	Single	93
ADOBE	Adobe Acrobat XI Standard x86 32 EN (11.0.06)	11.0.06	WIN	Maintenance	Term	Enterprise	Single	95
ADOBE	Adobe AIR			Maintenance	Term	Enterprise	Single	10
ADOBE	Adobe AIR 15.0.0.249			Maintenance	Term	Enterprise	Single	5
ADOBE	Adobe AIR 2.6			Maintenance	Term	Enterprise	Single	1
ADOBE	Adobe AIR 3.7.0.1860			Maintenance	Term	Enterprise	Single	1
ADOBE	Adobe AIR 4.0.0.1390			Maintenance	Term	Enterprise	Single	2
ADOBE	Adobe Captivate 7.0 x64 64			Maintenance	Term	Enterprise	Single	1
ADOBE	Adobe Captivate 8 (64 Bit)			Maintenance	Term	Enterprise	Single	1

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ADOBE	Adobe Captivate Quiz Results Analyzer			Maintenance	Term	Enterprise	Single	1
ADOBE	Adobe Color Engine 2.7.28.1			Maintenance	Term	Enterprise	Single	1
ADOBE	Adobe Community Help			Maintenance	Term	Enterprise	Single	8
ADOBE	Adobe Creative Suite 6 Master Collection			Maintenance	Term	Enterprise	Single	3
ADOBE	Adobe Dreamweaver CS6			Maintenance	Term	Enterprise	Single	10
ADOBE	Adobe Fireworks CS6			Maintenance	Term	Enterprise	Single	3
ADOBE	Adobe Flash Player 10 ActiveX	10	WIN	Maintenance	Term	Enterprise	Single	128
ADOBE	Adobe Flash Player 10 ActiveX			Maintenance	Term	Enterprise	Single	20
ADOBE	Adobe Flash Player 11 ActiveX	11	WIN	Maintenance	Term	Enterprise	Single	954
ADOBE	Adobe Flash Player 11 ActiveX			Maintenance	Term	Enterprise	Single	404
ADOBE	Adobe Flash Player 11 ActiveX 64-bit			Maintenance	Term	Enterprise	Single	4
ADOBE	Adobe Flash Player 11 Plugin			Maintenance	Term	Enterprise	Single	231
ADOBE	Adobe Flash Player 11 Plugin 64-bit			Maintenance	Term	Enterprise	Single	2
ADOBE	Adobe Flash Player 12 ActiveX			Maintenance	Term	Enterprise	Single	459
ADOBE	Adobe Flash Player 12 Plugin			Maintenance	Term	Enterprise	Single	459
ADOBE	Adobe Flash Player 13 ActiveX			Maintenance	Term	Enterprise	Single	175
ADOBE	Adobe Flash Player 13 Plugin			Maintenance	Term	Enterprise	Single	175
ADOBE	Adobe Flash Player 13.0.0.182 ActiveX			Maintenance	Term	Enterprise	Single	1
ADOBE	Adobe Flash Player 14 ActiveX			Maintenance	Term	Enterprise	Single	732
ADOBE	Adobe Flash Player 14 Plugin			Maintenance	Term	Enterprise	Single	732
ADOBE	Adobe Flash Player 14.0.0.125 ActiveX			Maintenance	Term	Enterprise	Single	1
ADOBE	Adobe Flash Player 14.0.0.145 ActiveX			Maintenance	Term	Enterprise	Single	1
ADOBE	Adobe Flash Player 14.0.0.176 ActiveX			Maintenance	Term	Enterprise	Single	3
ADOBE	Adobe Flash Player 15 ActiveX			Maintenance	Term	Enterprise	Single	451
ADOBE	Adobe Flash Player 15 Plugin			Maintenance	Term	Enterprise	Single	447
ADOBE	Adobe Flash Player 15.0.0.152 ActiveX			Maintenance	Term	Enterprise	Single	34

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ADOBE	Adobe Flash Player 15.0.0.152 Plugin			Maintenance	Term	Enterprise	Single	1
ADOBE	Adobe Flash Player 9.0 r47 x86 32			Maintenance	Term	Enterprise	Single	1
ADOBE	Adobe Flash Player ActiveX 10.1.53.64			Maintenance	Term	Enterprise	Single	1
ADOBE	Adobe Flash Player ActiveX 10.1.85.3			Maintenance	Term	Enterprise	Single	1
ADOBE	Adobe Flash Player ActiveX 10.2.152.26			Maintenance	Term	Enterprise	Single	1
ADOBE	Adobe Flash Player ActiveX 10.3.181.26			Maintenance	Term	Enterprise	Single	15
ADOBE	Adobe flash player ActiveX 11.0.1.152			Maintenance	Term	Enterprise	Single	1
ADOBE	Adobe Flash Player ActiveX 11.1.102.55			Maintenance	Term	Enterprise	Single	1
ADOBE	Adobe Flash player ActiveX 11.2.202.235			Maintenance	Term	Enterprise	Single	1
ADOBE	Adobe Flash player ActiveX 11.4.402.265			Maintenance	Term	Enterprise	Single	1
ADOBE	Adobe Flash player ActiveX 11.4.402.287			Maintenance	Term	Enterprise	Single	1
ADOBE	Adobe Flash player ActiveX 11.5.502.146			Maintenance	Term	Enterprise	Single	2
ADOBE	Adobe Flash player ActiveX 11.6.602.180			Maintenance	Term	Enterprise	Single	1
ADOBE	Adobe Flash Player ActiveX 11.7.700.169			Maintenance	Term	Enterprise	Single	2
ADOBE	Adobe Flash Player ActiveX 11.7.700.202			Maintenance	Term	Enterprise	Single	3
ADOBE	Adobe Flash Player ActiveX 11.7.700.202 2 Adobe Systems Incorporated	11.7.700.202	WIN	Maintenance	Term	Enterprise	Single	51
ADOBE	Adobe Flash Player ActiveX 11.8.800.175			Maintenance	Term	Enterprise	Single	15
ADOBE	Adobe Flash Player ActiveX 11.8.800.175 5 Adobe Systems Incorporated	11.8.8.175	WIN	Maintenance	Term	Enterprise	Single	72
ADOBE	Adobe Flash Player ActiveX 11.8.800.94			Maintenance	Term	Enterprise	Single	8
ADOBE	Adobe Flash Player ActiveX 11.8.800.94 4 Adobe Systems	11.8.800.94	WIN	Maintenance	Term	Enterprise	Single	1520

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	Incorporated							
ADOBE	Adobe Flash Player ActiveX 11.9.900.152			Maintenance	Term	Enterprise	Single	8
ADOBE	Adobe Flash Player ActiveX 11.9.900.152 2 Adobe Systems Incorporated	11.9.900.152	WIN	Maintenance	Term	Enterprise	Single	107
ADOBE	Adobe Flash Player ActiveX 11.9.900.170			Maintenance	Term	Enterprise	Single	5
ADOBE	Adobe Flash Player ActiveX 11.9.900.170 0 Adobe Systems Incorporated	11.9.900.170	WIN	Maintenance	Term	Enterprise	Single	1666
ADOBE	Adobe Flash Player ActiveX 12.0.0.38			Maintenance	Term	Enterprise	Single	4
ADOBE	Adobe Flash Player ActiveX 12.0.0.38 8 Adobe Systems Incorporated	12.0.0.38	WIN	Maintenance	Term	Enterprise	Single	1438
ADOBE	Adobe Flash Player ActiveX 12.0.0.44			Maintenance	Term	Enterprise	Single	2
ADOBE	Adobe Flash Player ActiveX 12.0.0.44 4 Adobe Systems Incorporated	12.0.0.44	WIN	Maintenance	Term	Enterprise	Single	1487
ADOBE	Adobe Flash Player ActiveX 12.0.0.70			Maintenance	Term	Enterprise	Single	6
ADOBE	Adobe Flash Player ActiveX 12.0.0.70 0 Adobe Systems Incorporated	12.0.0.70	WIN	Maintenance	Term	Enterprise	Single	78
ADOBE	Adobe Flash Player ActiveX 12.0.0.77			Maintenance	Term	Enterprise	Single	7
ADOBE	Adobe Flash Player ActiveX 12.0.0.77 7 Adobe Systems Incorporated	12.0.0.77	WIN	Maintenance	Term	Enterprise	Single	639
ADOBE	Adobe Flash Player ActiveX 13.0.0.182			Maintenance	Term	Enterprise	Single	42
ADOBE	Adobe Flash Player ActiveX 13.0.0.182 2 Adobe Systems Incorporated	13.0.0.182	WIN	Maintenance	Term	Enterprise	Single	1679
ADOBE	Adobe Flash Player ActiveX 13.0.0.206			Maintenance	Term	Enterprise	Single	4
ADOBE	Adobe Flash Player ActiveX 13.0.0.206 6 Adobe Systems Incorporated	13.0.0.206	WIN	Maintenance	Term	Enterprise	Single	1609
ADOBE	Adobe Flash Player ActiveX 13.0.0.214			Maintenance	Term	Enterprise	Single	4
ADOBE	Adobe Flash Player ActiveX 13.0.0.214 4 Adobe Systems Incorporated	13.0.0.214	WIN	Maintenance	Term	Enterprise	Single	1595

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ADOBE	Adobe Flash Player ActiveX 13.0.0.244			Maintenance	Term	Enterprise	Single	1
ADOBE	Adobe Flash Player ActiveX 14.0.0.125			Maintenance	Term	Enterprise	Single	44
ADOBE	Adobe Flash Player ActiveX 14.0.0.125 5 Adobe Systems Incorporated	14.0.0.125	WIN	Maintenance	Term	Enterprise	Single	1749
ADOBE	Adobe Flash Player ActiveX 14.0.0.145			Maintenance	Term	Enterprise	Single	78
ADOBE	Adobe Flash Player ActiveX 14.0.0.145 5 Adobe Systems Incorporated	14.0.0.145	WIN	Maintenance	Term	Enterprise	Single	1548
ADOBE	Adobe Flash Player ActiveX 14.0.0.176			Maintenance	Term	Enterprise	Single	296
ADOBE	Adobe Flash Player ActiveX 15.0.0.152			Maintenance	Term	Enterprise	Single	1564
ADOBE	Adobe Flash Player ActiveX 15.0.0.167			Maintenance	Term	Enterprise	Single	4
ADOBE	Adobe Flash Player ActiveX 9.0.124.0			Maintenance	Term	Enterprise	Single	1
ADOBE	Adobe Flash Player Plugin 11.8.800.168			Maintenance	Term	Enterprise	Single	4
ADOBE	Adobe Flash Player Plugin 11.8.800.168 8 Adobe Systems Incorporated	11.8.800.168	WIN	Maintenance	Term	Enterprise	Single	59
ADOBE	Adobe Flash Player Plugin 11.9.900.152			Maintenance	Term	Enterprise	Single	3
ADOBE	Adobe Flash Player Plugin 11.9.900.152 2 Adobe Systems Incorporated	11.9.900.152	WIN	Maintenance	Term	Enterprise	Single	102
ADOBE	Adobe Flash Player Plugin 11.9.900.170 0 Adobe Systems Incorporated	11.9.900.170	WIN	Maintenance	Term	Enterprise	Single	1654
ADOBE	Adobe Flash Player Plugin 12.0.0.43			Maintenance	Term	Enterprise	Single	2
ADOBE	Adobe Flash Player Plugin 12.0.0.43 3 Adobe Systems Incorporated	12.0.0.43	WIN	Maintenance	Term	Enterprise	Single	1434
ADOBE	Adobe Flash Player Plugin 12.0.0.44			Maintenance	Term	Enterprise	Single	2
ADOBE	Adobe Flash Player Plugin 12.0.0.44 4 Adobe Systems Incorporated	12.0.0.44	WIN	Maintenance	Term	Enterprise	Single	1486

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ADOBE	Adobe Flash Player Plugin 12.0.0.70			Maintenance	Term	Enterprise	Single	6
ADOBE	Adobe Flash Player Plugin 12.0.0.70 0 Adobe Systems Incorporated	12.0.0.70	WIN	Maintenance	Term	Enterprise	Single	80
ADOBE	Adobe Flash Player Plugin 12.0.0.77			Maintenance	Term	Enterprise	Single	7
ADOBE	Adobe Flash Player Plugin 12.0.0.77 7 Adobe Systems Incorporated	12.0.0.77	WIN	Maintenance	Term	Enterprise	Single	636
ADOBE	Adobe Flash Player Plugin 13.0.0.182			Maintenance	Term	Enterprise	Single	42
ADOBE	Adobe Flash Player Plugin 13.0.0.182 2 Adobe Systems Incorporated	13.0.0.182	WIN	Maintenance	Term	Enterprise	Single	1679
ADOBE	Adobe Flash Player Plugin 13.0.0.206			Maintenance	Term	Enterprise	Single	3
ADOBE	Adobe Flash Player Plugin 13.0.0.206 6 Adobe Systems Incorporated	13.0.0.206	WIN	Maintenance	Term	Enterprise	Single	1609
ADOBE	Adobe Flash Player Plugin 13.0.0.214			Maintenance	Term	Enterprise	Single	4
ADOBE	Adobe Flash Player Plugin 13.0.0.214 4 Adobe Systems Incorporated	13.0.0.214	WIN	Maintenance	Term	Enterprise	Single	1576
ADOBE	Adobe Flash Player Plugin 13.0.0.244			Maintenance	Term	Enterprise	Single	1
ADOBE	Adobe Flash Player Plugin 14.0.0.125			Maintenance	Term	Enterprise	Single	44
ADOBE	Adobe Flash Player Plugin 14.0.0.125 5 Adobe Systems Incorporated	14.0.0.125	WIN	Maintenance	Term	Enterprise	Single	1746
ADOBE	Adobe Flash Player Plugin 14.0.0.145			Maintenance	Term	Enterprise	Single	78
ADOBE	Adobe Flash Player Plugin 14.0.0.145 5 Adobe Systems Incorporated	14.0.0.145	WIN	Maintenance	Term	Enterprise	Single	1541
ADOBE	Adobe Flash Player Plugin 14.0.0.179			Maintenance	Term	Enterprise	Single	297
ADOBE	Adobe Flash Player Plugin 15.0.0.152			Maintenance	Term	Enterprise	Single	1557
ADOBE	Adobe Help Manager			Maintenance	Term	Enterprise	Single	8
ADOBE	Adobe Illustrator CS6			Maintenance	Term	Enterprise	Single	12
ADOBE	Adobe ImageReady Creative Suite 2 x86 32			Maintenance	Term	Enterprise	Single	4
ADOBE	Adobe Indesign CS6			Maintenance	Term	Enterprise	Single	2
ADOBE	Adobe LiveCycle Designer ES2 9.0	9.0	WIN	Maintenance	Term	Enterprise	Single	62
ADOBE	Adobe LiveCycle Designer ES2 9.0			Maintenance	Term	Enterprise	Single	21
ADOBE	Adobe Media Encoder CS5			Maintenance	Term	Enterprise	Single	1
ADOBE	Adobe PDF Creation Add-On X			Maintenance	Term	Enterprise	Single	7
ADOBE	Adobe PDF Creation Add-On XI			Maintenance	Term	Enterprise	Single	6

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ADOBE	Adobe PDF iFilter 9 for 64-bit platforms			Maintenance	Term	Enterprise	Single	6
ADOBE	Adobe PDF iFilter 9.0 x64 64			Maintenance	Term	Enterprise	Single	6
ADOBE	Adobe Photoshop	CS6	WIN	Maintenance	Term	Enterprise	Single	73
ADOBE	Adobe Photoshop			Maintenance	Term	Enterprise	Single	29
ADOBE	Adobe Photoshop CS6			Maintenance	Term	Enterprise	Single	30
ADOBE	Adobe Reader 8			Maintenance	Term	Enterprise	Single	1
ADOBE	Adobe Reader 9.3.3			Maintenance	Term	Enterprise	Single	1
ADOBE	Adobe Reader 9.4.1			Maintenance	Term	Enterprise	Single	1
ADOBE	Adobe Reader 9.4.2			Maintenance	Term	Enterprise	Single	3
ADOBE	Adobe Reader Extended Language Support Font Pack			Maintenance	Term	Enterprise	Single	1
ADOBE	Adobe Reader Fonts 10.0 JA			Maintenance	Term	Enterprise	Single	1
ADOBE	Adobe Reader Fonts 10.0 KO			Maintenance	Term	Enterprise	Single	1
ADOBE	Adobe Reader Fonts 10.0 ZH-CN			Maintenance	Term	Enterprise	Single	1
ADOBE	Adobe Reader Fonts 10.0 ZH-TW			Maintenance	Term	Enterprise	Single	1
ADOBE	Adobe Reader X (10.1.0)			Maintenance	Term	Enterprise	Single	44
ADOBE	Adobe Reader X (10.1.1)	10.1.1	WIN	Maintenance	Term	Enterprise	Single	26
ADOBE	Adobe Reader X (10.1.1)			Maintenance	Term	Enterprise	Single	1
ADOBE	Adobe Reader X (10.1.2)			Maintenance	Term	Enterprise	Single	11
ADOBE	Adobe Reader X (10.1.3)			Maintenance	Term	Enterprise	Single	4
ADOBE	Adobe Reader XI			Maintenance	Term	Enterprise	Single	1
ADOBE	Adobe Reader XI (11.0.01) EN			Maintenance	Term	Enterprise	Single	1
ADOBE	Adobe Reader XI (11.0.02)	11.0.02	WIN	Maintenance	Term	Enterprise	Single	36
ADOBE	Adobe Reader XI (11.0.02)			Maintenance	Term	Enterprise	Single	1
ADOBE	Adobe Reader XI (11.0.02) EN			Maintenance	Term	Enterprise	Single	1
ADOBE	Adobe Reader XI (11.0.03)	11.0.03	WIN	Maintenance	Term	Enterprise	Single	1688
ADOBE	Adobe Reader XI (11.0.03)			Maintenance	Term	Enterprise	Single	344
ADOBE	Adobe Reader XI (11.0.03) EN			Maintenance	Term	Enterprise	Single	7
ADOBE	Adobe Reader XI (11.0.04)			Maintenance	Term	Enterprise	Single	17
ADOBE	Adobe Reader XI (11.0.05)			Maintenance	Term	Enterprise	Single	6

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ADOBE	Adobe Reader XI (11.0.05) EN			Maintenance	Term	Enterprise	Single	4
ADOBE	Adobe Reader XI (11.0.06)			Maintenance	Term	Enterprise	Single	113
ADOBE	Adobe Reader XI (11.0.06) EN			Maintenance	Term	Enterprise	Single	25
ADOBE	Adobe Reader XI (11.0.07)			Maintenance	Term	Enterprise	Single	129
ADOBE	Adobe Reader XI (11.0.07) EN			Maintenance	Term	Enterprise	Single	172
ADOBE	Adobe Reader XI (11.0.08)			Maintenance	Term	Enterprise	Single	345
ADOBE	Adobe Reader XI (11.0.08) EN			Maintenance	Term	Enterprise	Single	412
ADOBE	Adobe Reader XI (11.0.09)			Maintenance	Term	Enterprise	Single	578
ADOBE	Adobe Reader XI (11.0.09) EN			Maintenance	Term	Enterprise	Single	1446
ADOBE	Adobe Reader XI EN			Maintenance	Term	Enterprise	Single	1
ADOBE	Adobe Reader XI EN (11.0.04)	11.0.04	WIN	Maintenance	Term	Enterprise	Single	27
ADOBE	Adobe Reader XI EN (11.0.05)	11.0.05	WIN	Maintenance	Term	Enterprise	Single	1710
ADOBE	Adobe Reader XI EN (11.0.06)	11.0.06	WIN	Maintenance	Term	Enterprise	Single	1944
ADOBE	Adobe Reader XI EN (11.0.07)	11.0.07	WIN	Maintenance	Term	Enterprise	Single	1812
ADOBE	Adobe Reader XI Update 11.0.06			Maintenance	Term	Enterprise	Single	10
ADOBE	Adobe RoboHelp 11			Maintenance	Term	Enterprise	Single	5
ADOBE	Adobe RoboHelp 9			Maintenance	Term	Enterprise	Single	8
ADOBE	Adobe RoboHelp 9.0			Maintenance	Term	Enterprise	Single	13
ADOBE	Adobe Shockwave Player 12.1.0.150			Maintenance	Term	Enterprise	Single	1
ADOBE	Adobe Update Manager CS4			Maintenance	Term	Enterprise	Single	1
ADOBE	Adobe Widget Browser			Maintenance	Term	Enterprise	Single	1
ADOBE	Adobe® Content Viewer			Maintenance	Term	Enterprise	Single	1
	Adonis Management Console			Maintenance	Term	Enterprise	Single	2
	ADRAP 8.5			Maintenance	Term	Enterprise	Single	1
	ADRAP 8.5 (Private)			Maintenance	Term	Enterprise	Single	1
	AdtAgent			Maintenance	Term	Enterprise	Single	3
	alacarte			Maintenance	Term	Enterprise	Single	1
	alchemist			Maintenance	Term	Enterprise	Single	1
	Alex Sirota Colorzilla 2.6.4			Maintenance	Term	Enterprise	Single	2
	alsa-lib			Maintenance	Term	Enterprise	Single	1

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	alsa-lib-devel			Maintenance	Term	Enterprise	Single	1
	alsa-utils			Maintenance	Term	Enterprise	Single	1
	Altova XMLSpy 2014 rel. 2 (x64) Professional Edition			Maintenance	Term	Enterprise	Single	8
	Altova XMLSpy 2014 rel. 2 sp1 (x64) Professional Edition			Maintenance	Term	Enterprise	Single	2
	Altova XMLSpy® 2012 rel. 2 sp1 (x64) Professional Edition			Maintenance	Term	Enterprise	Single	1
	Altova XMLSpy® 2013 rel. 2 sp1 (x64) Professional Edition			Maintenance	Term	Enterprise	Single	3
	AMD Catalyst Install Manager			Maintenance	Term	Enterprise	Single	2
	Amos 18			Maintenance	Term	Enterprise	Single	3
	amtu			Maintenance	Term	Enterprise	Single	1
	anacron			Maintenance	Term	Enterprise	Single	1
	Apache Ant 1.8.2			Maintenance	Term	Enterprise	Single	3
	Apache CouchDB 1.3.1			Maintenance	Term	Enterprise	Single	14
	Apache Derby 10.6.2.1 [Linux]			Maintenance	Term	Enterprise	Single	2
	Apache Derby 10.6.2.1 1 [Linux]	10.6.2.1	LINUX	Maintenance	Term	Enterprise	Single	339
	Apache HTTP Server 2.0.54			Maintenance	Term	Enterprise	Single	2
	Apache HTTP Server 2.2.11			Maintenance	Term	Enterprise	Single	1
	Apache log4j 1.2.15 [Unix]	1.2.15	UNIX	Maintenance	Term	Enterprise	Single	41
	Apache log4j 1.2.15 [Unix]			Maintenance	Term	Enterprise	Single	5
	Apache Tomcat 5.5			Maintenance	Term	Enterprise	Single	1
	Apache Tomcat 6.0			Maintenance	Term	Enterprise	Single	4
	AppDetectivePro Setup			Maintenance	Term	Enterprise	Single	1
	Apple Application Support 2.0			Maintenance	Term	Enterprise	Single	2
	Apple Bonjour 2.0			Maintenance	Term	Enterprise	Single	1
	Apple QuickTime Player 6.5.2			Maintenance	Term	Enterprise	Single	6
	Apple QuickTime Player 7.74.80.86			Maintenance	Term	Enterprise	Single	2
	Apple QuickTime Player 7.75.80.95			Maintenance	Term	Enterprise	Single	1
	Apple Software Update 2.1.3			Maintenance	Term	Enterprise	Single	4
	Application Verifier			Maintenance	Term	Enterprise	Single	1

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	ApproveIt Desktop			Maintenance	Term	Enterprise	Single	8
	ApproveIt Desktop 5.7.3			Maintenance	Term	Enterprise	Single	1
	AppSense Application Manager Agent (64 Bit) 8.3.119.0			Maintenance	Term	Enterprise	Single	6
	AppSense Application Manager Console (64 Bit) 8.3.119.0			Maintenance	Term	Enterprise	Single	2
	AppSense Application Manager Documentation (64 Bit) 8.3.2.0			Maintenance	Term	Enterprise	Single	1
	AppSense Client Communications Agent (64 Bit) 8.2.67.0			Maintenance	Term	Enterprise	Single	6
	AppSense Environment Manager Agent (64 Bit) 8.1.544.0			Maintenance	Term	Enterprise	Single	6
	AppSense Environment Manager Configuration 'DMDC EM Base XenApp Config 0.2' 8.1.25.0			Maintenance	Term	Enterprise	Single	2
	AppSense Environment Manager Configuration 'DMDC EM Base XenApp Config 0.2' 8.1.27.0			Maintenance	Term	Enterprise	Single	6
	AppSense Environment Manager Console (64 Bit) 8.1.544.0			Maintenance	Term	Enterprise	Single	4
	AppSense Environment Manager Documentation (64 Bit) 8.1.61.0			Maintenance	Term	Enterprise	Single	3
	AppSense Management Center Documentation (64 Bit) 8.2.11.0			Maintenance	Term	Enterprise	Single	1
	AppSense Management Console (64 Bit) 8.2.67.0			Maintenance	Term	Enterprise	Single	2
	AppSense Management Server (64 Bit) 8.2.67.0			Maintenance	Term	Enterprise	Single	1
	AppSense Performance Manager Agent (64 Bit) 8.1.107.0			Maintenance	Term	Enterprise	Single	6
	AppSense Performance Manager Console (64 Bit) 8.1.102.0			Maintenance	Term	Enterprise	Single	1
	AppSense Performance Manager Documentation (64 Bit) 8.1.61.0			Maintenance	Term	Enterprise	Single	1
	AppSense Personalization Server (64 Bit) 8.1.544.0			Maintenance	Term	Enterprise	Single	2
	apr			Maintenance	Term	Enterprise	Single	1
	apr-util			Maintenance	Term	Enterprise	Single	1

Asset Management

ESRI	ARCGis		LINUX	Maintenance	Term	Enterprise	[Unknown]	2
ESRI	ArcGIS Desktop			Maintenance	Term	Enterprise	Single	1
ESRI	ArcGIS License Manager			Maintenance	Term	Enterprise	Single	1
	ArcSight SmartConnector			Maintenance	Term	Enterprise	Single	1
	ARR Helper for IIS 7			Maintenance	Term	Enterprise	Single	1
	aspell			Maintenance	Term	Enterprise	Single	1
	aspell-en			Maintenance	Term	Enterprise	Single	1
	at			Maintenance	Term	Enterprise	Single	1
	AT&T Connect Participant Application v9.5.35			Maintenance	Term	Enterprise	Single	1
	AT&T Connect Participant Application v9.5.51			Maintenance	Term	Enterprise	Single	2
	ATI Catalyst Control Center - Branding 1.0			Maintenance	Term	Enterprise	Single	23
	ATI Catalyst Install Manager			Maintenance	Term	Enterprise	Single	19
	ATI Display Driver			Maintenance	Term	Enterprise	Single	41
	ATI Stream SDK v2 Developer			Maintenance	Term	Enterprise	Single	19
	atk			Maintenance	Term	Enterprise	Single	1
	atk-devel			Maintenance	Term	Enterprise	Single	1
	at-spi			Maintenance	Term	Enterprise	Single	1
	Attachmate Reflection for IBM 13.0			Maintenance	Term	Enterprise	Single	1
	Attachmate Reflection for IBM 14.0.2			Maintenance	Term	Enterprise	Single	1
	Attachmate Reflection for IBM 2008			Maintenance	Term	Enterprise	Single	2
	Attachmate Reflection for ReGIS Graphics 13.0			Maintenance	Term	Enterprise	Single	1
	Attachmate Reflection for ReGIS Graphics 14.0			Maintenance	Term	Enterprise	Single	4
	Attachmate Reflection for Secure IT Client 7.0			Maintenance	Term	Enterprise	Single	4
	Attachmate Reflection for Secure IT Client 7.1			Maintenance	Term	Enterprise	Single	5
	Attachmate Reflection for Secure IT Client 7.2			Maintenance	Term	Enterprise	Single	7

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	Attachmate Reflection for Secure IT Server 7.2			Maintenance	Term	Enterprise	Single	1
	Attachmate Reflection for UNIX and OpenVMS 14.0			Maintenance	Term	Enterprise	Single	4
	Attachmate Reflection X 14.1			Maintenance	Term	Enterprise	Single	1
	attr			Maintenance	Term	Enterprise	Single	1
	audiofile			Maintenance	Term	Enterprise	Single	1
	audiofile-devel			Maintenance	Term	Enterprise	Single	1
	audit			Maintenance	Term	Enterprise	Single	1
	audit-libs			Maintenance	Term	Enterprise	Single	1
	audit-libs-python			Maintenance	Term	Enterprise	Single	1
	Auth Diagnostics 1.0 (x86)			Maintenance	Term	Enterprise	Single	1
	authconfig			Maintenance	Term	Enterprise	Single	1
	authconfig-gtk			Maintenance	Term	Enterprise	Single	1
	autoconf			Maintenance	Term	Enterprise	Single	1
	autofs			Maintenance	Term	Enterprise	Single	1
	automake			Maintenance	Term	Enterprise	Single	1
	automake14			Maintenance	Term	Enterprise	Single	1
	automake15			Maintenance	Term	Enterprise	Single	1
	automake16			Maintenance	Term	Enterprise	Single	1
	automake17			Maintenance	Term	Enterprise	Single	1
	AutomatedQA TestExecute 8			Maintenance	Term	Enterprise	Single	1
	avahi			Maintenance	Term	Enterprise	Single	1
	avahi-compat-libdns_sd			Maintenance	Term	Enterprise	Single	1
	avahi-glib			Maintenance	Term	Enterprise	Single	1
	Avaya CMS Supervisor r16.3	r16.3	WIN	Maintenance	Term	Enterprise	Single	200
	Avaya CMS Supervisor r16.3			Maintenance	Term	Enterprise	Single	157
	Avaya Integrated Management Site Administration			Maintenance	Term	Enterprise	Single	4
	Avaya one-X Agent R2.5			Maintenance	Term	Enterprise	Single	1
	Avaya one-X Agent R2.5 SP1			Maintenance	Term	Enterprise	Single	9

	Avaya one-X® Communicator			Maintenance	Term	Enterprise	Single	2
SAS	Base SAS for 25 PC user, Windows – Product ID 404790/USERBPKG	SAS-BASESAS 25PCM	WIN	Maintenance	Term	Client Sessions	Concurrent Users	1
SAS	Base SAS for a Class J Mainframe - Product ID 381/SAS	SAS-IBM-J-2-IND	z/OS	Maintenance	Term	Processor	Site	1
SAS	Base SAS for a HP Windows Server w/2 Quad core processors – Product ID 523902/SAS	SAS-10320-8	WIN	Maintenance	Term	Processor	Site	1
SAS	Base SAS for each additional PC users, Windows – Product ID 404790/USERBPKG	SAS-BASESAS 26 PCM	WIN	Maintenance	Term	Client Sessions	Concurrent Users	25
	BEA WebLogic Platform 8.1.6.0 x86 32			Maintenance	Term	Enterprise	Single	2
	BEA WebLogic Real Time 1.0 x86 32			Maintenance	Term	Enterprise	Single	1
	BEA WebLogic RFID Edge Server 2 x86 32			Maintenance	Term	Enterprise	Single	2
	BEA WebLogic Workshop 8.1 SP1 x86 32			Maintenance	Term	Enterprise	Single	1
	BEA WebLogic Workshop 8.1 SP2 x86 32			Maintenance	Term	Enterprise	Single	2
	BEA WebLogic Workshop 8.1 SP3 x86 32			Maintenance	Term	Enterprise	Single	2
	BEA WebLogic Workshop 8.1 SP5 x86 32			Maintenance	Term	Enterprise	Single	2
	BEA WebLogic Workshop 8.1 SP6 x86 32			Maintenance	Term	Enterprise	Single	1
	BESR Granular Restore Option			Maintenance	Term	Enterprise	Single	1
	Beyond Compare 2.5 Build 250			Maintenance	Term	Enterprise	Single	1
	Beyond Compare 3.1.11			Maintenance	Term	Enterprise	Single	14
	Beyond Compare Versio 3.3.3 Scooter Software	3.3.3	WIN	Maintenance	Term	Enterprise	Single	206
	Beyond Compare Version 3.1.11			Maintenance	Term	Enterprise	Single	12
	Beyond Compare Version 3.3.3			Maintenance	Term	Enterprise	Single	243
	Beyond Compare Version 3.3.4			Maintenance	Term	Enterprise	Single	2
	BeyondTrust Retina			Maintenance	Term	Enterprise	Single	1
	BILOGMG 3.0			Maintenance	Term	Enterprise	Single	5

Asset Management

	BlackBerry Desktop Software	4.7.0	WIN	Maintenance	Term	Enterprise	Single	69
	BlackBerry Desktop Software 4.7.0.32 2 Research In Motion Limited	4.7.0	WIN	Maintenance	Term	Enterprise	Single	52
	BlackBerry Desktop Software 5.0.1.18			Maintenance	Term	Enterprise	Single	1
	BlackBerry Desktop Software 7.1			Maintenance	Term	Enterprise	Single	1
	BlackBerry Device Communication Components			Maintenance	Term	Enterprise	Single	1
	BlackBerry Device Communication Components 1.2			Maintenance	Term	Enterprise	Single	1
	BrightStor ARCserve Backup Agent for Microsoft SQL Server			Maintenance	Term	Enterprise	Single	2
	BrightStor ARCserve Backup Agent for Open Files for Windows			Maintenance	Term	Enterprise	Single	12
	BrightStor ARCserve Backup Agent for VSS Snap-Shot			Maintenance	Term	Enterprise	Single	7
	BrightStor ARCserve Backup Client Agent for Windows			Maintenance	Term	Enterprise	Single	12
	BrightStor ARCserve Backup Diagnostic Utilities			Maintenance	Term	Enterprise	Single	9
	brlapi			Maintenance	Term	Enterprise	Single	1
	Broadcom Management Programs			Maintenance	Term	Enterprise	Single	2
	Brother MFL-Pro Suite MFC-8860DN			Maintenance	Term	Enterprise	Single	1
	BusinessObjects Enterprise 11.0			Maintenance	Term	Enterprise	Single	1
IBM	C FOR VM/ESA V3	5654033	z/OS	Maintenance	Term	Processor	Site	1
CA_TECHNOLOGIES	CA Advantage Data Transformer			Maintenance	Term	Enterprise	Single	2
CA_TECHNOLOGIES	CA Advantage Ingres - Q and R Tools 2.6			Maintenance	Term	Enterprise	Single	2
CA_TECHNOLOGIES	CA AllFusion ERwin Data Modeler - Datatype Standards Editor r4.1.4 SP2			Maintenance	Term	Enterprise	Single	1
CA_TECHNOLOGIES	CA AllFusion ERwin Data Modeler - ModelMart Synchronizer r4.1.4 SP2			Maintenance	Term	Enterprise	Single	1
CA_TEC	CA Anti-Virus engine 30.3			Maintenance	Term	Enterprise	Single	3

HNOLO GIES								
CA_TEC HNOLO GIES	CA ARCserve Backup			Maintenance	Term	Enterprise	Single	79
CA_TEC HNOLO GIES	CA ARCserve Backup - Agent for Microsoft SQL Server 15.0			Maintenance	Term	Enterprise	Single	2
CA_TEC HNOLO GIES	CA ARCserve Backup - Agent for Microsoft SQL Server 15.1			Maintenance	Term	Enterprise	Single	4
CA_TEC HNOLO GIES	CA ARCserve Backup - Agent for Open Files for Windows 15.0	15.0	WIN	Maintenance	Term	Enterprise	Single	65
CA_TEC HNOLO GIES	CA ARCserve Backup - Agent for Open Files for Windows 15.0			Maintenance	Term	Enterprise	Single	34
CA_TEC HNOLO GIES	CA ARCserve Backup - Agent for Open Files for Windows 15.1	15.1	WIN	Maintenance	Term	Enterprise	Single	124
CA_TEC HNOLO GIES	CA ARCserve Backup - Agent for Open Files for Windows 15.1			Maintenance	Term	Enterprise	Single	96
CA_TEC HNOLO GIES	CA ARCserve Backup - Agent for Virtual Machines 15.1	15.1	WIN	Maintenance	Term	Enterprise	Single	85
CA_TEC HNOLO GIES	CA ARCserve Backup - Agent for Virtual Machines 15.1			Maintenance	Term	Enterprise	Single	66
CA_TEC HNOLO GIES	CA ARCserve Backup - Client Agent for Windows 15.1	15.1	WIN	Maintenance	Term	Enterprise	Single	129
CA_TEC HNOLO GIES	CA ARCserve Backup - Client Agent for Windows 15.1			Maintenance	Term	Enterprise	Single	97
CA_TEC HNOLO GIES	CA ARCserve Backup - Client Agent for windows r15.0	15.0	WIN	Maintenance	Term	Enterprise	Single	71
CA_TEC HNOLO	CA ARCserve Backup - Client Agent for windows r15.0			Maintenance	Term	Enterprise	Single	34

GIES								
CA_TECHNOLOGIES	CA ARCserve Backup - Diagnostic Utilities 15.0	15.0	WIN	Maintenance	Term	Enterprise	Single	50
CA_TECHNOLOGIES	CA ARCserve Backup - Diagnostic Utilities 15.0			Maintenance	Term	Enterprise	Single	29
CA_TECHNOLOGIES	CA ARCserve Backup - Diagnostic Utilities 15.1	15.1	WIN	Maintenance	Term	Enterprise	Single	118
CA_TECHNOLOGIES	CA ARCserve Backup - Diagnostic Utilities 15.1			Maintenance	Term	Enterprise	Single	90
CA_TECHNOLOGIES	CA ARCserve Backup - Setup Support Files 15.0	15.0	WIN	Maintenance	Term	Enterprise	Single	71
CA_TECHNOLOGIES	CA ARCserve Backup - Setup Support Files 15.0			Maintenance	Term	Enterprise	Single	34
CA_TECHNOLOGIES	CA ARCserve Backup - Setup Support Files 15.1	15.1	WIN	Maintenance	Term	Enterprise	Single	129
CA_TECHNOLOGIES	CA ARCserve Backup - Setup Support Files 15.1			Maintenance	Term	Enterprise	Single	97
CA_TECHNOLOGIES	CA ARCserve Backup 15.1	15.1	WIN	Maintenance	Term	Enterprise	Single	129
CA_TECHNOLOGIES	CA ARCserve Backup 15.1			Maintenance	Term	Enterprise	Single	97
CA_TECHNOLOGIES	CA ARCserve Backup Agent for Microsoft SharePoint Server			Maintenance	Term	Enterprise	Single	6
CA_TECHNOLOGIES	CA ARCserve Backup Agent for Microsoft SQL Server			Maintenance	Term	Enterprise	Single	10
CA_TECHNOLO	CA ARCserve Backup Agent for Open Files for Windows			Maintenance	Term	Enterprise	Single	84

GIES								
CA_TECHNOLOGIES	CA ARCserve Backup Agent for Virtual Machines			Maintenance	Term	Enterprise	Single	53
CA_TECHNOLOGIES	CA ARCserve Backup Client Agent for Windows			Maintenance	Term	Enterprise	Single	40
CA_TECHNOLOGIES	CA ARCserve Backup Diagnostic Utilities			Maintenance	Term	Enterprise	Single	35
CA_TECHNOLOGIES	CA ARCserve Backup Patch Manager			Maintenance	Term	Enterprise	Single	1
CA_TECHNOLOGIES	CA ARCserve Backup Setup Support Files			Maintenance	Term	Enterprise	Single	27
CA_TECHNOLOGIES	CA ARCserve Discovery Service			Maintenance	Term	Enterprise	Single	27
CA_TECHNOLOGIES	CA ARCserve Discovery Service 15.0	15.0	WIN	Maintenance	Term	Enterprise	Single	71
CA_TECHNOLOGIES	CA ARCserve Discovery Service 15.0			Maintenance	Term	Enterprise	Single	34
CA_TECHNOLOGIES	CA ARCserve Discovery Service 15.1	15.1	WIN	Maintenance	Term	Enterprise	Single	129
CA_TECHNOLOGIES	CA ARCserve Discovery Service 15.1			Maintenance	Term	Enterprise	Single	97
CA_TECHNOLOGIES	CA ARCserve Universal Agent			Maintenance	Term	Enterprise	Single	27
CA_TECHNOLOGIES	CA ARCserve Universal Agent 15.1	15,1	WIN	Maintenance	Term	Enterprise	Single	129
CA_TECHNOLO	CA ARCserve Universal Agent 15.1			Maintenance	Term	Enterprise	Single	97

GIES								
CA_TECHNOLOGIES	CA Asset Management Performance LiteAgent			Maintenance	Term	Enterprise	Single	31
CA_TECHNOLOGIES	CA Asset Management Performance LiteAgent r11.2.7277			Maintenance	Term	Enterprise	Single	1918
CA_TECHNOLOGIES	CA Asset Management Performance LiteAgent r11.2.7277 ca	11.2	WIN	Maintenance	Term	Enterprise	Single	2963
CA_TECHNOLOGIES	CA BrightStor ARCserve Backup - Agent for Open Files Console r11.5 SP1			Maintenance	Term	Enterprise	Single	2
CA_TECHNOLOGIES	CA BrightStor ARCserve Backup - Agent for Open Files r11.5 SP1 x86 32			Maintenance	Term	Enterprise	Single	2
CA_TECHNOLOGIES	CA BrightStor ARCserve Backup - Client Agent r11.5 SP1			Maintenance	Term	Enterprise	Single	2
CA_TECHNOLOGIES	CA BrightStor ARCserve Backup - Diagnostic Utility 11.5			Maintenance	Term	Enterprise	Single	7
CA_TECHNOLOGIES	CA Business Intelligence			Maintenance	Term	Enterprise	Single	2
CA_TECHNOLOGIES	CA Business Intelligence 3.2			Maintenance	Term	Enterprise	Single	1
CA_TECHNOLOGIES	CA CAI/PT ODBC			Maintenance	Term	Enterprise	Single	2
CA_TECHNOLOGIES	CA CAISERV r11 x86 32	11.2	WIN	Maintenance	Term	Enterprise	Single	181
CA_TECHNOLOGIES	CA CAISERV r11 x86 32			Maintenance	Term	Enterprise	Single	163
CA_TECHNOLO	CA CleverPath Aion Business Rules Expert 9.1 [SunOS]			Maintenance	Term	Enterprise	Single	1

GIES								
CA_TECHNOLOGIES	CA CleverPath Forest & Trees - Developer 7.1			Maintenance	Term	Enterprise	Single	2
CA_TECHNOLOGIES	CA CleverPath Forest & Trees - Runtime Option 7.1	7.1	WIN	Maintenance	Term	Enterprise	Single	243
CA_TECHNOLOGIES	CA CleverPath Forest & Trees - Runtime Option 7.1			Maintenance	Term	Enterprise	Single	177
CA_TECHNOLOGIES	CA CleverPath Reporter - Builder r4.2			Maintenance	Term	Enterprise	Single	1
CA_TECHNOLOGIES	CA CleverPath Reporter - Server r4.2			Maintenance	Term	Enterprise	Single	1
CA_TECHNOLOGIES	CA Client Automation r12.5 SP1 C1 [Windows]			Maintenance	Term	Enterprise	Single	10
CA_TECHNOLOGIES	CA CMDB			Maintenance	Term	Enterprise	Single	2
CA_TECHNOLOGIES	CA CMDB Federation Adapters			Maintenance	Term	Enterprise	Single	1
CA_TECHNOLOGIES	CA CMDB Visualizer			Maintenance	Term	Enterprise	Single	2
CA_TECHNOLOGIES	CA Common Registration API			Maintenance	Term	Enterprise	Single	1
CA_TECHNOLOGIES	CA Common Services Agent Technologies API r11(build 11.0.8030.0) [SunOS]			Maintenance	Term	Enterprise	Single	2
CA_TECHNOLOGIES	CA Common Services Agent Technologies DSM Provider x86 32			Maintenance	Term	Enterprise	Single	2
CA_TECHNOLO	CA Common Services Agent Technologies Factory API r11 (build			Maintenance	Term	Enterprise	Single	2

GIES	11.0.8051.1731) [SunOS]							
CA_TECHNOLOGIES	CA Common Services Agent Technology Manager Policy for UNIX Log Agent r11 (build 11.0.8037.1318) [SunOS]			Maintenance	Term	Enterprise	Single	2
CA_TECHNOLOGIES	CA Common Services Agent Technology Manager Policy for UNIX OS Agent r11 (build 11.0.8037.1318) [SunOS]			Maintenance	Term	Enterprise	Single	2
CA_TECHNOLOGIES	CA Common Services CAM Messaging r11(build 11.0.54.14) [SunOS]			Maintenance	Term	Enterprise	Single	2
CA_TECHNOLOGIES	CA Common Services Common Object Registration API r11 x86 32			Maintenance	Term	Enterprise	Single	3
CA_TECHNOLOGIES	CA Common Services Common Resource Packages BG Images r11 x86 32			Maintenance	Term	Enterprise	Single	4
CA_TECHNOLOGIES	CA Common Services Common Resource Packages Mibs r11 x86 32	11	WIN	Maintenance	Term	Enterprise	Single	272
CA_TECHNOLOGIES	CA Common Services Common Resource Packages Mibs r11 x86 32			Maintenance	Term	Enterprise	Single	195
CA_TECHNOLOGIES	CA Common Services Continuous Discovery Agent r11 x86 32			Maintenance	Term	Enterprise	Single	2
CA_TECHNOLOGIES	CA Common Services Continuous Discovery Manager r11 x86 32			Maintenance	Term	Enterprise	Single	2
CA_TECHNOLOGIES	CA Common Services DIA DNA Component r11(build 11.0.0.307) [SunOS]			Maintenance	Term	Enterprise	Single	2
CA_TECHNOLOGIES	CA Common Services Dynamic Containment Service r11 x86 32			Maintenance	Term	Enterprise	Single	1
CA_TECHNOLOGIES	CA Common Services Java Runtime Environment r11 x86 32	11	WIN	Maintenance	Term	Enterprise	Single	272

CA_TECHNOLOGIES	CA Common Services Java Runtime Environment r11 x86 32			Maintenance	Term	Enterprise	Single	194
CA_TECHNOLOGIES	CA Common Services Java Runtime r11 [SunOS]			Maintenance	Term	Enterprise	Single	2
CA_TECHNOLOGIES	CA Common Services OpenSSL Redistributables r11 x86 32			Maintenance	Term	Enterprise	Single	3
CA_TECHNOLOGIES	CA Common Services System Performance Translation Character Maps r11 (build 11.0.5314.0) [SunOS]			Maintenance	Term	Enterprise	Single	2
CA_TECHNOLOGIES	CA Common Services Unicenter Utilities r11 (build 11.8030.0.0) [SunOS]			Maintenance	Term	Enterprise	Single	2
CA_TECHNOLOGIES	CA Common Services Web Reporting Service Provider r11 x86 32			Maintenance	Term	Enterprise	Single	2
CA_TECHNOLOGIES	CA Common Services Worldview Administrative Client r11 x86 32			Maintenance	Term	Enterprise	Single	7
CA_TECHNOLOGIES	CA Common Services WorldView API r11 x86 32	11	WIN	Maintenance	Term	Enterprise	Single	35
CA_TECHNOLOGIES	CA Common Services WorldView API r11 x86 32			Maintenance	Term	Enterprise	Single	15
CA_TECHNOLOGIES	CA Common Services WorldView Common Repository Creation r11 x86 32			Maintenance	Term	Enterprise	Single	7
CA_TECHNOLOGIES	CA Common Services WorldView DIA Cell r11 x86 32			Maintenance	Term	Enterprise	Single	3
CA_TECHNOLOGIES	CA Common Services WorldView Severity Propagation Services r11 x86 32			Maintenance	Term	Enterprise	Single	3
CA_TECHNOLOGIES	CA Common Services WorldView Tools Provider r11 x86 32			Maintenance	Term	Enterprise	Single	1

CA_TECHNOLOGIES	CA Common Services Xalan Redistributables r11 x86 32			Maintenance	Term	Enterprise	Single	2
CA_TECHNOLOGIES	CA Common Services xerces c r11 [SunOS]			Maintenance	Term	Enterprise	Single	2
CA_TECHNOLOGIES	CA Common Services Xerces Redistributables r11 x86 32	11	WIN	Maintenance	Term	Enterprise	Single	79
CA_TECHNOLOGIES	CA Common Services Xerces Redistributables r11 x86 32			Maintenance	Term	Enterprise	Single	27
CA_TECHNOLOGIES	CA Constant Access			Maintenance	Term	Enterprise	Single	3
CA_TECHNOLOGIES	CA Constant Access 2.5			Maintenance	Term	Enterprise	Single	12
CA_TECHNOLOGIES	CA Content Import Client			Maintenance	Term	Enterprise	Single	4
CA_TECHNOLOGIES	CA Continous Discovery - Agent 11.0.001			Maintenance	Term	Enterprise	Single	1
CA_TECHNOLOGIES	CA Desktop Migration Manager			Maintenance	Term	Enterprise	Single	1
CA_TECHNOLOGIES	CA Desktop Migration Manager r12.5 [Windows] x86 32			Maintenance	Term	Enterprise	Single	1
CA_TECHNOLOGIES	CA Directory			Maintenance	Term	Enterprise	Single	2
CA_TECHNOLOGIES	CA DSM Agent + Asset Management DCS plug-in r12.5 SP1 [Windows] x86 32			Maintenance	Term	Enterprise	Single	4
CA_TECHNOLOGIES	CA DSM Agent + Asset Management plugin			Maintenance	Term	Enterprise	Single	1013

CA_TECHNOLOGIES	CA DSM Agent + Asset Management plugin (English only Edition)			Maintenance	Term	Enterprise	Single	96
CA_TECHNOLOGIES	CA DSM Agent + Asset Management Plug-in r12.5 [Linux]			Maintenance	Term	Enterprise	Single	3
CA_TECHNOLOGIES	CA DSM Agent + Asset Management Plug-in r12.5 [Solaris] intel			Maintenance	Term	Enterprise	Single	2
CA_TECHNOLOGIES	CA DSM Agent + Asset Management Plug-in r12.5 [Solaris] sparc			Maintenance	Term	Enterprise	Single	3
CA_TECHNOLOGIES	CA DSM Agent + Asset Management Plug-in r12.5 [Windows] x86 32			Maintenance	Term	Enterprise	Single	55
CA_TECHNOLOGIES	CA DSM Agent + Asset Management Plug-in r12.5 SP1 [Linux]	12.5	LINUX	Maintenance	Term	Enterprise	Single	334
CA_TECHNOLOGIES	CA DSM Agent + Asset Management Plug-in r12.5 SP1 [Linux]			Maintenance	Term	Enterprise	Single	1
CA_TECHNOLOGIES	CA DSM Agent + Asset Management Plug-in r12.5 SP1 [Windows] x86 32			Maintenance	Term	Enterprise	Single	1917
CA_TECHNOLOGIES	CA DSM Agent + Asset Management Plug-in r12.5 SP1 sparc [Solaris]	12.5	SOLARIS	Maintenance	Term	Enterprise	Single	99
CA_TECHNOLOGIES	CA DSM Agent + Asset Management Plug-in r12.5 SP1 x86 32 [Windows]	12.5	WIN	Maintenance	Term	Enterprise	Single	2918
CA_TECHNOLOGIES	CA DSM Agent + Asset Management Plug-in r12.5 x86 32 [Windows]	12.5	WIN	Maintenance	Term	Enterprise	Single	104
CA_TECHNOLOGIES	CA DSM Agent + Asset Management Remote Virtualization Inventory plug-in r12.5 SP1 [Windows] x86 32			Maintenance	Term	Enterprise	Single	4
CA_TECHNOLOGIES	CA DSM Agent + Basic Inventory plugin			Maintenance	Term	Enterprise	Single	560

CA_TECHNOLOGIES	CA DSM Agent + Basic Inventory plugin (English only Edition)			Maintenance	Term	Enterprise	Single	7
CA_TECHNOLOGIES	CA DSM Agent + Basic Inventory Plug-in r12.5 [Linux]			Maintenance	Term	Enterprise	Single	3
CA_TECHNOLOGIES	CA DSM Agent + Basic Inventory Plug-in r12.5 [Solaris] intel			Maintenance	Term	Enterprise	Single	2
CA_TECHNOLOGIES	CA DSM Agent + Basic Inventory Plug-in r12.5 [Solaris] sparc			Maintenance	Term	Enterprise	Single	3
CA_TECHNOLOGIES	CA DSM Agent + Basic Inventory Plug-in r12.5 [Windows] x86 32			Maintenance	Term	Enterprise	Single	41
CA_TECHNOLOGIES	CA DSM Agent + Basic Inventory Plug-in r12.5 SP1 [Linux]	12.5	LINUX	Maintenance	Term	Enterprise	Single	334
CA_TECHNOLOGIES	CA DSM Agent + Basic Inventory Plug-in r12.5 SP1 [Linux]			Maintenance	Term	Enterprise	Single	1
CA_TECHNOLOGIES	CA DSM Agent + Basic Inventory Plug-in r12.5 SP1 [Windows] x86 32			Maintenance	Term	Enterprise	Single	1930
CA_TECHNOLOGIES	CA DSM Agent + Basic Inventory Plug-in r12.5 SP1 sparc [Solaris]	12.5	SOLARIS	Maintenance	Term	Enterprise	Single	99
CA_TECHNOLOGIES	CA DSM Agent + Basic Inventory Plug-in r12.5 SP1 x86 32 [Windows]	12.5	WIN	Maintenance	Term	Enterprise	Single	2946
CA_TECHNOLOGIES	CA DSM Agent + Basic Inventory Plug-in r12.5 x86 32 [Windows]	12.5	WIN	Maintenance	Term	Enterprise	Single	79
CA_TECHNOLOGIES	CA DSM Agent + Data Transport plugin			Maintenance	Term	Enterprise	Single	3
CA_TECHNOLOGIES	CA DSM Agent + Data Transport Plug-in r12.5 [Solaris] sparc			Maintenance	Term	Enterprise	Single	1

Asset Management

CA_TECHNOLOGIES	CA DSM Agent + Data Transport Plug-in r12.5 SP1 [Linux]	12.5	LINUX	Maintenance	Term	Enterprise	Single	334
CA_TECHNOLOGIES	CA DSM Agent + Data Transport Plug-in r12.5 SP1 [Linux]			Maintenance	Term	Enterprise	Single	1
CA_TECHNOLOGIES	CA DSM Agent + Data Transport Plug-in r12.5 SP1 sparc [Solaris]	12.5	SOLARIS	Maintenance	Term	Enterprise	Single	99
CA_TECHNOLOGIES	CA DSM Agent + Remote Control plugin			Maintenance	Term	Enterprise	Single	972
CA_TECHNOLOGIES	CA DSM Agent + Remote Control plugin (English only Edition)			Maintenance	Term	Enterprise	Single	5
CA_TECHNOLOGIES	CA DSM Agent + Remote Control Plug-in r12.5 [Windows] x86 32			Maintenance	Term	Enterprise	Single	6
CA_TECHNOLOGIES	CA DSM Agent + Remote Control Plug-in r12.5 SP1 [Windows] x86 32			Maintenance	Term	Enterprise	Single	1746
CA_TECHNOLOGIES	CA DSM Agent + Remote Control Plug-in r12.5 SP1 x86 32 [Windows]	12.5	WIN	Maintenance	Term	Enterprise	Single	2782
CA_TECHNOLOGIES	CA DSM Agent + Remote Control Replayer r12.5 [Windows] x86 32			Maintenance	Term	Enterprise	Single	7
CA_TECHNOLOGIES	CA DSM Agent + Remote Control Replayer r12.5 SP1 [Windows] x86 32			Maintenance	Term	Enterprise	Single	155
CA_TECHNOLO	CA DSM Agent + Remote Control Replayer r12.5 SP1 x86 32 [Windows]	12.5	WIN	Mainte	Term	Enterprise	Single	272

GIES				nan ce				
CA_TEC HNOLO GIES	CA DSM Agent + Remote Control Viewer r12.5 [Windows] x86 32			Mai nte nan ce	Term	Enterprise	Single	7
CA_TEC HNOLO GIES	CA DSM Agent + Remote Control Viewer r12.5 SP1 [Windows] x86 32			Mai nte nan ce	Term	Enterprise	Single	156
CA_TEC HNOLO GIES	CA DSM Agent + Remote Control Viewer r12.5 SP1 x86 32 [Windows]	12.5	WIN	Mai nte nan ce	Term	Enterprise	Single	272
CA_TEC HNOLO GIES	CA DSM Agent + Software Delivery Catalog r12.5 [Windows] x86 32			Mai nte nan ce	Term	Enterprise	Single	26
CA_TEC HNOLO GIES	CA DSM Agent + Software Delivery Catalog r12.5 SP1 [Windows] x86 32			Mai nte nan ce	Term	Enterprise	Single	1926
CA_TEC HNOLO GIES	CA DSM Agent + Software Delivery Catalog r12.5 SP1 x86 32 [Windows]	12.5	WIN	Mai nte nan ce	Term	Enterprise	Single	2945
CA_TEC HNOLO GIES	CA DSM Agent + Software Delivery Catalog r12.5 x86 32 [Windows]	12.5	WIN	Mai nte nan ce	Term	Enterprise	Single	75
CA_TEC HNOLO GIES	CA DSM Agent + Software Delivery plugin			Mai nte nan ce	Term	Enterprise	Single	1016
CA_TEC HNOLO GIES	CA DSM Agent + Software Delivery plugin (English only Edition)			Mai nte nan ce	Term	Enterprise	Single	80
CA_TEC HNOLO	CA DSM Agent + Software Delivery Plug-in r12.5 [Solaris] sparc			Mai nte	Term	Enterprise	Single	1

GIES				nance				
CA_TECHNOLOGIES	CA DSM Agent + Software Delivery Plug-in r12.5 [Windows] x86 32			Maintenance	Term	Enterprise	Single	26
CA_TECHNOLOGIES	CA DSM Agent + Software Delivery Plug-in r12.5 SP1 [Linux]	12.5	LINUX	Maintenance	Term	Enterprise	Single	334
CA_TECHNOLOGIES	CA DSM Agent + Software Delivery Plug-in r12.5 SP1 [Linux]			Maintenance	Term	Enterprise	Single	1
CA_TECHNOLOGIES	CA DSM Agent + Software Delivery Plug-in r12.5 SP1 [Windows] x86 32			Maintenance	Term	Enterprise	Single	1928
CA_TECHNOLOGIES	CA DSM Agent + Software Delivery Plug-in r12.5 SP1 sparc [Solaris]	12.5	SOLARIS	Maintenance	Term	Enterprise	Single	99
CA_TECHNOLOGIES	CA DSM Agent + Software Delivery Plug-in r12.5 SP1 x86 32 [Windows]	12.5	WIN	Maintenance	Term	Enterprise	Single	2945
CA_TECHNOLOGIES	CA DSM Agent + Software Delivery Plug-in r12.5 x86 32 [Windows]	12.5	WIN	Maintenance	Term	Enterprise	Single	75
CA_TECHNOLOGIES	CA DSM Agent AM Device Compliance Scanner plugin			Maintenance	Term	Enterprise	Single	7
CA_TECHNOLOGIES	CA DSM Agent AM RVI plugin			Maintenance	Term	Enterprise	Single	3
CA_TECHNOLO	CA DSM DMPrimer			Mainte	Term	Enterprise	Single	78

GIES				nan ce				
CA_TEC HNOLO GIES	CA DSM DMPrimer 12.5	12.5	WIN	Mai nte nan ce	Term	Enterprise	Single	327
CA_TEC HNOLO GIES	CA DSM DMPrimer 12.5			Mai nte nan ce	Term	Enterprise	Single	230
CA_TEC HNOLO GIES	CA DSM Documentation			Mai nte nan ce	Term	Enterprise	Single	10
CA_TEC HNOLO GIES	CA DSM Explorer			Mai nte nan ce	Term	Enterprise	Single	49
CA_TEC HNOLO GIES	CA DSM Explorer - Asset Management r12.5 [Windows]			Mai nte nan ce	Term	Enterprise	Single	1
CA_TEC HNOLO GIES	CA DSM Explorer - Asset Management r12.5 SP1 [Windows]	12.5	WIN	Mai nte nan ce	Term	Enterprise	Single	115
CA_TEC HNOLO GIES	CA DSM Explorer - Asset Management r12.5 SP1 [Windows]			Mai nte nan ce	Term	Enterprise	Single	79
CA_TEC HNOLO GIES	CA DSM Explorer - Remote Control r12.5 [Windows] x86 32			Mai nte nan ce	Term	Enterprise	Single	1
CA_TEC HNOLO GIES	CA DSM Explorer - Remote Control r12.5 SP1 [Windows] x86 32			Mai nte nan ce	Term	Enterprise	Single	76
CA_TEC HNOLO	CA DSM Explorer - Remote Control r12.5 SP1 x86 32 [Windows]	12.5	WIN	Mai nte	Term	Enterprise	Single	112

GIES				nan ce				
CA_TEC HNOLO GIES	CA DSM Explorer - Software Delivery Boot Management r12.5 SP1 [Windows] x86 32			Mai nte nan ce	Term	Enterprise	Single	79
CA_TEC HNOLO GIES	CA DSM Explorer - Software Delivery Boot Management r12.5 SP1 x86 32 [Windows]	12.5	WIN	Mai nte nan ce	Term	Enterprise	Single	115
CA_TEC HNOLO GIES	CA DSM Explorer - Software Delivery OSIPS r12.5 SP1 [Windows] x86 32			Mai nte nan ce	Term	Enterprise	Single	79
CA_TEC HNOLO GIES	CA DSM Explorer - Software Delivery OSIPS r12.5 SP1 x86 32 [Windows]	12.5	WIN	Mai nte nan ce	Term	Enterprise	Single	115
CA_TEC HNOLO GIES	CA DSM Explorer - Software Delivery r12.5 [Windows] x86 32			Mai nte nan ce	Term	Enterprise	Single	1
CA_TEC HNOLO GIES	CA DSM Explorer - Software Delivery r12.5 SP1 [Windows] x86 32			Mai nte nan ce	Term	Enterprise	Single	79
CA_TEC HNOLO GIES	CA DSM Explorer - Software Delivery r12.5 SP1 x86 32 [Windows]	12.5	WIN	Mai nte nan ce	Term	Enterprise	Single	115
CA_TEC HNOLO GIES	CA DSM Manager			Mai nte nan ce	Term	Enterprise	Single	4
CA_TEC HNOLO GIES	CA DSM Manager - Asset Management r12.5 SP1 [Windows] x86 32			Mai nte nan ce	Term	Enterprise	Single	5
CA_TEC HNOLO	CA DSM Manager - Data Transport Service r12.5 SP1 [Windows] x86 32			Mai nte	Term	Enterprise	Single	5

GIES				nance				
CA_TECHNOLOGIES	CA DSM Manager - Deployment r12.5 SP1 [Windows] x86 32			Maintenance	Term	Enterprise	Single	3
CA_TECHNOLOGIES	CA DSM Manager - Engine r12.5 SP1 [Windows] x86 32			Maintenance	Term	Enterprise	Single	7
CA_TECHNOLOGIES	CA DSM Manager - Remote Control r12.5 SP1 [Windows] x86 32			Maintenance	Term	Enterprise	Single	4
CA_TECHNOLOGIES	CA DSM Manager - Software Delivery r12.5 SP1 [Windows] x86 32			Maintenance	Term	Enterprise	Single	5
CA_TECHNOLOGIES	CA DSM Manager - Web Console r12.5 SP1 [Windows] x86 32			Maintenance	Term	Enterprise	Single	3
CA_TECHNOLOGIES	CA DSM Manager - Web Service r12.5 SP1 [Windows] x86 32			Maintenance	Term	Enterprise	Single	3
CA_TECHNOLOGIES	CA DSM Scalability Server			Maintenance	Term	Enterprise	Single	3
CA_TECHNOLOGIES	CA DSM Scalability Server - Asset Management r12.5 SP1 [Windows] x86 32			Maintenance	Term	Enterprise	Single	6
CA_TECHNOLOGIES	CA DSM Scalability Server - Remote Control r12.5 SP1 [Windows] x86 32			Maintenance	Term	Enterprise	Single	5
CA_TECHNOLO	CA DSM Scalability Server - Software Delivery Boot Server r12.5 SP1 [Windows]			Maintenance	Term	Enterprise	Single	6

GIES	x86 32			nan ce				
CA_TEC HNOLO GIES	CA DSM Scalability Server - Software Delivery Staging Server r12.5 SP1 [Windows] x86 32			Mai nte nan ce	Term	Enterprise	Single	6
CA_TEC HNOLO GIES	CA Embedded Entitlements Manager			Mai nte nan ce	Term	Enterprise	Single	2
CA_TEC HNOLO GIES	CA Enterprise Communicator			Mai nte nan ce	Term	Enterprise	Single	1
CA_TEC HNOLO GIES	CA ERwin Data Modeler r7.3			Mai nte nan ce	Term	Enterprise	Single	34
CA_TEC HNOLO GIES	CA eTrust Embedded Identity and Access Management 8.1			Mai nte nan ce	Term	Enterprise	Single	1
CA_TEC HNOLO GIES	CA eTrust PKI 2.2.0			Mai nte nan ce	Term	Enterprise	Single	1
CA_TEC HNOLO GIES	CA IT Client Manager			Mai nte nan ce	Term	Enterprise	Single	11
CA_TEC HNOLO GIES	CA IT Client Manager OSIM_IPS			Mai nte nan ce	Term	Enterprise	Single	2
CA_TEC HNOLO GIES	CA iTechnology iGateway			Mai nte nan ce	Term	Enterprise	Single	6
CA_TEC HNOLO	CA iTechnology iGateway 4.0.060109 - 2006-01-09 Windows			Mai nte	Term	Enterprise	Single	1

GIES				nan ce				
CA_TEC HNOLO GIES	CA iTechnology iGateway 4.0.060220 - 2006-02-20 Windows			Mai nte nan ce	Term	Enterprise	Single	1
CA_TEC HNOLO GIES	CA iTechnology iGateway 4.0.060220 Windows			Mai nte nan ce	Term	Enterprise	Single	1
CA_TEC HNOLO GIES	CA License Software 1.61.12 Windows			Mai nte nan ce	Term	Enterprise	Single	90
CA_TEC HNOLO GIES	CA License Software 1.61.12 Windows ca	1.61	WIN	Mai nte nan ce	Term	Enterprise	Single	264
CA_TEC HNOLO GIES	CA License Software 1.61.9 Windows			Mai nte nan ce	Term	Enterprise	Single	1
CA_TEC HNOLO GIES	CA License Software 1.62.0 Windows			Mai nte nan ce	Term	Enterprise	Single	1
CA_TEC HNOLO GIES	CA License Software 1.62.12 Windows			Mai nte nan ce	Term	Enterprise	Single	7
CA_TEC HNOLO GIES	CA License Software 1.63.03 Solaris			Mai nte nan ce	Term	Enterprise	Single	2
CA_TEC HNOLO GIES	CA License Software 1.80.1 Windows			Mai nte nan ce	Term	Enterprise	Single	5
CA_TEC HNOLO	CA License Software 1.9.01.105			Mai nte	Term	Enterprise	Single	194

GIES				nan ce				
CA_TEC HNOLO GIES	CA License Software 1.9.01.105 5 ca	1.9	WIN	Mai nte nan ce	Term	Enterprise	Single	242
CA_TEC HNOLO GIES	CA Licensing			Mai nte nan ce	Term	Enterprise	Single	6
CA_TEC HNOLO GIES	CA Licensing 1.52			Mai nte nan ce	Term	Enterprise	Single	2
CA_TEC HNOLO GIES	CA Licensing 1.61	1.61	WIN	Mai nte nan ce	Term	Enterprise	Single	138
CA_TEC HNOLO GIES	CA Licensing 1.61			Mai nte nan ce	Term	Enterprise	Single	10
CA_TEC HNOLO GIES	CA ManageIT SQL-Station - Plan Analyzer 5.10			Mai nte nan ce	Term	Enterprise	Single	13
CA_TEC HNOLO GIES	CA Messaging Windows 1.11.54.16 6 (CAM) ca	1.11.54	WIN	Mai nte nan ce	Term	Enterprise	Single	59
CA_TEC HNOLO GIES	CA MIBS 5.01			Mai nte nan ce	Term	Enterprise	Single	43
CA_TEC HNOLO GIES	CA Opera	OPERAB002	z/OS	Mai nte nan ce	Term	Processor	Site	1
CA_TEC HNOLO	CA Patch Manager			Mai nte	Term	Enterprise	Single	1

GIES				nan ce				
CA_TEC HNOLO GIES	CA Patch Manager r12.5 SP1 [Windows] x86 32			Mai nte nan ce	Term	Enterprise	Single	2
CA_TEC HNOLO GIES	CA Secure Socket Adapter			Mai nte nan ce	Term	Enterprise	Single	1110
CA_TEC HNOLO GIES	CA Secure Socket Adapter 2.2	2.2	WIN	Mai nte nan ce	Term	Enterprise	Single	3017
CA_TEC HNOLO GIES	CA Secure Socket Adapter 2.2			Mai nte nan ce	Term	Enterprise	Single	1974
CA_TEC HNOLO GIES	CA Service Desk			Mai nte nan ce	Term	Enterprise	Single	1
CA_TEC HNOLO GIES	CA Service Desk Manager - Server 12.7			Mai nte nan ce	Term	Enterprise	Single	1
CA_TEC HNOLO GIES	CA Service Desk Manager - server r12.6			Mai nte nan ce	Term	Enterprise	Single	3
CA_TEC HNOLO GIES	CA Socket Adapter			Mai nte nan ce	Term	Enterprise	Single	3
CA_TEC HNOLO GIES	CA Systems Performance LiteAgent			Mai nte nan ce	Term	Enterprise	Single	32
CA_TEC HNOLO	CA Systems Performance LiteAgent r11.2	11.2	WIN	Mai nte	Term	Enterprise	Single	2981

GIES				nan ce				
CA_TEC HNOLO GIES	CA Systems Performance LiteAgent r11.2			Mai nte nan ce	Term	Enterprise	Single	1934
CA_TEC HNOLO GIES	CA TNDClient 4.0			Mai nte nan ce	Term	Enterprise	Single	4
CA_TEC HNOLO GIES	CA UBIImages 5.01			Mai nte nan ce	Term	Enterprise	Single	3
CA_TEC HNOLO GIES	CA Unicenter 3.1			Mai nte nan ce	Term	Enterprise	Single	5
CA_TEC HNOLO GIES	CA Unicenter Agent Technology - UNIX Log Agent r11 (build 11.0.8037.0) [SunOS]			Mai nte nan ce	Term	Enterprise	Single	2
CA_TEC HNOLO GIES	CA Unicenter Agent Technology - UNIX OS Agent r11 (build 11.0.8066.0) [SunOS]			Mai nte nan ce	Term	Enterprise	Single	2
CA_TEC HNOLO GIES	CA Unicenter Alert Management Agent r11 x86 32			Mai nte nan ce	Term	Enterprise	Single	17
CA_TEC HNOLO GIES	CA Unicenter Asset Management - Agent 4.0 SP1 [Win CE]			Mai nte nan ce	Term	Enterprise	Single	1
CA_TEC HNOLO GIES	CA Unicenter Configuration Manager r11 x86 32			Mai nte nan ce	Term	Enterprise	Single	1
CA_TEC HNOLO	CA Unicenter DSM Agent - Scripting Language Interpreter r11.2	11.2	WIN	Mai nte	Term	Enterprise	Single	120

GIES				nan ce				
CA_TEC HNOLO GIES	CA Unicenter DSM Agent - Scripting Language Interpreter r11.2			Mai nte nan ce	Term	Enterprise	Single	1
CA_TEC HNOLO GIES	CA Unicenter DSM Agent + Asset Management Plug-in r11.1 [SunOS]			Mai nte nan ce	Term	Enterprise	Single	2
CA_TEC HNOLO GIES	CA Unicenter DSM Agent + Asset Management Plug-in r11.2 (C2) x86 32			Mai nte nan ce	Term	Enterprise	Single	1
CA_TEC HNOLO GIES	CA Unicenter DSM Agent + Asset Management Plug-in r11.2 SP4 x86 32	11.2	WIN	Mai nte nan ce	Term	Enterprise	Single	52
CA_TEC HNOLO GIES	CA Unicenter DSM Agent + Asset Management Plug-in r11.2 x86 32 (C3)	11.2	WIN	Mai nte nan ce	Term	Enterprise	Single	67
CA_TEC HNOLO GIES	CA Unicenter DSM Agent + Basic Inventory Plug-in r11.1 [SunOS]			Mai nte nan ce	Term	Enterprise	Single	2
CA_TEC HNOLO GIES	CA Unicenter DSM Agent + Basic Inventory Plug-in r11.2 (C2) x86 32			Mai nte nan ce	Term	Enterprise	Single	1
CA_TEC HNOLO GIES	CA Unicenter DSM Agent + Basic Inventory Plug-in r11.2 SP4 x86 32	11.2	WIN	Mai nte nan ce	Term	Enterprise	Single	51
CA_TEC HNOLO GIES	CA Unicenter DSM Agent + Basic Inventory Plug-in r11.2 x86 32 (C3)	11.2	WIN	Mai nte nan ce	Term	Enterprise	Single	67
CA_TEC HNOLO	CA Unicenter DSM Agent + Remote Control Plug-in r11.2 (C3) x86 32			Mai nte	Term	Enterprise	Single	2

GIES				nan ce				
CA_TEC HNOLO GIES	CA Unicenter DSM Agent + Software Delivery Catalog r11.2 (C1) x86 32			Mai nte nan ce	Term	Enterprise	Single	1
CA_TEC HNOLO GIES	CA Unicenter DSM Agent + Software Delivery Plug-in r11.2 (C1) x86 32			Mai nte nan ce	Term	Enterprise	Single	1
CA_TEC HNOLO GIES	CA Unicenter DSM Agent + Software Delivery Plug-in r11.2 SP4 x86 32	11.2	WIN	Mai nte nan ce	Term	Enterprise	Single	51
CA_TEC HNOLO GIES	CA Unicenter DSM Agent + Software Delivery Plug-in r11.2 x86 32 (C3)	11.2	WIN	Mai nte nan ce	Term	Enterprise	Single	68
CA_TEC HNOLO GIES	CA Unicenter DSM Asset Management Agent r11.1 (build 11.1.8160) [SunOS]			Mai nte nan ce	Term	Enterprise	Single	2
CA_TEC HNOLO GIES	CA Unicenter HAS - Cluster Service Layer r11.1 x86 32			Mai nte nan ce	Term	Enterprise	Single	1
CA_TEC HNOLO GIES	CA Unicenter Network and Systems Management r11.1	11.1	WIN	Mai nte nan ce	Term	Enterprise	Single	34
CA_TEC HNOLO GIES	CA Unicenter Network and Systems Management r11.1			Mai nte nan ce	Term	Enterprise	Single	9
CA_TEC HNOLO GIES	CA Unicenter NSM - Agent Common Services 3.1			Mai nte nan ce	Term	Enterprise	Single	2
CA_TEC HNOLO	CA Unicenter NSM - Agent Technology Common Services r11.2 x86 32	11.2	WIN	Mai nte	Term	Enterprise	Single	202

GIES				nan ce				
CA_TEC HNOLO GIES	CA Unicenter NSM - Agent Technology Common Services r11.2 x86 32			Mai nte nan ce	Term	Enterprise	Single	171
CA_TEC HNOLO GIES	CA Unicenter NSM - CCS r11.2 (build 11.2.7292.0) [Linux]			Mai nte nan ce	Term	Enterprise	Single	4
CA_TEC HNOLO GIES	CA Unicenter NSM - CCS r11.2 (build 11.2.7292.0) [SunOS]			Mai nte nan ce	Term	Enterprise	Single	5
CA_TEC HNOLO GIES	CA Unicenter NSM - CCS r11.2 (build 11.2.7292.0)[Linux]	11.2	LINUX	Mai nte nan ce	Term	Enterprise	Single	345
CA_TEC HNOLO GIES	CA Unicenter NSM - CCS r11.2 (build 11.2.7292.0)[SunOS]	11.2	SOLARIS	Mai nte nan ce	Term	Enterprise	Single	106
CA_TEC HNOLO GIES	CA Unicenter NSM - EM Event Agent r11.2 SP1 x86 32			Mai nte nan ce	Term	Enterprise	Single	16
CA_TEC HNOLO GIES	CA Unicenter NSM - Log Agent 3.1			Mai nte nan ce	Term	Enterprise	Single	2
CA_TEC HNOLO GIES	CA Unicenter NSM - Report Explorer r11.1 x86 32			Mai nte nan ce	Term	Enterprise	Single	2
CA_TEC HNOLO GIES	CA Unicenter NSM - Report Explorer r11.2 x86 32			Mai nte nan ce	Term	Enterprise	Single	7
CA_TEC HNOLO	CA Unicenter NSM - Severity Browser 3.0			Mai nte	Term	Enterprise	Single	11

GIES				nan ce				
CA_TEC HNOLO GIES	CA Unicenter NSM - Unicenter Browser Interface r11.1			Mai nte nan ce	Term	Enterprise	Single	1
CA_TEC HNOLO GIES	CA Unicenter NSM - UNIX Log Agent r11(build 11.0.5193.0) [SunOS]			Mai nte nan ce	Term	Enterprise	Single	2
CA_TEC HNOLO GIES	CA Unicenter NSM - UNIX Log Agent r11.2 (build 11.2.7284.0) [Linux]			Mai nte nan ce	Term	Enterprise	Single	4
CA_TEC HNOLO GIES	CA Unicenter NSM - UNIX Log Agent r11.2 (build 11.2.7284.0) [SunOS]			Mai nte nan ce	Term	Enterprise	Single	5
CA_TEC HNOLO GIES	CA Unicenter NSM - UNIX Log Agent r11.2 (build 11.2.7284.0)[Linux]	11.2	LINUX	Mai nte nan ce	Term	Enterprise	Single	345
CA_TEC HNOLO GIES	CA Unicenter NSM - UNIX Log Agent r11.2 (build 11.2.7284.0)[SunOS]	11.2	SOLARIS	Mai nte nan ce	Term	Enterprise	Single	106
CA_TEC HNOLO GIES	CA Unicenter NSM - UNIX System Agent r11(build 11.0.5193.0) [SunOS]			Mai nte nan ce	Term	Enterprise	Single	2
CA_TEC HNOLO GIES	CA Unicenter NSM - UNIX System Agent r11.2 (build 11.2.7284.0) [Linux]			Mai nte nan ce	Term	Enterprise	Single	4
CA_TEC HNOLO GIES	CA Unicenter NSM - UNIX System Agent r11.2 (build 11.2.7284.0) [SunOS]			Mai nte nan ce	Term	Enterprise	Single	5
CA_TEC HNOLO	CA Unicenter NSM - UNIX System Agent r11.2 (build 11.2.7284.0)[Linux]	11.2	LINUX	Mai nte	Term	Enterprise	Single	345

GIES				nan ce				
CA_TEC HNOLO GIES	CA Unicenter NSM - UNIX System Agent r11.2 (build 11.2.7284.0)[SunOS]	11.2	SOLARIS	Mai nte nan ce	Term	Enterprise	Single	106
CA_TEC HNOLO GIES	CA Unicenter NSM - Windows 2000 System Agent 3.1			Mai nte nan ce	Term	Enterprise	Single	2
CA_TEC HNOLO GIES	CA Unicenter NSM - Windows Management Instrumentation Agent 3.0			Mai nte nan ce	Term	Enterprise	Single	5
CA_TEC HNOLO GIES	CA Unicenter NSM - Windows NT 4 System Agent 3.1			Mai nte nan ce	Term	Enterprise	Single	1
CA_TEC HNOLO GIES	CA Unicenter NSM - Worldview Administation Client r11.1 x86 32			Mai nte nan ce	Term	Enterprise	Single	7
CA_TEC HNOLO GIES	CA Unicenter NSM - Worldview Advanced Integration Server r11.1 x86 32			Mai nte nan ce	Term	Enterprise	Single	1
CA_TEC HNOLO GIES	CA Unicenter NSM - Worldview Advanced Integration Server r11.2 x86 32			Mai nte nan ce	Term	Enterprise	Single	6
CA_TEC HNOLO GIES	CA Unicenter NSM - Worldview API r11.2 x86 32			Mai nte nan ce	Term	Enterprise	Single	8
CA_TEC HNOLO GIES	CA Unicenter NSM Systems Agents - Adaptive Configuration r11.1 x86 32			Mai nte nan ce	Term	Enterprise	Single	3
CA_TEC HNOLO	CA Unicenter NSM Systems Agents - Adaptive Configuration r11.2 x86 32	11.2	WIN	Mai nte	Term	Enterprise	Single	234

GIES				nan ce				
CA_TEC HNOLO GIES	CA Unicenter NSM Systems Agents - Adaptive Configuration r11.2 x86 32			Mai nte nan ce	Term	Enterprise	Single	185
CA_TEC HNOLO GIES	CA Unicenter NSM Systems Agents - Log Agent r11.1 SP1 Cum 3 x86 32	11.1	WIN	Mai nte nan ce	Term	Enterprise	Single	27
CA_TEC HNOLO GIES	CA Unicenter NSM Systems Agents - Log Agent r11.1 SP1 Cum 3 x86 32			Mai nte nan ce	Term	Enterprise	Single	7
CA_TEC HNOLO GIES	CA Unicenter NSM Systems Agents - Log Agent r11.2 SP1 x86 32	11.2	WIN	Mai nte nan ce	Term	Enterprise	Single	61
CA_TEC HNOLO GIES	CA Unicenter NSM Systems Agents - Log Agent r11.2 SP1 x86 32			Mai nte nan ce	Term	Enterprise	Single	32
CA_TEC HNOLO GIES	CA Unicenter NSM Systems Agents - Log Agent r11.2 SP2 x86 32	11.2	WIN	Mai nte nan ce	Term	Enterprise	Single	172
CA_TEC HNOLO GIES	CA Unicenter NSM Systems Agents - Log Agent r11.2 SP2 x86 32			Mai nte nan ce	Term	Enterprise	Single	153
CA_TEC HNOLO GIES	CA Unicenter NSM Systems Agents - Windows System Agent r11.1 SP1 Cum 3 x86 32	11.1	WIN	Mai nte nan ce	Term	Enterprise	Single	29
CA_TEC HNOLO GIES	CA Unicenter NSM Systems Agents - Windows System Agent r11.1 SP1 Cum 3 x86 32			Mai nte nan ce	Term	Enterprise	Single	7
CA_TEC HNOLO	CA Unicenter NSM Systems Agents - Windows System Agent r11.2 SP1 x86 32	11.2	WIN	Mai nte	Term	Enterprise	Single	61

GIES				nan ce				
CA_TEC HNOLO GIES	CA Unicenter NSM Systems Agents - Windows System Agent r11.2 SP1 x86 32			Mai nte nan ce	Term	Enterprise	Single	32
CA_TEC HNOLO GIES	CA Unicenter NSM Systems Agents - Windows System Agent r11.2 SP2 x86 32	11.2	WIN	Mai nte nan ce	Term	Enterprise	Single	172
CA_TEC HNOLO GIES	CA Unicenter NSM Systems Agents - Windows System Agent r11.2 SP2 x86 32			Mai nte nan ce	Term	Enterprise	Single	153
CA_TEC HNOLO GIES	CA Unicenter Service Desk - Dashboard r11.2	11.2	WIN	Mai nte nan ce	Term	Enterprise	Single	225
CA_TEC HNOLO GIES	CA Unicenter Service Desk - Dashboard r11.2			Mai nte nan ce	Term	Enterprise	Single	166
CA_TEC HNOLO GIES	CA Unicenter Service Desk (one bundled product with includes CMDB and Knowledge Tools) - r12.1	12.1_1cp-196	WIN	Mai nte nan ce	Term	Enterprise	Single	1
CA_TEC HNOLO GIES	CA Unicenter Software Delivery 4.0 SP1	4.0	WIN	Mai nte nan ce	Term	Enterprise	Single	47
CA_TEC HNOLO GIES	CA Unicenter TND 3.0			Mai nte nan ce	Term	Enterprise	Single	1
CA_TEC HNOLO GIES	CA Unicenter TNG - Auto Discovery 2.2			Mai nte nan ce	Term	Enterprise	Single	11
CA_TEC HNOLO	CA View	VIEBAS002	z/OS	Mai nte	Term	Processor	Site	1

GIES				nan ce				
CA_TEC HNOLO GIES	CA View Extended Retention	VIEERO002	z/OS	Mai nte nan ce	Term	Processor	Site	1
CA_TEC HNOLO GIES	CA VM: Backup	VMBKUP004	z/OS	Mai nte nan ce	Term	Processor	Site	1
CA_TEC HNOLO GIES	CA VM: Tape	VMTAPE004	z/OS	Mai nte nan ce	Term	Processor	Site	1
CA_TEC HNOLO GIES	CA Workload CA 7	SEVBAS002	z/OS	Mai nte nan ce	Term	Processor	Site	1
CA_TEC HNOLO GIES	CA_Client_Automation_r12_5_SP1C1			Mai nte nan ce	Term	Enterprise	Single	1
Pitney Boyes	Canadian Code- 1 Plus		Solaris	Mai nte nan ce	Term	Enterprise	Site	1
Pitney Boyes	Canadian Code- 1 Plus		z/OS	Mai nte nan ce	Term	Processor	Site	1
	Cisco Agent Desktop			Mai nte nan ce	Term	Enterprise	Single	2
	Cisco Agent Desktop 85.1	85.1	WIN	Mai nte nan ce	Term	Enterprise	Single	142
	Cisco Agent Desktop 85.1			Mai nte	Term	Enterprise	Single	76

				nan ce				
	Cisco AnyConnect Diagnostics and Reporting Tool			Mai nte nan ce	Term	Enterprise	Single	19
	Cisco AnyConnect Secure Mobility Client			Mai nte nan ce	Term	Enterprise	Single	19
	Cisco ASDM-IDM Launcher			Mai nte nan ce	Term	Enterprise	Single	3
	Cisco Desktop Services 8.5(2a) Maintenance Release 2			Mai nte nan ce	Term	Enterprise	Single	2
	Cisco SDM			Mai nte nan ce	Term	Enterprise	Single	1
	Cisco Systems VPN Client 5.0.07			Mai nte nan ce	Term	Enterprise	Single	24
	Cisco Systems VPN Client 5.0.07.0290			Mai nte nan ce	Term	Enterprise	Single	19
	Cisco WebEx Meetings			Mai nte nan ce	Term	Enterprise	Single	1
	CiscoSecure ACS v4.2			Mai nte nan ce	Term	Enterprise	Single	2
	Citrix Access Management Console			Mai nte	Term	Enterprise	Single	7

				nance				
	Citrix Access Management Console - Framework 5.0			Maintenance	Term	Enterprise	Single	7
	Citrix Access Management Console 5.0			Maintenance	Term	Enterprise	Single	7
	Citrix AD Identity SnapIn			Maintenance	Term	Enterprise	Single	1
	Citrix Broker PowerShell Snap-In			Maintenance	Term	Enterprise	Single	5
	Citrix Common Commands			Maintenance	Term	Enterprise	Single	1
	Citrix Configuration SnapIn			Maintenance	Term	Enterprise	Single	1
	Citrix Desktop Director			Maintenance	Term	Enterprise	Single	3
	Citrix Desktop Studio			Maintenance	Term	Enterprise	Single	1
	Citrix Group Policy Management (x64)			Maintenance	Term	Enterprise	Single	1
	Citrix HDX MediaStream for Flash - Server			Mainte	Term	Enterprise	Single	7

				nan ce				
	Citrix Host SnapIn			Mai nte nan ce	Term	Enterprise	Single	5
	Citrix Hotfix Rollup Pack XAE500W2K8X64R01			Mai nte nan ce	Term	Enterprise	Single	7
	Citrix Hotfix XAE500R01W2K8X64024			Mai nte nan ce	Term	Enterprise	Single	7
	Citrix Licensing			Mai nte nan ce	Term	Enterprise	Single	1
	Citrix Machine Creation SnapIn			Mai nte nan ce	Term	Enterprise	Single	1
	Citrix Machine Identity SnapIn			Mai nte nan ce	Term	Enterprise	Single	1
	Citrix Offline Plug-in			Mai nte nan ce	Term	Enterprise	Single	2
	Citrix Online Launcher			Mai nte nan ce	Term	Enterprise	Single	16
	Citrix online plug-in			Mai nte nan ce	Term	Enterprise	Single	1
	Citrix online plug-in - web			Mai nte	Term	Enterprise	Single	1

				nan ce				
	Citrix online plug-in - web 12.0			Mai nte nan ce	Term	Enterprise	Single	1
	Citrix online plug-in (DV)			Mai nte nan ce	Term	Enterprise	Single	1
	Citrix online plug-in (DV) 12.3			Mai nte nan ce	Term	Enterprise	Single	25
	Citrix online plug-in (HDX)			Mai nte nan ce	Term	Enterprise	Single	1
	Citrix online plug-in (HDX) 12.3			Mai nte nan ce	Term	Enterprise	Single	25
	Citrix online plug-in (USB)			Mai nte nan ce	Term	Enterprise	Single	1
	Citrix online plug-in (USB) 12.3			Mai nte nan ce	Term	Enterprise	Single	24
	Citrix online plug-in (Web)			Mai nte nan ce	Term	Enterprise	Single	1
	Citrix online plug-in (Web) 12.3			Mai nte nan ce	Term	Enterprise	Single	27
	Citrix online plug-in 12.3 (DV)	12.3	WIN	Mai nte	Term	Enterprise	Single	47

				nance				
	Citrix online plug-in 12.3 (HDX)	12.3	WIN	Maintenance	Term	Enterprise	Single	47
	Citrix online plug-in 12.3 (Web)	12.3	WIN	Maintenance	Term	Enterprise	Single	53
	Citrix Online Plug-in 13.0			Maintenance	Term	Enterprise	Single	8
	Citrix Online Plug-in 13.1			Maintenance	Term	Enterprise	Single	1
	Citrix Online Plug-in 13.3			Maintenance	Term	Enterprise	Single	7
	Citrix Online Plug-in 13.4	13.4	WIN	Maintenance	Term	Enterprise	Single	204
	Citrix Online Plug-in 13.4			Maintenance	Term	Enterprise	Single	137
	Citrix Online Plug-in 14.0			Maintenance	Term	Enterprise	Single	2
	Citrix Online Plug-in 14.1			Maintenance	Term	Enterprise	Single	53
	Citrix Provisioning Services Console x64			Mainte	Term	Enterprise	Single	4

				nance				
	Citrix Provisioning Services x64			Maintenance	Term	Enterprise	Single	2
	Citrix Receiver			Maintenance	Term	Enterprise	Single	27
	Citrix Receiver (Aero) 3.0			Maintenance	Term	Enterprise	Single	7
	Citrix Receiver (Aero) 3.3			Maintenance	Term	Enterprise	Single	6
	Citrix Receiver (Aero) 3.4			Maintenance	Term	Enterprise	Single	134
	Citrix Receiver (Aero) 4.0			Maintenance	Term	Enterprise	Single	2
	Citrix Receiver (Aero) 4.1			Maintenance	Term	Enterprise	Single	53
	Citrix Receiver (DV) 3.0			Maintenance	Term	Enterprise	Single	7
	Citrix Receiver (DV) 3.3			Maintenance	Term	Enterprise	Single	6
	Citrix Receiver (DV) 3.4			Mainte	Term	Enterprise	Single	134

				nance				
	Citrix Receiver (DV) 4.0			Maintenance	Term	Enterprise	Single	2
	Citrix Receiver (DV) 4.1			Maintenance	Term	Enterprise	Single	53
	Citrix Receiver (Enterprise)			Maintenance	Term	Enterprise	Single	18
	Citrix Receiver (HDX Flash Redirection) 3.0			Maintenance	Term	Enterprise	Single	7
	Citrix Receiver (HDX Flash Redirection) 3.3			Maintenance	Term	Enterprise	Single	6
	Citrix Receiver (HDX Flash Redirection) 3.4			Maintenance	Term	Enterprise	Single	134
	Citrix Receiver (HDX Flash Redirection) 4.0			Maintenance	Term	Enterprise	Single	2
	Citrix Receiver (HDX Flash Redirection) 4.1			Maintenance	Term	Enterprise	Single	53
	Citrix Receiver (PNA) 3.0			Maintenance	Term	Enterprise	Single	1
	Citrix Receiver (PNA) 3.4			Mainte	Term	Enterprise	Single	26

				nan ce				
	Citrix Receiver (SSON) 3.0			Mai nte nan ce	Term	Enterprise	Single	1
	Citrix Receiver (SSON) 3.4			Mai nte nan ce	Term	Enterprise	Single	26
	Citrix Receiver (USB) 3.0			Mai nte nan ce	Term	Enterprise	Single	2
	Citrix Receiver (USB) 3.3			Mai nte nan ce	Term	Enterprise	Single	1
	Citrix Receiver (USB) 3.4			Mai nte nan ce	Term	Enterprise	Single	34
	Citrix Receiver (USB) 4.0			Mai nte nan ce	Term	Enterprise	Single	2
	Citrix Receiver (USB) 4.1			Mai nte nan ce	Term	Enterprise	Single	27
	Citrix Receiver 13.4 (Aero)	13.4	WIN	Mai nte nan ce	Term	Enterprise	Single	127
	Citrix Receiver 13.4 (DV)	13.4	WIN	Mai nte nan ce	Term	Enterprise	Single	126
	Citrix Receiver 13.4 (HDX Flash Redirection)	13.4	WIN	Mai nte	Term	Enterprise	Single	126

				nance				
	Citrix Receiver 13.4 (PNA)	13.4	WIN	Maintenance	Term	Enterprise	Single	28
	Citrix Receiver 13.4 (SSON)	13.4	WIN	Maintenance	Term	Enterprise	Single	28
	Citrix Receiver 13.4 (USB)	13.4	WIN	Maintenance	Term	Enterprise	Single	40
	Citrix Receiver 13.4 Enterprise Edition	13.4	WIN	Maintenance	Term	Enterprise	Single	28
	Citrix Receiver 3.0 Enterprise Edition			Maintenance	Term	Enterprise	Single	1
	Citrix Receiver 3.3			Maintenance	Term	Enterprise	Single	1
	Citrix Receiver 3.4			Maintenance	Term	Enterprise	Single	8
	Citrix Receiver 3.4 (Aero)	3.4	WIN	Maintenance	Term	Enterprise	Single	191
	Citrix Receiver 3.4 (DV)	3.4	WIN	Maintenance	Term	Enterprise	Single	191
	Citrix Receiver 3.4 (HDX Flash Redirection)	3.4	WIN	Maint	Term	Enterprise	Single	191

				nance				
	Citrix Receiver 3.4 (PNA)	3.4	WIN	Maintenance	Term	Enterprise	Single	48
	Citrix Receiver 3.4 (SSON)	3.4	WIN	Maintenance	Term	Enterprise	Single	49
	Citrix Receiver 3.4 (USB)	3.4	WIN	Maintenance	Term	Enterprise	Single	65
	Citrix Receiver 3.4 Enterprise Edition	3.4	WIN	Maintenance	Term	Enterprise	Single	48
	Citrix Receiver 3.4 Enterprise Edition			Maintenance	Term	Enterprise	Single	26
	Citrix Receiver 4.1			Maintenance	Term	Enterprise	Single	27
	Citrix Receiver Inside 3.0			Maintenance	Term	Enterprise	Single	8
	Citrix Receiver Inside 3.3			Maintenance	Term	Enterprise	Single	7
	Citrix Receiver Inside 3.4	3.4	WIN	Maintenance	Term	Enterprise	Single	215
	Citrix Receiver Inside 3.4			Mainte	Term	Enterprise	Single	142

				nance				
	Citrix Receiver Inside 4.1			Maintenance	Term	Enterprise	Single	54
	Citrix Receiver Updater 3.3			Maintenance	Term	Enterprise	Single	7
	Citrix Receiver Updater 3.4	3.4	WIN	Maintenance	Term	Enterprise	Single	156
	Citrix Receiver Updater 3.4			Maintenance	Term	Enterprise	Single	117
	Citrix Receiver Updater 4.0			Maintenance	Term	Enterprise	Single	2
	Citrix Receiver Updater 4.1			Maintenance	Term	Enterprise	Single	53
	Citrix Web Interface			Maintenance	Term	Enterprise	Single	2
	Citrix XenApp 5.0			Maintenance	Term	Enterprise	Single	7
	Citrix XenApp Document Library 5.0.0			Maintenance	Term	Enterprise	Single	7
	Citrix XenApp Plugin for Streamed Apps			Mainte	Term	Enterprise	Single	1

				nan ce				
	Citrix XenDesktop			Mai nte nan ce	Term	Enterprise	Single	4
	Classic Discovery			Mai nte nan ce	Term	Enterprise	Single	3
	ClassicImages			Mai nte nan ce	Term	Enterprise	Single	3
	CleverPath Forest & Trees 7.1 Developer			Mai nte nan ce	Term	Enterprise	Single	4
	CleverPath Forest & Trees 7.1 Runtime Option			Mai nte nan ce	Term	Enterprise	Single	138
	CleverPath Forest & Trees 7.11 Runtime Option			Mai nte nan ce	Term	Enterprise	Single	1
	CleverPath Reporter Builder			Mai nte nan ce	Term	Enterprise	Single	1
	CleverPath Reporter Server			Mai nte nan ce	Term	Enterprise	Single	1
	Client Letter			Mai nte nan ce	Term	Enterprise	Single	137
	CMD Prompt Here as Administrator PowerToy for Windows Vista v1.0.2			Mai nte	Term	Enterprise	Single	19

	(Uninstall only)			nan ce				
	CMD Prompt Here PowerToy			Mai nte nan ce	Term	Enterprise	Single	44
	CMD Prompt Here PowerToy v1.0.3 (Uninstall only)			Mai nte nan ce	Term	Enterprise	Single	19
	CMS Supervisor R16			Mai nte nan ce	Term	Enterprise	Single	137
IBM	COBOL V4	5655S71	z/OS	Mai nte nan ce	Term	Processor	Site	1
Pitney Boyes	Code-1 Plus	IBM: OS/390 MVS - Internet Delivery	z/OS	Mai nte nan ce	Term	Processor	Site	1
Pitney Boyes	CODE-1 Plus		Solaris	Mai nte nan ce	Term	Enterprise	Site	2
Pitney Boyes	Code-1 Plus International		Solaris	Mai nte nan ce	Term	Enterprise	Site	1
Pitney Boyes	Code-1 Plus International		z/os	Mai nte nan ce	Term	Processor	Site	1
	CollabNet Subversion Client 1.6.2			Mai nte nan ce	Term	Enterprise	Single	2
IBM	Compatibility Fonts	5655M32	z/OS	Mai nte	Term	Processor	Site	1

				nan ce				
	Computer Associates CAWIN Localisation Library			Mai nte nan ce	Term	Enterprise	Single	1
	Compuware Distributed License Management			Mai nte nan ce	Term	Enterprise	Single	16
	Compuware Distributed License Management x64			Mai nte nan ce	Term	Enterprise	Single	1
	Compuware File-AID/CS Execution Server			Mai nte nan ce	Term	Enterprise	Single	1
	Compuware License Administration			Mai nte nan ce	Term	Enterprise	Single	1
	Compuware Open Server			Mai nte nan ce	Term	Enterprise	Single	1
	Compuware QADirector 1.0			Mai nte nan ce	Term	Enterprise	Single	1
	Compuware QADirector Integration Plug-Ins 06.00.00			Mai nte nan ce	Term	Enterprise	Single	1
	CoreStreet Desktop Validation Client	6.1	WIN	Mai nte nan ce	Term	Enterprise	Single	1172
	CoreStreet Desktop Validation Client 2.1.5			Mai nte	Term	Enterprise	Single	11

				nan ce				
	CoreStreet Desktop Validation Client 2.1.6 / x64 Edition			Mai nte nan ce	Term	Enterprise	Single	4
	CoreStreet Desktop Validation Client 3.1 / x64 Edition			Mai nte nan ce	Term	Enterprise	Single	4
	CoreStreet Desktop Validation Client 3.1.4			Mai nte nan ce	Term	Enterprise	Single	8
	CoreStreet Desktop Validation Client 3.1.4 / x64 Edition			Mai nte nan ce	Term	Enterprise	Single	50
	CoreStreet Desktop Validation Client 3.1.7 / x64 Edition			Mai nte nan ce	Term	Enterprise	Single	967
	CoreStreet Desktop Validation Client All User Settings			Mai nte nan ce	Term	Enterprise	Single	973
	CoreStreet Server Validation Extension 3.1.4 for Microsoft(R) Domain Controller(R)			Mai nte nan ce	Term	Enterprise	Single	3
	CoreStreet Server Validation Extension 3.1.4 for Microsoft(R) Domain Controller(R) / x64 Edition			Mai nte nan ce	Term	Enterprise	Single	5
	CoreStreet Server Validation Extension 3.1.7 for Microsoft(R) Internet Information Server / x64 Edition			Mai nte nan ce	Term	Enterprise	Single	1
	Crystal Reports Basic for Visual Studio 2008			Mai nte	Term	Enterprise	Single	1

				nance				
	Crystal Reports for Visual Studio			Maintenance	Term	Enterprise	Single	1
	Crystal Reports XI			Maintenance	Term	Enterprise	Single	1
	CutePDF Printer Setup			Maintenance	Term	Enterprise	Single	12
	CutePDF Writer	2.7	WIN	Maintenance	Term	Enterprise	Single	2839
	CutePDF Writer 2.3			Maintenance	Term	Enterprise	Single	1
	CutePDF Writer 2.7			Maintenance	Term	Enterprise	Single	1771
	CutePDF Writer 2.8			Maintenance	Term	Enterprise	Single	2
	cvs			Maintenance	Term	Enterprise	Single	1
	CVSNT			Maintenance	Term	Enterprise	Single	195
	CVSNT 2.0.51			Mainte	Term	Enterprise	Single	253

				nan ce				
	CyberLink PowerDVD 5.5			Mai nte nan ce	Term	Enterprise	Single	1
IBM	Data Fonts Object	5771ADA	z/OS	Mai nte nan ce	Term	Processor	Site	1
IBM	Data Fonts Source		z/OS	Mai nte nan ce	Term	Processor	Site	1
	DBIDS Background Registration			Mai nte nan ce	Term	Enterprise	Single	3
	DBsign Web Signer			Mai nte nan ce	Term	Enterprise	Single	988
	DCO XMPP Desktop Client			Mai nte nan ce	Term	Enterprise	Single	963
	DCO XMPP Desktop Client (remove only)			Mai nte nan ce	Term	Enterprise	Single	986
	Debug Diagnostics 1.2 32-bit			Mai nte nan ce	Term	Enterprise	Single	1
IBM	Debug Tool V12 S&S	5655J19	z/OS	Mai nte nan ce	Term	Processor	Site	1
	Debugging Tools for Windows (x86)			Mai nte	Term	Enterprise	Single	1

				nan ce				
	Definition update for Microsoft Office 2010 (KB982726) 32-Bit Edition			Mai nte nan ce	Term	Enterprise	Single	2
	Definition Update for Microsoft Office 2010 (KB982726) 64-Bit Edition			Mai nte nan ce	Term	Enterprise	Single	8
IBM	Device Supp Facilities	5655257	z/OS	Mai nte nan ce	Term	Processor	Site	1
IBM	Device Supp Facilities ICKDS	5655257	z/OS	Mai nte nan ce	Term	Processor	Site	1
IBM	DFSMS/VM Primary	5741A05	z/VM	Mai nte nan ce	Term	Processor	Site	1
IBM	DFSORT/CMS Version 2	5684134	z/OS	Mai nte nan ce	Term	Processor	Site	1
	DirectX 9.0c			Mai nte nan ce	Term	Enterprise	Single	1979
	Diskeeper 2007 Server			Mai nte nan ce	Term	Enterprise	Single	2
	Diskeeper 2008 Server			Mai nte nan ce	Term	Enterprise	Single	1
IBM	Display Management System V2	5684113	z/OS	Mai nte	Term	Processor	Site	1

				nan ce				
IBM	DITTO for VSE and VM V3	5688052	z/VM	Mai nte nan ce	Term	Processor	Site	1
IBM	DITTO/ESA for MVS	5655103	z/OS	Mai nte nan ce	Term	Processor	Site	1
	DMDC Adobe Dreamweaver			Mai nte nan ce	Term	Enterprise	Single	8
	DMDC GotoMeeting			Mai nte nan ce	Term	Enterprise	Single	65
	DMDC Hummingbird Exceed			Mai nte nan ce	Term	Enterprise	Single	121
	DMDC Optimal Trace			Mai nte nan ce	Term	Enterprise	Single	24
	DMDC Optimal Trace Admin Tool			Mai nte nan ce	Term	Enterprise	Single	24
	DMDC Optimal Trace CMD Line			Mai nte nan ce	Term	Enterprise	Single	24
	DMDC Project Pro			Mai nte nan ce	Term	Enterprise	Single	484
	DMDC Sharepoint Designer			Mai nte	Term	Enterprise	Single	76

				nan ce				
	DMDC TestPartner			Mai nte nan ce	Term	Enterprise	Single	119
	DMDC Toad Basic			Mai nte nan ce	Term	Enterprise	Single	86
	DMDC Toad Generic			Mai nte nan ce	Term	Enterprise	Single	148
	DMDC Toad KXpert			Mai nte nan ce	Term	Enterprise	Single	6
	DMDC Toad Server Side			Mai nte nan ce	Term	Enterprise	Single	2
	DMDC Toad SQL Optimizer			Mai nte nan ce	Term	Enterprise	Single	79
	DMDC Toad TDM			Mai nte nan ce	Term	Enterprise	Single	79
	DMDC Visio Pro			Mai nte nan ce	Term	Enterprise	Single	541
	DMDC.Signer.Installer			Mai nte nan ce	Term	Enterprise	Single	24
	Documentation for Visual Fortran Compiler Professional 11.1			Mai nte	Term	Enterprise	Single	1

				nan ce				
	Dotfuscator Software Services - Community Edition			Mai nte nan ce	Term	Enterprise	Single	27
	doxygen			Mai nte nan ce	Term	Enterprise	Single	1
	Dragon NaturallySpeaking 12.5			Mai nte nan ce	Term	Enterprise	Single	1
	DYMO Label Software 8.5			Mai nte nan ce	Term	Enterprise	Single	1
	DYMO Label v.8			Mai nte nan ce	Term	Enterprise	Single	1
	DYMO Stamps			Mai nte nan ce	Term	Enterprise	Single	2
	Eclipse SDK 2.1.0 - Build id: 200303272130 x86 32			Mai nte nan ce	Term	Enterprise	Single	1
	Eclipse SDK 3.3.0 - Build id : M20080221-1800 x86 32			Mai nte nan ce	Term	Enterprise	Single	1
	Eclipse SDK 3.6.1			Mai nte nan ce	Term	Enterprise	Single	1
	eEye Digital Security Enterprise Update Server			Mai nte	Term	Enterprise	Single	2

				nance				
	eEye Digital Security REM Events Manager			Maintenance	Term	Enterprise	Single	1
	eEye Digital Security REM Events Server			Maintenance	Term	Enterprise	Single	1
	eEye Digital Security Retina			Maintenance	Term	Enterprise	Single	4
	EFCM_9.6			Maintenance	Term	Enterprise	Single	1
	EMET 4.1			Maintenance	Term	Enterprise	Single	619
	EMET 4.1 Update 1			Maintenance	Term	Enterprise	Single	140
	Emulex Common SAN Management 33.00.17.06			Maintenance	Term	Enterprise	Single	2
	Emulex Common SAN Management 33.00.19.02			Maintenance	Term	Enterprise	Single	1
	Emulex elxocm-windows-5.00.17.06-2			Maintenance	Term	Enterprise	Single	3
	Emulex HBAnyware CLI 4.0a32			Maint	Term	Enterprise	Single	1

				nan ce				
	Emulex HBAnyware CLI 4.1a35			Mai nte nan ce	Term	Enterprise	Single	7
	Emulex OCManager 5.0			Mai nte nan ce	Term	Enterprise	Single	2
	Emulex OCManager 5.00.17.06			Mai nte nan ce	Term	Enterprise	Single	2
	Emulex OCManager Enterprise 5.1.42.4-1			Mai nte nan ce	Term	Enterprise	Single	4
	Emulex Storport Miniport Driver Core Kit 2.10x1-1c			Mai nte nan ce	Term	Enterprise	Single	1
	Emulex Storport Miniport Driver Core Kit 2.20.006-1g			Mai nte nan ce	Term	Enterprise	Single	7
	EnPasFltV2x64			Mai nte nan ce	Term	Enterprise	Single	134
	EnPasFltV2x86			Mai nte nan ce	Term	Enterprise	Single	12
IBM	Enterprise PL/I for z/OS V4	5655W67	z/OS	Mai nte nan ce	Term	Processor	Site	1
	Entity Framework Designer for Visual Studio 2012 - enu			Mai nte	Term	Enterprise	Single	3

				nan ce				
	EPSON Attach To Email			Mai nte nan ce	Term	Enterprise	Single	1
	EPSON Copy Utility 3			Mai nte nan ce	Term	Enterprise	Single	1
	EPSON Event Manager			Mai nte nan ce	Term	Enterprise	Single	1
	EPSON Perfection V500 Photo Scanner Driver Update			Mai nte nan ce	Term	Enterprise	Single	1
	EPSON Perfection V500P User's Guide			Mai nte nan ce	Term	Enterprise	Single	1
	EPSON Printer Software			Mai nte nan ce	Term	Enterprise	Single	1
	EPSON Scan			Mai nte nan ce	Term	Enterprise	Single	2
	EPSON Scan Assistant			Mai nte nan ce	Term	Enterprise	Single	1
IBM	EREP	5654260	z/OS	Mai nte nan ce	Term	Processor	Site	1
IBM	EREP V3 VM	5654260	z/OS	Mai nte	Term	Processor	Site	1

				nance				
	Exceed 2007 x64			Maintenance	Term	Enterprise	Single	4
	F5 iRule Editor			Maintenance	Term	Enterprise	Single	3
	Fiddler 2.3			Maintenance	Term	Enterprise	Single	5
	Fiddler2			Maintenance	Term	Enterprise	Single	3
IBM	File Manager V12 S&S	5697G60	z/OS	Maintenance	Term	Processor	Site	1
	Fluke Networks OPV-PE for Windows NT/2000/XP			Maintenance	Term	Enterprise	Single	1
	Foundation Classes (MFC) 7.0			Maintenance	Term	Enterprise	Single	280
	Freedom Import Printer			Maintenance	Term	Enterprise	Single	3
	Freedom Scientific Braille 10.19			Maintenance	Term	Enterprise	Single	1
	Freedom Scientific Braille Display driver			Maint	Term	Enterprise	Single	1

				nance				
	Freedom Scientific Document Server 10.19			Maintenance	Term	Enterprise	Single	7
	Freedom Scientific FineReader			Maintenance	Term	Enterprise	Single	3
	Freedom Scientific FineReader Additional Recognition Files			Maintenance	Term	Enterprise	Single	2
	Freedom Scientific FSReader 2.0			Maintenance	Term	Enterprise	Single	4
	Freedom Scientific JAWS 13.0			Maintenance	Term	Enterprise	Single	2
	Freedom Scientific JAWS 14.0			Maintenance	Term	Enterprise	Single	1
	Freedom Scientific Ocr			Maintenance	Term	Enterprise	Single	3
	Freedom Scientific OmniPage			Maintenance	Term	Enterprise	Single	3
	Freedom Scientific OpenBook 9.0			Maintenance	Term	Enterprise	Single	1
	Freedom Scientific RealSpeak Solo Direct			Maint	Term	Enterprise	Single	2

				nan ce				
	Freedom Scientific SAPI5 Voices			Mai nte nan ce	Term	Enterprise	Single	2
	Freedom Scientific Synthesizer Eloquence			Mai nte nan ce	Term	Enterprise	Single	1
	Freedom Scientific Synthesizer Eloquence 6.1			Mai nte nan ce	Term	Enterprise	Single	6
	Freedom Scientific Talking Installer 14.0			Mai nte nan ce	Term	Enterprise	Single	1
	Freedom Scientific USB Camera Driver			Mai nte nan ce	Term	Enterprise	Single	3
	Freedom Scientific Utilities 10.19			Mai nte nan ce	Term	Enterprise	Single	1
	Freedom Scientific Video Intercept			Mai nte nan ce	Term	Enterprise	Single	1
	Freedom Scientific Video Intercept 10.19			Mai nte nan ce	Term	Enterprise	Single	2
	Freedom Scientific WYNN 7.0			Mai nte nan ce	Term	Enterprise	Single	2
	GDR 1617 for SQL Server 2008 R2 (KB2494088)			Mai nte	Term	Enterprise	Single	1

				nan ce				
	GDR 1617 for SQL Server 2008 R2 (KB2494088) (64-bit)			Mai nte nan ce	Term	Enterprise	Single	15
	GDR 4060 for SQL Server Database Services 2005 (64-bit) ENU (KB2494113)			Mai nte nan ce	Term	Enterprise	Single	2
	GDR 4060 for SQL Server Database Services 2005 ENU (KB2494113)			Mai nte nan ce	Term	Enterprise	Single	1
	GDR 4060 for SQL Server Integration Services 2005 (64-bit) ENU (KB2494113)			Mai nte nan ce	Term	Enterprise	Single	2
	GDR 4060 for SQL Server Tools and Workstation Components 2005 (64-bit) ENU (KB2494113)			Mai nte nan ce	Term	Enterprise	Single	2
	GDR 4060 for SQL Server Tools and Workstation Components 2005 ENU (KB2494113)			Mai nte nan ce	Term	Enterprise	Single	2
	GDR 4064 for SQL Server 2008 (KB2494089) (64-bit)			Mai nte nan ce	Term	Enterprise	Single	1
	GDR 5057 for SQL Server Database Services 2005 ENU (KB2494120)			Mai nte nan ce	Term	Enterprise	Single	7
	GDR 5057 for SQL Server Integration Services 2005 ENU (KB2494120)			Mai nte nan ce	Term	Enterprise	Single	5
	GDR 5057 for SQL Server Tools and Workstation Components 2005 ENU			Mai nte	Term	Enterprise	Single	12

	(KB2494120)			nan ce				
	GEAR driver installer for x86 and x64			Mai nte nan ce	Term	Enterprise	Single	1
	Geeknet jTDS 1.2.5			Mai nte nan ce	Term	Enterprise	Single	4
	Google Chrome 15.0			Mai nte nan ce	Term	Enterprise	Single	1
	Google Chrome 34.0.1847.116			Mai nte nan ce	Term	Enterprise	Single	1
	Google Chrome 34.0.1847.116 6 Google	34.0.1847.116	WIN	Mai nte nan ce	Term	Enterprise	Single	33
	Google Chrome 34.0.1847.131			Mai nte nan ce	Term	Enterprise	Single	1
	Google Chrome 34.0.1847.131 1 Google	34.0.1847.131	WIN	Mai nte nan ce	Term	Enterprise	Single	34
	Google Chrome 35.0.1916.114 4 Google	35.0.1916.114	WIN	Mai nte nan ce	Term	Enterprise	Single	37
	Google Chrome 35.0.1916.153 3 Google	35.0.1916.153	WIN	Mai nte nan ce	Term	Enterprise	Single	38
	Google Chrome 36.0.1985.125			Mai nte	Term	Enterprise	Single	5

				nan ce				
	Google Chrome 36.0.1985.125 5 Google	36.0.1985.125	WIN	Mai nte nan ce	Term	Enterprise	Single	39
	Google Chrome 36.0.1985.143			Mai nte nan ce	Term	Enterprise	Single	1
	Google Chrome 37.0.2062.103			Mai nte nan ce	Term	Enterprise	Single	1
	Google Chrome 37.0.2062.120			Mai nte nan ce	Term	Enterprise	Single	5
	Google Chrome 37.0.2062.124			Mai nte nan ce	Term	Enterprise	Single	26
	Google Chrome 37.0.2062.94			Mai nte nan ce	Term	Enterprise	Single	1
	Google IE Toolbar			Mai nte nan ce	Term	Enterprise	Single	1
	Google Update Helper 1.3	1.3	WIN	Mai nte nan ce	Term	Enterprise	Single	48
	Google Update Helper 1.3			Mai nte nan ce	Term	Enterprise	Single	51
	Google Updater 1.3.21.79			Mai nte	Term	Enterprise	Single	1

				nan ce				
	GPL Ghostscript			Mai nte nan ce	Term	Enterprise	Single	989
	GPL Ghostscript 8.63	8.63	WIN	Mai nte nan ce	Term	Enterprise	Single	958
	GPL Ghostscript 8.63			Mai nte nan ce	Term	Enterprise	Single	988
IBM	High Level Ass. Toolkit	5696234	z/OS	Mai nte nan ce	Term	Processor	Site	1
IBM	High Level Assembler	5696234	z/OS	Mai nte nan ce	Term	Processor	Site	1
	HP Array Configuration Utility 7.85			Mai nte nan ce	Term	Enterprise	Single	4
	HP Array Configuration Utility 8.10			Mai nte nan ce	Term	Enterprise	Single	3
	HP Array Configuration Utility 8.28			Mai nte nan ce	Term	Enterprise	Single	1
	HP Array Configuration Utility 8.70			Mai nte nan ce	Term	Enterprise	Single	8
	HP Array Configuration Utility CLI			Mai nte	Term	Enterprise	Single	44

				nan ce				
	HP Array Configuration Utility CLI 7.85			Mai nte nan ce	Term	Enterprise	Single	4
	HP Array Configuration Utility CLI 8.10			Mai nte nan ce	Term	Enterprise	Single	3
	HP Array Configuration Utility CLI 8.28			Mai nte nan ce	Term	Enterprise	Single	1
	HP Array Configuration Utility CLI 8.70			Mai nte nan ce	Term	Enterprise	Single	8
	HP Array Configurtion Utility CLI			Mai nte nan ce	Term	Enterprise	Single	2
	HP Array Diagnostic Utility			Mai nte nan ce	Term	Enterprise	Single	32
	HP Array Diagnostic Utility 7.85			Mai nte nan ce	Term	Enterprise	Single	4
	HP Array Diagnostic Utility 8.25			Mai nte nan ce	Term	Enterprise	Single	1
	HP BufferChm 130.0			Mai nte nan ce	Term	Enterprise	Single	3
	HP CIO Components Installer 3.1 x86 32			Mai nte	Term	Enterprise	Single	1

				nan ce				
	HP Color LaserJet CM2320 MFP Series 3.1			Mai nte nan ce	Term	Enterprise	Single	1
	HP Commercial Scanjet 5590 TWAIN Driver			Mai nte nan ce	Term	Enterprise	Single	8
	HP Customer Participation Program 10.0			Mai nte nan ce	Term	Enterprise	Single	1
	HP Customer Participation Program 13.0			Mai nte nan ce	Term	Enterprise	Single	1
	HP CustomerResearchQFolder 1.00			Mai nte nan ce	Term	Enterprise	Single	1
	HP DeviceManagementQFolder 1.00			Mai nte nan ce	Term	Enterprise	Single	1
	HP Headless Server Registry Update 1.0			Mai nte nan ce	Term	Enterprise	Single	45
	HP Imaging Device Functions 10.0			Mai nte nan ce	Term	Enterprise	Single	1
	HP Imaging Device Functions 13.0			Mai nte nan ce	Term	Enterprise	Single	3
	HP Insight Diagnostics Online Edition for Windows			Mai nte	Term	Enterprise	Single	28

				nan ce				
	HP Insight Diagnostics Online Edition for Windows			Mai nte nan ce	Term	Enterprise	Single	17
	HP Insight Diagnostics Online Edition for Windows 7.7			Mai nte nan ce	Term	Enterprise	Single	2
	HP Insight Diagnostics Online Edition for Windows 8.2			Mai nte nan ce	Term	Enterprise	Single	1
	HP Insight Integration for Unicenter			Mai nte nan ce	Term	Enterprise	Single	1
	HP Insight Management Agents			Mai nte nan ce	Term	Enterprise	Single	44
	HP Insight Management Agents 7.90			Mai nte nan ce	Term	Enterprise	Single	1
	HP Insight Management WBEM Providers			Mai nte nan ce	Term	Enterprise	Single	6
	HP Insight Management WBEM Providers for Windows Server 2003/2008			Mai nte nan ce	Term	Enterprise	Single	1
	HP Insight Management WBEM Providers for Windows Server 2003/2008 x64 Editions			Mai nte nan ce	Term	Enterprise	Single	7
	HP Insight Management WBEM Providers for Windows Server 2008 x64 Editions			Mai nte	Term	Enterprise	Single	1

				nan ce				
	HP LaserJet P2050 Series 6.0			Mai nte nan ce	Term	Enterprise	Single	1
	HP Lights-Out Migration Tool			Mai nte nan ce	Term	Enterprise	Single	1
	HP Lights-Out Online Configuration Utility			Mai nte nan ce	Term	Enterprise	Single	41
	HP Lights-Out Online Configuration Utility 1.5.1			Mai nte nan ce	Term	Enterprise	Single	6
	HP Lights-Out Online Configuration Utility 1.8			Mai nte nan ce	Term	Enterprise	Single	1
	HP Lights-Out Online Configuration Utility 2.1			Mai nte nan ce	Term	Enterprise	Single	1
	HP Lights-Out Online Configuration Utility for Windows Server 2003 x64 Edition			Mai nte nan ce	Term	Enterprise	Single	4
	HP Lights-Out Passthrough Service			Mai nte nan ce	Term	Enterprise	Single	15
	HP OfficeJet J6400			Mai nte nan ce	Term	Enterprise	Single	3
	HP Officejet Pro 8500 A910 Basic Device Software			Mai nte	Term	Enterprise	Single	2

				nan ce				
	HP Officejet Pro 8500 A910 Help			Mai nte nan ce	Term	Enterprise	Single	2
	HP Officejet Pro 8600 Basic Device Software			Mai nte nan ce	Term	Enterprise	Single	6
	HP Officejet Pro 8610 Basic Device Software			Mai nte nan ce	Term	Enterprise	Single	2
	HP ProLiant iLO 3 CHIF Driver (X64)			Mai nte nan ce	Term	Enterprise	Single	3
	HP ProLiant iLO 3 Core Driver (X64)			Mai nte nan ce	Term	Enterprise	Single	3
	HP ProLiant iLO 3 Management Controller Package			Mai nte nan ce	Term	Enterprise	Single	5
	HP ProLiant iLO 3 Monitor Service (X64)			Mai nte nan ce	Term	Enterprise	Single	3
	HP ProLiant iLO 3 WHEA Driver (X64)			Mai nte nan ce	Term	Enterprise	Single	3
	HP ProLiant Integrated Management Log Viewer			Mai nte nan ce	Term	Enterprise	Single	46
	HP ProLiant Integrated Management Log Viewer 5.10			Mai nte	Term	Enterprise	Single	2

				nan ce				
	HP ProLiant Integrated Management Log Viewer 5.13			Mai nte nan ce	Term	Enterprise	Single	4
	HP ProLiant Integrated Management Log Viewer 5.21			Mai nte nan ce	Term	Enterprise	Single	3
	HP ProLiant Integrated Management Log Viewer 5.22			Mai nte nan ce	Term	Enterprise	Single	1
	HP ProLiant IPMI WMI Provider			Mai nte nan ce	Term	Enterprise	Single	9
	HP ProLiant PCI-express Power Management Update for Windows			Mai nte nan ce	Term	Enterprise	Single	20
	HP ProLiant PCI-express Power Management Update for Windows 1.3			Mai nte nan ce	Term	Enterprise	Single	36
	HP ProLiant Remote Monitor Service			Mai nte nan ce	Term	Enterprise	Single	41
	HP ProLiant Remote Monitor Service 5.11.1.0			Mai nte nan ce	Term	Enterprise	Single	2
	HP ProLiant Remote Monitor Service 5.11.3.0			Mai nte nan ce	Term	Enterprise	Single	4
	HP ProLiant Remote Monitor Service 5.21			Mai nte	Term	Enterprise	Single	31

				nan ce				
	HP ProLiant Smart Array Device Manager Extension			Mai nte nan ce	Term	Enterprise	Single	2
	HP Protect Your Data			Mai nte nan ce	Term	Enterprise	Single	15
	HP Protected Your Data			Mai nte nan ce	Term	Enterprise	Single	1
	HP Scanjet 7500 ISIS Driver			Mai nte nan ce	Term	Enterprise	Single	2
	HP Scanjet 7500 TWAIN			Mai nte nan ce	Term	Enterprise	Single	3
	HP Scanjet 7500 Utilities			Mai nte nan ce	Term	Enterprise	Single	3
	HP Scanjet 7650 Document ISIS/TWAIN			Mai nte nan ce	Term	Enterprise	Single	6
	HP Scanjet N6310 Document ISIS/TWAIN			Mai nte nan ce	Term	Enterprise	Single	2
	HP Smart Array SAS/SATA Event Notification Service			Mai nte nan ce	Term	Enterprise	Single	37
	HP Smart Array SAS/SATA Event Notification Service 6.0.0.32			Mai nte	Term	Enterprise	Single	2

				nan ce				
	HP Smart Array SAS/SATA Event Notification Service 6.14.0			Mai nte nan ce	Term	Enterprise	Single	1
	HP Smart Array SAS/SATA Event Notification Service 6.4			Mai nte nan ce	Term	Enterprise	Single	4
	HP Smart Document Scan Software			Mai nte nan ce	Term	Enterprise	Single	3
	HP Smart Web Printing 4.51			Mai nte nan ce	Term	Enterprise	Single	2
	HP Solution Center 13.0			Mai nte nan ce	Term	Enterprise	Single	2
	HP StorageWorks Library And Tape Tools			Mai nte nan ce	Term	Enterprise	Single	1
	HP System Management Homepage			Mai nte nan ce	Term	Enterprise	Single	41
	HP System Management Homepage 2.1.7			Mai nte nan ce	Term	Enterprise	Single	1
	HP System Management Homepage 6.3			Mai nte nan ce	Term	Enterprise	Single	6
	HP Update			Mai nte	Term	Enterprise	Single	1

				nan ce				
	HP USB Key Utility			Mai nte nan ce	Term	Enterprise	Single	1
	HP Version Control Agent			Mai nte nan ce	Term	Enterprise	Single	39
	HP Version Control Agent 2.1			Mai nte nan ce	Term	Enterprise	Single	6
	HP Version Control Agent 2.1.10			Mai nte nan ce	Term	Enterprise	Single	6
	HP Version Control Agent 2.1.7.770			Mai nte nan ce	Term	Enterprise	Single	2
	HP Version Control Agent 2.1.9			Mai nte nan ce	Term	Enterprise	Single	4
	HP Version Control Agent 2.2			Mai nte nan ce	Term	Enterprise	Single	1
	HP Version Control Agent 6.3			Mai nte nan ce	Term	Enterprise	Single	8
	HP Web Jetadmin 10.1			Mai nte nan ce	Term	Enterprise	Single	1
	HPFC			Mai nte	Term	Enterprise	Single	1

				nan ce				
	HPInsightDiagnostics			Mai nte nan ce	Term	Enterprise	Single	2
	HPInsightDiagnostics 7.9			Mai nte nan ce	Term	Enterprise	Single	1
	HPScanjet5590Corporate11			Mai nte nan ce	Term	Enterprise	Single	9
	HPScanjet7650Corporate			Mai nte nan ce	Term	Enterprise	Single	5
	HPScanjetN6310Corporate			Mai nte nan ce	Term	Enterprise	Single	2
	Hummingbird Exceed 2007			Mai nte nan ce	Term	Enterprise	Single	11
	Hyena 7.0.2			Mai nte nan ce	Term	Enterprise	Single	2
	Hyena 7.1.1			Mai nte nan ce	Term	Enterprise	Single	1
	Hyena v8.5			Mai nte nan ce	Term	Enterprise	Single	1
IBM	IBM 31-bit SDK for z/OS V6	5655R31	z/OS	Mai nte	Term	Processor	Site	1

				nan ce				
IBM	IBM C/370 Library Version 2	5688188	z/OS	Mai nte nan ce	Term	Processor	Site	1
IBM	IBM Cognos Business Intelligence - Metric Modeling 10.2.0			Mai nte nan ce	Term	Enterprise	Single	27
IBM	IBM Cognos Business Intelligence - Metric Modeling 10.2.0 IBM Corporation	10.2	WIN	Mai nte nan ce	Term	Enterprise	Single	34
IBM	IBM Cognos Business Intelligence - Metric Modeling 10.2.1			Mai nte nan ce	Term	Enterprise	Single	27
IBM	IBM Cognos Business Intelligence - Metric Modeling 10.2.1 IBM Corporation	10.2.1	WIN	Mai nte nan ce	Term	Enterprise	Single	34
IBM	IBM Cognos Business Intelligence - Metric Server 10.2.0			Mai nte nan ce	Term	Enterprise	Single	1
IBM	IBM Cognos Business Intelligence - Metric Server 10.2.0 IBM Corporation	10.2	WIN	Mai nte nan ce	Term	Enterprise	Single	31
IBM	IBM Cognos Business Intelligence - Metric Server 10.2.1			Mai nte nan ce	Term	Enterprise	Single	1
IBM	IBM Cognos Business Intelligence - Metric Server 10.2.1 IBM Corporation	10.2.1	WIN	Mai nte nan ce	Term	Enterprise	Single	31
IBM	IBM Cognos Business Intelligence Framework Manager 10.1.1			Mai nte	Term	Enterprise	Single	15

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IBM	IBM Cognos Business Intelligence Framework Manager 10.2.0			Mai nte nan ce	Term	Enterprise	Single	26
IBM	IBM Cognos Business Intelligence Framework Manager 10.2.0 IBM Corporation	10.2	WIN	Mai nte nan ce	Term	Enterprise	Single	30
IBM	IBM Cognos Business Intelligence PowerPlay Client 10.2.0			Mai nte nan ce	Term	Enterprise	Single	18
IBM	IBM Cognos Business Intelligence Server 10.1.1			Mai nte nan ce	Term	Enterprise	Single	18
IBM	IBM Cognos Business Intelligence Server 10.1.1 IBM Corporation	10.1.1	WIN	Mai nte nan ce	Term	Enterprise	Single	26
IBM	IBM Cognos Business Intelligence Server 10.2.0			Mai nte nan ce	Term	Enterprise	Single	1
IBM	IBM Cognos Business Intelligence Transformer 10.1.1			Mai nte nan ce	Term	Enterprise	Single	13
IBM	IBM Cognos Business Intelligence Transformer 10.2.0			Mai nte nan ce	Term	Enterprise	Single	19
IBM	IBM Cognos Series 7 Version 5			Mai nte nan ce	Term	Enterprise	Single	2
IBM	IBM Cognos Windows Common Logon Server			Mai nte	Term	Enterprise	Single	2

				nan ce				
IBM	IBM Compiler for REXX/370	5695013	z/OS	Mai nte nan ce	Term	Processor	Site	1
IBM	IBM Forms Viewer 4.0.0			Mai nte nan ce	Term	Enterprise	Single	7
IBM	IBM Informix Client - SDK 3.00			Mai nte nan ce	Term	Enterprise	Single	1
IBM	IBM InfoSphere Information Server			Mai nte nan ce	Term	Enterprise	Single	1
IBM	IBM Initiate Workbench 10.1.0			Mai nte nan ce	Term	Enterprise	Single	3
IBM	IBM Library for REXX/370	5695014	z/OS	Mai nte nan ce	Term	Processor	Site	1
IBM	IBM Lotus Forms Viewer 3.5	3.5	WIN	Mai nte nan ce	Term	Enterprise	Single	35
IBM	IBM Lotus Forms Viewer 3.5			Mai nte nan ce	Term	Enterprise	Single	5
IBM	IBM Lotus Forms Viewer 3.5.1			Mai nte nan ce	Term	Enterprise	Single	1
IBM	IBM Ported Tools for z/OS	5655M23	z/OS	Mai nte	Term	Processor	Site	1

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IBM	IBM ported tools z/OS	5655M29	z/OS	Mai nte nan ce	Term	Processor	Site	1
IBM	IBM Rational ClearQuest		WIN	Mai nte nan ce	Term	Enterprise	Single	33
IBM	IBM Rational RequisitePro		WIN	Mai nte nan ce	Term	Enterprise	Single	32
IBM	IBM Rational Rose Enterprise Edition		WIN	Mai nte nan ce	Term	Enterprise	Single	32
IBM	IBM Rational SoDA for Word		WIN	Mai nte nan ce	Term	Enterprise	Single	32
IBM	IBM Rational System Architect			Mai nte nan ce	Term	Enterprise	Single	4
IBM	IBM SPSS Concurrent Licensing Tools			Mai nte nan ce	Term	Enterprise	Single	1
IBM	IBM SPSS Statistics 20			Mai nte nan ce	Term	Enterprise	Single	10
IBM	IBM SPSS Statistics Client 20.0.0			Mai nte nan ce	Term	Enterprise	Single	15
IBM	IBM SPSS Statistics Client 22.0.0.0			Mai nte	Term	Enterprise	Single	1

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IBM	IBM STERLING CONNECT:DIRECT STD	SIMULTANEOUS SESSION ANNL SW S&S	Unix	Maintenance	Term	Client Sessions	Concurrent Users	3
IBM	IBM Tiv Mgmt Services z/OS S&S	5698S53	z/OS	Maintenance	Term	Processor	Site	1
IBM	IBM Tivoli OMEGAMON XE z/OS V5 S&S	5608S81	z/OS	Maintenance	Term	Processor	Site	1
IBM	IBM ViaVoice TTS Runtime v6.610 - UK English			Maintenance	Term	Enterprise	Single	2
IBM	IBM ViaVoice TTS Runtime v6.610 - US English			Maintenance	Term	Enterprise	Single	2
IBM	IBM VM RSCS Networking V3	5684096	z/VM	Maintenance	Term	Processor	Site	1
	IDT Audio			Maintenance	Term	Enterprise	Single	20
	IDT Audio 1.0			Maintenance	Term	Enterprise	Single	25
	IIS 6.0 Resource Kit Tools			Maintenance	Term	Enterprise	Single	2
	IIS 8.0 Express			Maint	Term	Enterprise	Single	3

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	IIS Advanced Logging 1.0			Mai nte nan ce	Term	Enterprise	Single	4
	ImgBurn 2.5			Mai nte nan ce	Term	Enterprise	Single	1
	IMSL* FNL 6.0 for Intel(R) Visual Fortran Compiler for IA-32			Mai nte nan ce	Term	Enterprise	Single	5
	IMSL* FNL 6.0 for Intel(R) Visual Fortran Compiler for IA-64			Mai nte nan ce	Term	Enterprise	Single	5
	IMSL* FNL 6.0 for Intel(R) Visual Fortran Compiler for Intel(R) 64			Mai nte nan ce	Term	Enterprise	Single	5
Rocket Software	Incremental ABARS maintenance	MST-INCA-MP-100	z/OS	Mai nte nan ce	Term	Processor	Site	1
	indent			Mai nte nan ce	Term	Enterprise	Single	1
	InstallRoot 3.13			Mai nte nan ce	Term	Enterprise	Single	6
	InstallRoot 3.15			Mai nte nan ce	Term	Enterprise	Single	3
	InstallShield 2010 Professional			Mai nte	Term	Enterprise	Single	3

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	Intel(R) Graphics Media Accelerator Driver			Mai nte nan ce	Term	Enterprise	Single	7
	Intel(R) Graphics Media Accelerator Driver 8.15			Mai nte nan ce	Term	Enterprise	Single	5
	Intel(R) Management Engine Interface			Mai nte nan ce	Term	Enterprise	Single	1
	Intel(R) Network Connections 18.0.1.0			Mai nte nan ce	Term	Enterprise	Single	1
	Intel(R) Network Connections Drivers			Mai nte nan ce	Term	Enterprise	Single	10
	Intel(R) PRO Network Connections Drivers			Mai nte nan ce	Term	Enterprise	Single	1
	Intel(R) Processor Graphics			Mai nte nan ce	Term	Enterprise	Single	38
	Intel(R) Processor Graphics 8.15			Mai nte nan ce	Term	Enterprise	Single	21
	Intel(R) SDK for OpenCL - CPU Only Runtime Package			Mai nte nan ce	Term	Enterprise	Single	1
	Intel(R) Visual Fortran Compiler Professional Edition 11.1.035 for			Mai nte	Term	Enterprise	Single	6

	Windows*			nan ce				
	Intel(R) Visual Fortran Compiler Professional Edition 11.1.067 Update 7 for Windows*			Mai nte nan ce	Term	Enterprise	Single	1
	Intel® Active Management Technology			Mai nte nan ce	Term	Enterprise	Single	1
	Intel® PROSet/Wireless Software			Mai nte nan ce	Term	Enterprise	Single	17
	Internet Explorer 6 (7.0.5730.13)	7.0.5	WIN	Mai nte nan ce	Term	Enterprise	Single	103
	Internet Explorer 8			Mai nte nan ce	Term	Enterprise	Single	332
	Internet Explorer 8 UnBlocker Package			Mai nte nan ce	Term	Enterprise	Single	1
	Internet Explorer 9			Mai nte nan ce	Term	Enterprise	Single	1020
	iPlanet Web Server 6.0 SP4			Mai nte nan ce	Term	Enterprise	Single	6
	J2SE Runtime Environment 5.0 Update 11 [Linux]	5.0	LINUX	Mai nte nan ce	Term	Enterprise	Single	367
	J2SE Runtime Environment 5.0 Update 11 [Linux]			Mai nte	Term	Enterprise	Single	4

				nan ce				
	J2SE Runtime Environment 5.0 Update 22			Mai nte nan ce	Term	Enterprise	Single	3
	J2SE Runtime Environment 6.0 Update 11 (1.6.0_11-b03)			Mai nte nan ce	Term	Enterprise	Single	4
	J2SE Runtime Environment 6.0 Update 22 (1.6.0_22-b04)			Mai nte nan ce	Term	Enterprise	Single	8
	J2SE Runtime Environment 6.0 Update 24 (1.6.0_24-b07) x64 64			Mai nte nan ce	Term	Enterprise	Single	22
	J2SE Runtime Environment 6.0 Update 45 (1.6.0 45-b06)	6.0	WIN	Mai nte nan ce	Term	Enterprise	Single	65
	J2SE Runtime Environment 6.0 Update 65 (1.6.0 65-b14)	6.0	WIN	Mai nte nan ce	Term	Enterprise	Single	1650
	J2SE Runtime Environment 6.0 Update 71 (1.6.0 71-b12)	6.0	WIN	Mai nte nan ce	Term	Enterprise	Single	1927
	J2SE Runtime Environment 6.0 Update 71 (1.6.0_71-b12)			Mai nte nan ce	Term	Enterprise	Single	40
	J2SE Runtime Environment 6.0 Update 81 (1.6.0_81-b08)			Mai nte nan ce	Term	Enterprise	Single	1665
	J2SE Runtime Environment 7.0 Update 25 (1.7.0_25-b17) x64 64			Mai nte	Term	Enterprise	Single	2

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	J2SE Runtime Environment 7.0 Update 45 (1.7.0 45-b18)	7.0	WIN	Mai nte nan ce	Term	Enterprise	Single	32
	J2SE Runtime Environment 7.0 Update 45 (1.7.0_45-b18)			Mai nte nan ce	Term	Enterprise	Single	4
	J2SE Runtime Environment 7.0 Update 45 (1.7.0_45-b18) x64 64			Mai nte nan ce	Term	Enterprise	Single	2
	J2SE Runtime Environment 7.0 Update 51 (1.7.0_51-b13)			Mai nte nan ce	Term	Enterprise	Single	5
	J2SE Runtime Environment 7.0 Update 51 (1.7.0_51-b13) x64 64			Mai nte nan ce	Term	Enterprise	Single	2
	J2SE Runtime Environment 7.0 Update 55 (1.7.0_55-b13)			Mai nte nan ce	Term	Enterprise	Single	4
	J2SE Runtime Environment 7.0 Update 55 (1.7.0_55-b14)			Mai nte nan ce	Term	Enterprise	Single	10
	J2SE Runtime Environment 7.0 Update 60 (1.7.0_60-b19) x64 64			Mai nte nan ce	Term	Enterprise	Single	10
	J2SE Runtime Environment 7.0 Update 60 x64 64 (1.7.0 60-b19)	7.0	WIN	Mai nte nan ce	Term	Enterprise	Single	33
	J2SE Runtime Environment 7.0 Update 65 (1.7.0_65-b19)			Mai nte	Term	Enterprise	Single	20

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	J2SE Runtime Environment 7.0 Update 65 (1.7.0_65-b19) x64 64			Maintenance	Term	Enterprise	Single	12
	J2SE Runtime Environment 7.0 Update 65 (1.7.0_65-b20)			Maintenance	Term	Enterprise	Single	86
	J2SE Runtime Environment 7.0 Update 67 (1.7.0_67-b01)			Maintenance	Term	Enterprise	Single	23
	J2SE Runtime Environment 7.0 Update 67 (1.7.0_67-b01) x64 64			Maintenance	Term	Enterprise	Single	2
	J2SE Runtime Environment 8.0 (1.8.0-b132)			Maintenance	Term	Enterprise	Single	2
	Jakarta Isapi Redirector			Maintenance	Term	Enterprise	Single	2
	Java 6 Update 31 (TM)	6.0	WIN	Maintenance	Term	Enterprise	Single	51
	Java 6 Update 45 (TM)	6.0	WIN	Maintenance	Term	Enterprise	Single	65
	Java 6 Update 51 (TM)	6.0	WIN	Maintenance	Term	Enterprise	Single	855
	Java 7 Update 65			Maintenance	Term	Enterprise	Single	58

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	Java 7 Update 67			Maintenance	Term	Enterprise	Single	18
	Java Auto Updater			Maintenance	Term	Enterprise	Single	19
	Java Auto Updater 2.0	2.0	WIN	Maintenance	Term	Enterprise	Single	30
	Java Auto Updater 2.0			Maintenance	Term	Enterprise	Single	13
IBM	Java for OS 390	5655A46	z/OS	Maintenance	Term	Processor	Site	1
	Java(TM) 6 Update 24			Maintenance	Term	Enterprise	Single	18
	Java(TM) 6 Update 24 (64-bit)			Maintenance	Term	Enterprise	Single	20
	Java(TM) 6 Update 31			Maintenance	Term	Enterprise	Single	41
	Java(TM) 6 Update 31 (64-bit)			Maintenance	Term	Enterprise	Single	2
	Java(TM) 6 Update 33			Maint	Term	Enterprise	Single	9

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	Java(TM) 6 Update 43			Maintenance	Term	Enterprise	Single	4
	Java(TM) 6 Update 45			Maintenance	Term	Enterprise	Single	17
	Java(TM) 6 Update 51			Maintenance	Term	Enterprise	Single	108
	Java(TM) 6 Update 65			Maintenance	Term	Enterprise	Single	45
	Java(TM) 6 Update 71			Maintenance	Term	Enterprise	Single	58
	Java(TM) 6 Update 75			Maintenance	Term	Enterprise	Single	333
	Java(TM) 6 Update 81			Maintenance	Term	Enterprise	Single	631
	Jet Database Engine 4.04.0			Maintenance	Term	Enterprise	Single	19
ASG Federal, Inc	Jobscan		z/OS	Maintenance	Term	Processor	Site	1
	JProbe 8.0.1			Maint	Term	Enterprise	Single	4

				nance				
	JRE 1.6.0			Maintenance	Term	Enterprise	Single	1707
	JRE 1.6.0 x64			Maintenance	Term	Enterprise	Single	1007
	Juniper Networks Network Connect 7.1			Maintenance	Term	Enterprise	Single	13
	Juniper Networks Network Connect 7.1.0			Maintenance	Term	Enterprise	Single	1
	Juniper Networks Network Connect 7.4.0			Maintenance	Term	Enterprise	Single	1
	JUnit 3.8.2			Maintenance	Term	Enterprise	Single	34
	JUnit 4.8.2			Maintenance	Term	Enterprise	Single	80
	KB2917500 - Windows - rvkroots			Maintenance	Term	Enterprise	Single	1904
	KB2982792 - Windows 2003 - rvkroots			Maintenance	Term	Enterprise	Single	12
	Kiwi Logfile Viewer			Mainte	Term	Enterprise	Single	2

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	Kiwi Syslog Daemon			Mai nte nan ce	Term	Enterprise	Single	3
	Knowledge Xpert 10.0			Mai nte nan ce	Term	Enterprise	Single	6
	Knowledge Xpert for Oracle Administration			Mai nte nan ce	Term	Enterprise	Single	1
	Knowledge Xpert for Oracle Administration 10.1			Mai nte nan ce	Term	Enterprise	Single	8
	Knowledge Xpert for PLSQL			Mai nte nan ce	Term	Enterprise	Single	1
	Knowledge Xpert Oracle Common			Mai nte nan ce	Term	Enterprise	Single	1
	LiveUpdate 3.2 (Symantec Corporation)			Mai nte nan ce	Term	Enterprise	Single	8
	LiveUpdate 3.3 (Symantec Corporation)			Mai nte nan ce	Term	Enterprise	Single	20
	LocalGPO			Mai nte nan ce	Term	Enterprise	Single	23
	Log Parser 2.2			Mai nte	Term	Enterprise	Single	1

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	Logitech Webcam Software			Mai nte nan ce	Term	Enterprise	Single	2
	MadCap Capture V6			Mai nte nan ce	Term	Enterprise	Single	3
	MadCap Flare V10			Mai nte nan ce	Term	Enterprise	Single	3
	MadCap Help Viewer V6.3			Mai nte nan ce	Term	Enterprise	Single	3
	mailcap			Mai nte nan ce	Term	Enterprise	Single	1
	MailCrypt 2.0			Mai nte nan ce	Term	Enterprise	Single	3
	MailCrypt 2.2			Mai nte nan ce	Term	Enterprise	Single	1
	Marketsplash Shortcuts			Mai nte nan ce	Term	Enterprise	Single	4
IBM	Math and Science Font Source AFP	5771ADT	z/OS	Mai nte nan ce	Term	Processor	Site	1
IBM	Math and Science Font Source AFP		z/OS	Mai nte	Term	Processor	Site	1

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	MathLM 5.1			Maintenance	Term	Enterprise	Single	1
	MathLM 6			Maintenance	Term	Enterprise	Single	1
	MathPlayer			Maintenance	Term	Enterprise	Single	1
	Matrox Graphics Software 1.5			Maintenance	Term	Enterprise	Single	5
MCAFEE	McAfee Agent			Maintenance	Term	Enterprise	Single	1143
MCAFEE	McAfee Agent 4.5.0.1810			Maintenance	Term	Enterprise	Single	24
MCAFEE	McAfee Agent 4.5.0.1852			Maintenance	Term	Enterprise	Single	18
MCAFEE	McAfee Agent 4.6.0.1694			Maintenance	Term	Enterprise	Single	43
MCAFEE	McAfee Agent 4.6.0.1694 4 McAfee, Inc.	4.6.0.1694	WIN	Maintenance	Term	Enterprise	Single	261
MCAFEE	McAfee Agent 4.6.0.3122			Maint	Term	Enterprise	Single	112

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MCAFEE	McAfee Agent 4.6.0.3122 2 McAfee, Inc.	4.6.0.3122	WIN	Mai nte nan ce	Term	Enterprise	Single	1996
MCAFEE	McAfee AntiSpyware Enterprise Module			Mai nte nan ce	Term	Enterprise	Single	124
MCAFEE	McAfee AntiSpyware Enterprise Module 8.5.0.163 3 McAfee, Inc.	8.5.0.163	WIN	Mai nte nan ce	Term	Enterprise	Single	109
MCAFEE	McAfee AntiSpyware Enterprise Module 8.7.0.129			Mai nte nan ce	Term	Enterprise	Single	28
MCAFEE	McAfee AntiSpyware Enterprise Module 8.7.0.129 9 McAfee, Inc.	8.7.0.129	WIN	Mai nte nan ce	Term	Enterprise	Single	62
MCAFEE	McAfee Asset Baseline Monitor Agent	8.7	WIN	Mai nte nan ce	Term	Enterprise	Single	926
MCAFEE	McAfee Asset Baseline Monitor Agent			Mai nte nan ce	Term	Enterprise	Single	981
MCAFEE	McAfee Common Framework 3.6			Mai nte nan ce	Term	Enterprise	Single	6
MCAFEE	McAfee DLP Agent	8.7	WIN	Mai nte nan ce	Term	Enterprise	Single	129
MCAFEE	McAfee DLP Endpoint	8.7	WIN	Mai nte	Term	Enterprise	Single	870

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MCAFEE	McAfee DLP Endpoint			Maintenance	Term	Enterprise	Single	971
MCAFEE	McAfee DLP Management Tools			Maintenance	Term	Enterprise	Single	2
MCAFEE	McAfee ePolicy Agent 4.0			Maintenance	Term	Enterprise	Single	3
MCAFEE	McAfee ePolicy Orchestrator			Maintenance	Term	Enterprise	Single	1
MCAFEE	McAfee Host Intrusion Prevention			Maintenance	Term	Enterprise	Single	80
MCAFEE	McAfee Host Intrusion Prevention 7.0	7.0	WIN	Maintenance	Term	Enterprise	Single	459
MCAFEE	McAfee Host Intrusion Prevention 7.0			Maintenance	Term	Enterprise	Single	64
MCAFEE	McAfee Host Intrusion Prevention 8.0	8.0	WIN	Maintenance	Term	Enterprise	Single	2750
MCAFEE	McAfee Host Intrusion Prevention 8.0			Maintenance	Term	Enterprise	Single	1872
MCAFEE	McAfee Policy Auditor			Maint	Term	Enterprise	Single	1

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MCAFEE	McAfee Policy Auditor Agent	7.0	WIN	Maintenance	Term	Enterprise	Single	1231
MCAFEE	McAfee Policy Auditor Agent			Maintenance	Term	Enterprise	Single	1077
MCAFEE	McAfee Policy Auditor Content Creator			Maintenance	Term	Enterprise	Single	6
MCAFEE	McAfee Rogue System Detection Sensor			Maintenance	Term	Enterprise	Single	64
MCAFEE	McAfee Rogue System Detection Server			Maintenance	Term	Enterprise	Single	1
MCAFEE	McAfee VirusScan 6.0.0 [Solaris]			Maintenance	Term	Enterprise	Single	5
MCAFEE	McAfee VirusScan 6.0.0 [Solaris] McAfee, Inc.	6.0	SOLARIS	Maintenance	Term	Enterprise	Single	62
MCAFEE	McAfee VirusScan Enterprise			Maintenance	Term	Enterprise	Single	1134
MCAFEE	McAfee VirusScan Enterprise 8.0 x86 32	8.0	WIN	Maintenance	Term	Enterprise	Single	111
MCAFEE	McAfee VirusScan Enterprise 8.5 - Console x86 32			Maint	Term	Enterprise	Single	1

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MCAFEE	McAfee VirusScan Enterprise 8.5 - On-Access Scan x86 32			Mai nte nan ce	Term	Enterprise	Single	1
MCAFEE	McAfee VirusScan Enterprise 8.5 - On-Demand Scan x86 32			Mai nte nan ce	Term	Enterprise	Single	1
MCAFEE	McAfee VirusScan Enterprise 8.5 On-Access Scan x86 32	8.5	WIN	Mai nte nan ce	Term	Enterprise	Single	113
MCAFEE	McAfee VirusScan Enterprise 8.5 On-Demand Scan x86 32	8.5	WIN	Mai nte nan ce	Term	Enterprise	Single	96
MCAFEE	McAfee VirusScan Enterprise 8.5 Patch 6 x86 32	8.5	WIN	Mai nte nan ce	Term	Enterprise	Single	62
MCAFEE	McAfee VirusScan Enterprise 8.6 x86 32	8.6	WIN	Mai nte nan ce	Term	Enterprise	Single	113
MCAFEE	McAfee VirusScan Enterprise 8.6 x86 32			Mai nte nan ce	Term	Enterprise	Single	1
MCAFEE	McAfee VirusScan Enterprise 8.7	8.7	WIN	Mai nte nan ce	Term	Enterprise	Single	393
MCAFEE	McAfee VirusScan Enterprise 8.7			Mai nte nan ce	Term	Enterprise	Single	90
MCAFEE	McAfee VirusScan Enterprise 8.8	8.8	WIN	Mai nte	Term	Enterprise	Single	2834

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MCAFEE	McAfee VirusScan Enterprise 8.8			Mai nte nan ce	Term	Enterprise	Single	1887
	Media Player 10			Mai nte nan ce	Term	Enterprise	Single	25
	Media Player 6.4			Mai nte nan ce	Term	Enterprise	Single	129
	Media Player 9			Mai nte nan ce	Term	Enterprise	Single	1
	Messaging API and Collaboration Data Objects 1.2.1			Mai nte nan ce	Term	Enterprise	Single	1
	Micro Focus Optimal Trace - QADirector Integration Plug-in			Mai nte nan ce	Term	Enterprise	Single	1
	Micro Focus Optimal Trace Enterprise			Mai nte nan ce	Term	Enterprise	Single	15
	Micro Focus Optimal Trace Server			Mai nte nan ce	Term	Enterprise	Single	1
	Micro Focus QADirector 06.01.00			Mai nte nan ce	Term	Enterprise	Single	1
	Micro Focus TestPartner			Mai nte	Term	Enterprise	Single	71

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MICROSOFT	Microsoft Sys Ctr Standard All Lng Software Assurance Microsoft Volume License 1 License 2 PROC	n/a	WIN	Software Assurance	Term	Enterprise	[Other]	55
MICROSOFT	Microsoft Visio Professional Win32 All Languages Software Assurance Microsoft Volume License	n/a	WIN	Software Assurance	Term	Enterprise	Single	549
MICROSOFT	Microsoft Visual Studio Pro w/MSDN All Lng Software Assurance Microsoft Volume License 1 License	n/a	WIN	Software Assurance	Term	Enterprise	Single	11
MICROSOFT	Microsoft Visual Studio Team Fndation Svr CAL All Lng Software Assurance Microsoft Volume License 1 License User CAL User CAL	n/a	WIN	Client Access license (CAL)	Term	Enterprise	Single	30
MICROSOFT	Microsoft .NET Framework 2.0 Service Pack 2			Maintenance	Term	Enterprise	Single	38
MICROSOFT	Microsoft .NET Framework 2.0 SP2			Maintenance	Term	Enterprise	Single	1976
MICROSOFT	Microsoft .NET Framework 3.0 Service Pack 2			Mainte nan	Term	Enterprise	Single	34

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MICROSOFT	Microsoft .NET Framework 3.0 SP2			Maintenance	Term	Enterprise	Single	1935
MICROSOFT	Microsoft .NET Framework 3.5 SP1			Maintenance	Term	Enterprise	Single	2002
MICROSOFT	Microsoft .NET Framework 3.5.1			Maintenance	Term	Enterprise	Single	1940
MICROSOFT	Microsoft .NET Framework 4 Client Profile			Maintenance	Term	Enterprise	Single	43
MICROSOFT	Microsoft .NET Framework 4 Extended			Maintenance	Term	Enterprise	Single	39
MICROSOFT	Microsoft .NET Framework 4 Multi-Targeting Pack			Maintenance	Term	Enterprise	Single	24
MICROSOFT	Microsoft .NET Framework 4.0 Extended			Maintenance	Term	Enterprise	Single	73
MICROSOFT	Microsoft .NET Framework 4.5			Maintenance	Term	Enterprise	Single	960
MICROSOFT	Microsoft .NET Framework 4.5 Multi-Targeting Pack			Maintenance	Term	Enterprise	Single	3
MICROSOFT	Microsoft .NET Framework 4.5 SDK			Mainte	Term	Enterprise	Single	3

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MICROS OFT	Microsoft .NET Framework 4.5.1			Mai nte nan ce	Term	Enterprise	Single	19
MICROS OFT	Microsoft .NET Framework Client Profile 4.0			Mai nte nan ce	Term	Enterprise	Single	83
MICROS OFT	Microsoft .NET Framework Client Profile 4.5			Mai nte nan ce	Term	Enterprise	Single	1754
MICROS OFT	Microsoft .NET Framework Client Profile 4.5.1			Mai nte nan ce	Term	Enterprise	Single	44
MICROS OFT	Microsoft .NET Framework Full Profile 4.0			Mai nte nan ce	Term	Enterprise	Single	280
MICROS OFT	Microsoft .NET Framework Full Profile 4.5			Mai nte nan ce	Term	Enterprise	Single	1755
MICROS OFT	Microsoft .NET Framework Full Profile 4.5.1			Mai nte nan ce	Term	Enterprise	Single	44
MICROS OFT	Microsoft .NET Framework Multi-Targeting Pack 4.0			Mai nte nan ce	Term	Enterprise	Single	42
MICROS OFT	Microsoft Access Services Server			Mai nte nan ce	Term	Enterprise	Single	4
MICROS OFT	Microsoft Active Directory Management Pack Helper Object 1.1.0			Mai nte	Term	Enterprise	Single	3

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MICROS OFT	Microsoft Active Directory Service Interface 5.0	5.0	WIN	Mai nte nan ce	Term	Enterprise	Single	3029
MICROS OFT	Microsoft Active Directory Service Interface 5.0			Mai nte nan ce	Term	Enterprise	Single	1971
MICROS OFT	Microsoft Active Directory Topology Diagrammer			Mai nte nan ce	Term	Enterprise	Single	1
MICROS OFT	Microsoft Address Book 6.0			Mai nte nan ce	Term	Enterprise	Single	25
MICROS OFT	Microsoft Ajax Control Toolkit 4.1			Mai nte nan ce	Term	Enterprise	Single	3
MICROS OFT	Microsoft Analysis Services Deployment Utility 9.0	9.0	WIN	Mai nte nan ce	Term	Enterprise	Single	28
MICROS OFT	Microsoft Analysis Services Deployment Utility 9.0			Mai nte nan ce	Term	Enterprise	Single	12
MICROS OFT	Microsoft Anti-Cross Site Scripting Library v4.2 x86 32			Mai nte nan ce	Term	Enterprise	Single	4
MICROS OFT	Microsoft Antigen Enterprise Manager			Mai nte nan ce	Term	Enterprise	Single	1
MICROS OFT	Microsoft Application Error Reporting			Mai nte	Term	Enterprise	Single	15

				nan ce				
MICROS OFT	Microsoft Application Error Reporting 11.0.5228.1			Mai nte nan ce	Term	Enterprise	Single	1
MICROS OFT	Microsoft Application Error Reporting 11.0.5614.0			Mai nte nan ce	Term	Enterprise	Single	1
MICROS OFT	Microsoft Application Error Reporting 12.0.6012.5000			Mai nte nan ce	Term	Enterprise	Single	51
MICROS OFT	Microsoft Application Error Reporting 12.0.6012.5000 0 Microsoft Corporation	12.0.6012.5000	WIN	Mai nte nan ce	Term	Enterprise	Single	65
MICROS OFT	Microsoft Application Virtualization Client for Remote Desktop Services			Mai nte nan ce	Term	Enterprise	Single	2
MICROS OFT	Microsoft Application Virtualization Sequencer x64			Mai nte nan ce	Term	Enterprise	Single	1
MICROS OFT	Microsoft ASP.NET 2.0 AJAX Extensions 1.0			Mai nte nan ce	Term	Enterprise	Single	6
MICROS OFT	Microsoft ASP.NET Model View Controller (MVC) 2.0 - Visual Studio 2010 Tools			Mai nte nan ce	Term	Enterprise	Single	42
MICROS OFT	Microsoft ASP.NET Model View Controller 2.0 - Visual Studio 2010 Tools (MVC)	2010 2.0	WIN	Mai nte nan ce	Term	Enterprise	Single	50
MICROS OFT	Microsoft ASP.NET Model-View-Controller (MVC) 2.0			Mai nte	Term	Enterprise	Single	42

				nance				
MICROSOFT	Microsoft ASP.NET Model-View-Controller (MVC) 3.0			Maintenance	Term	Enterprise	Single	3
MICROSOFT	Microsoft ASP.NET MVC 1.0			Maintenance	Term	Enterprise	Single	3
MICROSOFT	Microsoft ASP.NET MVC 2			Maintenance	Term	Enterprise	Single	27
MICROSOFT	Microsoft ASP.NET MVC 2 - Visual Studio 2010 Tools			Maintenance	Term	Enterprise	Single	27
MICROSOFT	Microsoft ASP.NET MVC 3			Maintenance	Term	Enterprise	Single	3
MICROSOFT	Microsoft ASP.NET Web Pages			Maintenance	Term	Enterprise	Single	3
MICROSOFT	Microsoft Base Smart Card Cryptographic Service Provider Package			Maintenance	Term	Enterprise	Single	18
MICROSOFT	Microsoft Baseline Security Analyzer 2.0			Maintenance	Term	Enterprise	Single	46
MICROSOFT	Microsoft Baseline Security Analyzer 2.0.1			Maintenance	Term	Enterprise	Single	13
MICROSOFT	Microsoft Baseline Security Analyzer 2.2			Maint	Term	Enterprise	Single	22

				nan ce				
MICROS OFT	Microsoft Bing Bar 5.0			Mai nte nan ce	Term	Enterprise	Single	4
MICROS OFT	Microsoft Bing Bar Platform 5.0			Mai nte nan ce	Term	Enterprise	Single	4
MICROS OFT	Microsoft Boot Sector Manipulation Tool 6.0	6.0	WIN	Mai nte nan ce	Term	Enterprise	Single	45
MICROS OFT	Microsoft Boot Sector Manipulation Tool 6.0			Mai nte nan ce	Term	Enterprise	Single	23
MICROS OFT	Microsoft CAPICOM 2.1.0.1 1 SDK Microsoft Corporation	2.1.0.1	WIN	Mai nte nan ce	Term	Enterprise	Single	31
MICROS OFT	Microsoft CAPICOM 2.1.0.1 SDK			Mai nte nan ce	Term	Enterprise	Single	15
MICROS OFT	Microsoft Chart Controls for .NET Framework 3.5			Mai nte nan ce	Term	Enterprise	Single	10
MICROS OFT	Microsoft Chart Controls for Microsoft .NET Framework 3.5 (KB2500170)			Mai nte nan ce	Term	Enterprise	Single	10
MICROS OFT	Microsoft Compatibility Pack for 2007 Office system SP2 x86 32 EN	2007 SP2	WIN	Mai nte nan ce	Term	Enterprise	Single	128
MICROS OFT	Microsoft Compatibility Pack for 2007 Office system SP2 x86 32 EN			Mai nte	Term	Enterprise	Single	6

				nan ce				
MICROS OFT	Microsoft Compatibility Pack for 2007 Office system SP3 x86 32 EN	2007 SP3	WIN	Mai nte nan ce	Term	Enterprise	Single	27
MICROS OFT	Microsoft Compatibility Pack for 2007 Office system SP3 x86 32 EN			Mai nte nan ce	Term	Enterprise	Single	18
MICROS OFT	Microsoft Connection Manager Administration Kit 7.2	7.2	WIN	Mai nte nan ce	Term	Enterprise	Single	69
MICROS OFT	Microsoft Connection Manager Administration Kit 7.2			Mai nte nan ce	Term	Enterprise	Single	22
MICROS OFT	Microsoft Data Access Components (MDAC) 2.8 SP1			Mai nte nan ce	Term	Enterprise	Single	105
MICROS OFT	Microsoft Data Access Components (MDAC) 2.8 SP2			Mai nte nan ce	Term	Enterprise	Single	25
MICROS OFT	Microsoft Data Access Components (MDAC) 6.0			Mai nte nan ce	Term	Enterprise	Single	34
MICROS OFT	Microsoft Data Access Components (MDAC) 6.1			Mai nte nan ce	Term	Enterprise	Single	1918
MICROS OFT	Microsoft Default Manager 2.1.55			Mai nte nan ce	Term	Enterprise	Single	4
MICROS OFT	Microsoft Desktop Optimization Pack for SA All Lng Monthly Subscriptions-	n/a	WIN	Sub scri	Term	Enterprise	Single	50

	VolumeLicense Microsoft Volume License Per Device for Windows SA			ption				
MICROSOFT	Microsoft Document Explorer 2008			Maintenance	Term	Enterprise	Single	3
MICROSOFT	Microsoft Document Lifecycle Components			Maintenance	Term	Enterprise	Single	4
MICROSOFT	Microsoft Document Lifecycle Components English Language Pack			Maintenance	Term	Enterprise	Single	4
MICROSOFT	Microsoft Enhanced Mitigation Experience Toolkit (EMET) 4.0			Maintenance	Term	Enterprise	Single	1
MICROSOFT	Microsoft Enhanced Mitigation Experience Toolkit (EMET) 4.1			Maintenance	Term	Enterprise	Single	1387
MICROSOFT	Microsoft Enhanced Mitigation Experience Toolkit 4.1 (EMET)	4.1	WIN	Maintenance	Term	Enterprise	Single	1832
MICROSOFT	Microsoft Enterprise CAL All Lng Software Assurance Microsoft Volume License 1 License Platform User CAL User CAL w/ Services	n/a	WIN	Client Access license (CAL)	Term	Enterprise	Single	2,282
MICROSOFT	Microsoft Excel Mobile Viewer Components			Maintenance	Term	Enterprise	Single	4

MICROSOFT	Microsoft Exchange Server 2010			Maintenance	Term	Enterprise	Single	1
MICROSOFT	Microsoft Exchange Server 2010 Enterprise Edition SP1 x64 64 EN			Maintenance	Term	Enterprise	Single	1
MICROSOFT	Microsoft Exchange Server 5.5 SP4 x86 32 EN			Maintenance	Term	Enterprise	Single	1
MICROSOFT	Microsoft Exchange Server Best Practices Analyzer Tool 6.5			Maintenance	Term	Enterprise	Single	1
MICROSOFT	Microsoft Exchange Server Enterprise All Languages Software Assurance Microsoft Volume License	n/a	WIN	Software Assurance	Term	Enterprise	Single	5
MICROSOFT	Microsoft Fax Services 6.1	6.1	WIN	Maintenance	Term	Enterprise	Single	2720
MICROSOFT	Microsoft Fax Services 6.1			Maintenance	Term	Enterprise	Single	1761
MICROSOFT	Microsoft File Transfer Manager 5.00.34			Maintenance	Term	Enterprise	Single	1
MICROSOFT	Microsoft Filter Pack 2.0			Maintenance	Term	Enterprise	Single	9
MICROSOFT	Microsoft FrontPage Server Extensions 2002 x86 32 EN	2002	WIN	Maintenance	Term	Enterprise	Single	300

				nan ce				
MICROS OFT	Microsoft FrontPage Server Extensions 2002 x86 32 EN			Mai nte nan ce	Term	Enterprise	Single	103
MICROS OFT	Microsoft FrontPage Server Extensions 98 x86 32 EN			Mai nte nan ce	Term	Enterprise	Single	3
MICROS OFT	Microsoft Group Policy Management Console 1.0 SP1			Mai nte nan ce	Term	Enterprise	Single	6
MICROS OFT	Microsoft Group Policy Management Console with SP1			Mai nte nan ce	Term	Enterprise	Single	6
MICROS OFT	Microsoft Help Viewer 1.0			Mai nte nan ce	Term	Enterprise	Single	6
MICROS OFT	Microsoft Help Viewer 1.1			Mai nte nan ce	Term	Enterprise	Single	26
MICROS OFT	Microsoft Help Viewer 2.0			Mai nte nan ce	Term	Enterprise	Single	3
MICROS OFT	Microsoft Hyper-V - Windows 2008 x64 64			Mai nte nan ce	Term	Enterprise	Single	3
MICROS OFT	Microsoft IIS 6.0 Resource Kit Tools			Mai nte nan ce	Term	Enterprise	Single	1
MICROS OFT	Microsoft InfoPath Form Services English Language Pack			Mai nte	Term	Enterprise	Single	4

				nan ce				
MICROS OFT	Microsoft InfoPath Forms Services			Mai nte nan ce	Term	Enterprise	Single	4
MICROS OFT	Microsoft Internationalized Domain Names Mitigation APIs			Mai nte nan ce	Term	Enterprise	Single	2
MICROS OFT	Microsoft Internet Explorer 10 for Windows 7/Windows 2008 R2 x64 64	10.0	WIN	Mai nte nan ce	Term	Enterprise	Single	1922
MICROS OFT	Microsoft Internet Explorer 10 for Windows 7/Windows 2008 R2 x64 64			Mai nte nan ce	Term	Enterprise	Single	1724
MICROS OFT	Microsoft Internet Explorer 10 for Windows 8/Windows Server 2012 x64 64			Mai nte nan ce	Term	Enterprise	Single	1
MICROS OFT	Microsoft Internet Explorer 11 for Windows 7/Windows 2008 R2 x64 64			Mai nte nan ce	Term	Enterprise	Single	9
MICROS OFT	Microsoft Internet Explorer 6.0 x86 32			Mai nte nan ce	Term	Enterprise	Single	1
MICROS OFT	Microsoft Internet Explorer 7 for XP SP3 x86 32	7.0	WIN	Mai nte nan ce	Term	Enterprise	Single	99
MICROS OFT	Microsoft Internet Explorer 7.0 for Windows Server 2003 SP2 x86 32			Mai nte nan ce	Term	Enterprise	Single	1
MICROS OFT	Microsoft Internet Explorer 8 for Windows 7 x86 32			Mai nte	Term	Enterprise	Single	5

				nan ce				
MICROS OFT	Microsoft Internet Explorer 8 for Windows 7/Windows 2008 R2 x64 64	8.0	WIN	Mai nte nan ce	Term	Enterprise	Single	2537
MICROS OFT	Microsoft Internet Explorer 8 for Windows 7/Windows 2008 R2 x64 64			Mai nte nan ce	Term	Enterprise	Single	165
MICROS OFT	Microsoft Internet Explorer 8 for Windows Server 2003 SP2 x64 64			Mai nte nan ce	Term	Enterprise	Single	6
MICROS OFT	Microsoft Internet Explorer 8 for Windows Server 2003 SP2 x86 32	8.0	WIN	Mai nte nan ce	Term	Enterprise	Single	63
MICROS OFT	Microsoft Internet Explorer 8 for Windows Server 2003 SP2 x86 32			Mai nte nan ce	Term	Enterprise	Single	23
MICROS OFT	Microsoft Internet Explorer 8 for Windows Vista SP2/Windows 2008 SP2 x64 64	8.0	WIN	Mai nte nan ce	Term	Enterprise	Single	34
MICROS OFT	Microsoft Internet Explorer 8 for Windows Vista SP2/Windows 2008 SP2 x64 64			Mai nte nan ce	Term	Enterprise	Single	27
MICROS OFT	Microsoft Internet Explorer 8 x64 64	8.0	WIN	Mai nte nan ce	Term	Enterprise	Single	367
MICROS OFT	Microsoft Internet Explorer 9 for Windows 7/Windows 2008 R2 x64 64	9.0	WIN	Mai nte nan ce	Term	Enterprise	Single	62
MICROS OFT	Microsoft Internet Explorer 9 for Windows 7/Windows 2008 R2 x64 64			Mai nte	Term	Enterprise	Single	46

				nan ce				
MICROS OFT	Microsoft Internet Explorer 9 for Windows Vista/Windows 2008 x64 64			Mai nte nan ce	Term	Enterprise	Single	7
MICROS OFT	Microsoft Internet Information Services - ASP 7.0			Mai nte nan ce	Term	Enterprise	Single	5
MICROS OFT	Microsoft Internet Information Services - CGI 7.5			Mai nte nan ce	Term	Enterprise	Single	2
MICROS OFT	Microsoft Internet Information Services - Hostable Web Core 7.5	7.5	WIN	Mai nte nan ce	Term	Enterprise	Single	99
MICROS OFT	Microsoft Internet Information Services - Hostable Web Core 7.5			Mai nte nan ce	Term	Enterprise	Single	93
MICROS OFT	Microsoft Internet Information Services 6.0 x86 32	6.0	WIN	Mai nte nan ce	Term	Enterprise	Single	43
MICROS OFT	Microsoft Internet Information Services 6.0 x86 32			Mai nte nan ce	Term	Enterprise	Single	10
MICROS OFT	Microsoft Internet Information Services 7.0	7.0	WIN	Mai nte nan ce	Term	Enterprise	Single	111
MICROS OFT	Microsoft Internet Information Services 7.0			Mai nte nan ce	Term	Enterprise	Single	101
MICROS OFT	Microsoft Internet Information Services 7.5	7.5	WIN	Mai nte	Term	Enterprise	Single	67

				nan ce				
MICROS OFT	Microsoft Internet Information Services 7.5			Mai nte nan ce	Term	Enterprise	Single	62
MICROS OFT	Microsoft Interop Forms Redistributable Package 2.0a			Mai nte nan ce	Term	Enterprise	Single	1
MICROS OFT	Microsoft Kernel-Mode Driver Framework Feature Pack 1.5	1.5	WIN	Mai nte nan ce	Term	Enterprise	Single	40
MICROS OFT	Microsoft Kernel-Mode Driver Framework Feature Pack 1.5			Mai nte nan ce	Term	Enterprise	Single	9
MICROS OFT	Microsoft Log Parser 2.2			Mai nte nan ce	Term	Enterprise	Single	4
MICROS OFT	Microsoft Lync 2010 Attendee			Mai nte nan ce	Term	Enterprise	Single	1
MICROS OFT	Microsoft Lync Web App Plug-in			Mai nte nan ce	Term	Enterprise	Single	1
MICROS OFT	Microsoft National Language Support Downlevel APIs			Mai nte nan ce	Term	Enterprise	Single	2
MICROS OFT	Microsoft Network Monitor 3.1			Mai nte nan ce	Term	Enterprise	Single	7
MICROS OFT	Microsoft Network Monitor 3.2			Mai nte	Term	Enterprise	Single	3

				nan ce				
MICROS OFT	Microsoft Network Monitor 3.3			Mai nte nan ce	Term	Enterprise	Single	29
MICROS OFT	Microsoft Network Monitor 3.4			Mai nte nan ce	Term	Enterprise	Single	122
MICROS OFT	Microsoft Network Monitor: Microsoft Parsers 3.2			Mai nte nan ce	Term	Enterprise	Single	3
MICROS OFT	Microsoft Network Monitor: Microsoft Parsers 3.3			Mai nte nan ce	Term	Enterprise	Single	16
MICROS OFT	Microsoft Network Monitor: NetworkMonitor Parsers 3.4			Mai nte nan ce	Term	Enterprise	Single	57
MICROS OFT	Microsoft Office 2003 Professional Edition SP3 x86 32 EN	2003 SP3	WIN	Mai nte nan ce	Term	Enterprise	Single	85
MICROS OFT	Microsoft Office 2003 Professional Edition SP3 x86 32 EN			Mai nte nan ce	Term	Enterprise	Single	2
MICROS OFT	Microsoft Office 2003 Resource Kit			Mai nte nan ce	Term	Enterprise	Single	1
MICROS OFT	Microsoft Office 2003 SP1 for the 2007 Microsoft Office System Web Components EN	2007	WIN	Mai nte nan ce	Term	Enterprise	Single	36
MICROS OFT	Microsoft Office 2003 SP1 for the 2007 Microsoft Office System Web Components			Mai nte	Term	Enterprise	Single	30

	EN			nan ce				
MICROS OFT	Microsoft Office 2003 SP1 Web Components EN	2003 SP1	WIN	Mai nte nan ce	Term	Enterprise	Single	36
MICROS OFT	Microsoft Office 2003 SP1 Web Components EN			Mai nte nan ce	Term	Enterprise	Single	30
MICROS OFT	Microsoft Office 2003 Web Components	2003	WIN	Mai nte nan ce	Term	Enterprise	Single	46
MICROS OFT	Microsoft Office 2003 Web Components			Mai nte nan ce	Term	Enterprise	Single	26
MICROS OFT	Microsoft Office 2003 Web Components SP1 for the 2007 Microsoft Office System	2003 SP1	WIN	Mai nte nan ce	Term	Enterprise	Single	29
MICROS OFT	Microsoft Office 2007 Professional Plus Edition SP2 x86 32 EN	2007 SP2	WIN	Mai nte nan ce	Term	Enterprise	Single	27
MICROS OFT	Microsoft Office 2010 Deployment Kit for App-V			Mai nte nan ce	Term	Enterprise	Single	1
MICROS OFT	Microsoft Office 2010 Pinyin IME x64 64 ZH-TW			Mai nte nan ce	Term	Enterprise	Single	1
MICROS OFT	Microsoft Office 2010 Pinyin IME x86 32 ZH-TW			Mai nte nan ce	Term	Enterprise	Single	1
MICROS OFT	Microsoft Office 2010 Professional Plus Edition SP1 x64 64 EN			Mai nte	Term	Enterprise	Single	5

				nan ce				
MICROS OFT	Microsoft Office 2010 Professional Plus Edition SP1 x86 32 EN	2010 SP1	WIN	Mai nte nan ce	Term	Enterprise	Single	667
MICROS OFT	Microsoft Office 2010 Professional Plus Edition SP1 x86 32 EN			Mai nte nan ce	Term	Enterprise	Single	34
MICROS OFT	Microsoft Office 2010 Professional Plus Edition SP2 x64 64 EN			Mai nte nan ce	Term	Enterprise	Single	10
MICROS OFT	Microsoft Office 2010 Professional Plus Edition SP2 x86 32 EN	2010 SP2	WIN	Mai nte nan ce	Term	Enterprise	Single	2461
MICROS OFT	Microsoft Office 2010 Professional Plus Edition SP2 x86 32 EN			Mai nte nan ce	Term	Enterprise	Single	1747
MICROS OFT	Microsoft Office 2010 Professional Plus Edition x64 64 EN			Mai nte nan ce	Term	Enterprise	Single	17
MICROS OFT	Microsoft Office 2010 Professional Plus Edition x86 32 EN			Mai nte nan ce	Term	Enterprise	Single	2
MICROS OFT	Microsoft Office 2010 Service Pack 1 (SP1)	2010 SP1	WIN	Mai nte nan ce	Term	Enterprise	Single	327
MICROS OFT	Microsoft Office 2010 Service Pack 1 (SP1)			Mai nte nan ce	Term	Enterprise	Single	133
MICROS OFT	Microsoft Office Access 2003 SP3 x86 32 EN	2003 SP3	WIN	Mai nte	Term	Enterprise	Single	86

				nan ce				
MICROS OFT	Microsoft Office Access 2003 SP3 x86 32 EN			Mai nte nan ce	Term	Enterprise	Single	2
MICROS OFT	Microsoft Office Access 2007 SP2 x86 32 EN	2007 SP3	WIN	Mai nte nan ce	Term	Enterprise	Single	27
MICROS OFT	Microsoft Office Access 2010 SP1 x64 64 EN			Mai nte nan ce	Term	Enterprise	Single	5
MICROS OFT	Microsoft Office Access 2010 SP1 x86 32 EN	2010 SP1	WIN	Mai nte nan ce	Term	Enterprise	Single	668
MICROS OFT	Microsoft Office Access 2010 SP1 x86 32 EN			Mai nte nan ce	Term	Enterprise	Single	34
MICROS OFT	Microsoft Office Access 2010 SP2 x64 64 EN			Mai nte nan ce	Term	Enterprise	Single	10
MICROS OFT	Microsoft Office Access 2010 SP2 x86 32 EN	2010 SP2	WIN	Mai nte nan ce	Term	Enterprise	Single	2461
MICROS OFT	Microsoft Office Access 2010 SP2 x86 32 EN			Mai nte nan ce	Term	Enterprise	Single	1743
MICROS OFT	Microsoft Office Access 2010 x64 64 EN			Mai nte nan ce	Term	Enterprise	Single	17
MICROS OFT	Microsoft Office Access 2010 x86 32 EN			Mai nte	Term	Enterprise	Single	2

				nan ce				
MICROS OFT	Microsoft Office Access MUI (English) 2010			Mai nte nan ce	Term	Enterprise	Single	11
MICROS OFT	Microsoft Office Access MUI 2007 (English)	2007	WIN	Mai nte nan ce	Term	Enterprise	Single	68
MICROS OFT	Microsoft Office Access MUI 2010 (English)	2010	WIN	Mai nte nan ce	Term	Enterprise	Single	43
MICROS OFT	Microsoft Office Access Setup Metadata MUI (English) 2010			Mai nte nan ce	Term	Enterprise	Single	11
MICROS OFT	Microsoft Office Access Setup Metadata MUI 2007 (English)	2007	WIN	Mai nte nan ce	Term	Enterprise	Single	68
MICROS OFT	Microsoft Office Access Setup Metadata MUI 2010 (English)	2010	WIN	Mai nte nan ce	Term	Enterprise	Single	43
MICROS OFT	Microsoft Office Excel 2003 SP3 x86 32 EN	2003 SP3	WIN	Mai nte nan ce	Term	Enterprise	Single	86
MICROS OFT	Microsoft Office Excel 2003 SP3 x86 32 EN			Mai nte nan ce	Term	Enterprise	Single	2
MICROS OFT	Microsoft Office Excel 2007 SP2 x86 32 EN	2007 SP2	WIN	Mai nte nan ce	Term	Enterprise	Single	37
MICROS OFT	Microsoft Office Excel 2010 SP1 x64 64 EN			Mai nte	Term	Enterprise	Single	5

				nan ce				
MICROS OFT	Microsoft Office Excel 2010 SP1 x86 32 EN	2010 SP1	WIN	Mai nte nan ce	Term	Enterprise	Single	668
MICROS OFT	Microsoft Office Excel 2010 SP1 x86 32 EN			Mai nte nan ce	Term	Enterprise	Single	34
MICROS OFT	Microsoft Office Excel 2010 SP2 x64 64 EN			Mai nte nan ce	Term	Enterprise	Single	10
MICROS OFT	Microsoft Office Excel 2010 SP2 x86 32 EN	2010 SP2	WIN	Mai nte nan ce	Term	Enterprise	Single	2466
MICROS OFT	Microsoft Office Excel 2010 SP2 x86 32 EN			Mai nte nan ce	Term	Enterprise	Single	1748
MICROS OFT	Microsoft Office Excel 2010 x64 64 EN			Mai nte nan ce	Term	Enterprise	Single	17
MICROS OFT	Microsoft Office Excel 2010 x86 32 EN			Mai nte nan ce	Term	Enterprise	Single	2
MICROS OFT	Microsoft Office Excel MUI (English) 2010			Mai nte nan ce	Term	Enterprise	Single	11
MICROS OFT	Microsoft Office Excel MUI 2007 (English)	2007	WIN	Mai nte nan ce	Term	Enterprise	Single	78
MICROS OFT	Microsoft Office Excel MUI 2010 (English)	2010	WIN	Mai nte	Term	Enterprise	Single	44

				nance				
MICROSOFT	Microsoft Office File Validation Add-In			Maintenance	Term	Enterprise	Single	2
MICROSOFT	Microsoft Office File Validation Add-In 14.0			Maintenance	Term	Enterprise	Single	1
MICROSOFT	Microsoft Office Groove MUI (English) 2010			Maintenance	Term	Enterprise	Single	11
MICROSOFT	Microsoft Office Groove MUI 2010 (English)	2010	WIN	Maintenance	Term	Enterprise	Single	43
MICROSOFT	Microsoft Office InfoPath 2003 SP3 x86 32 EN	2003 SP3	WIN	Maintenance	Term	Enterprise	Single	86
MICROSOFT	Microsoft Office InfoPath 2007 SP2 x86 32 EN	2007 SP2	WIN	Maintenance	Term	Enterprise	Single	27
MICROSOFT	Microsoft Office InfoPath 2010 SP1 x64 64 EN			Maintenance	Term	Enterprise	Single	5
MICROSOFT	Microsoft Office InfoPath 2010 SP1 x86 32 EN	2010 SP1	WIN	Maintenance	Term	Enterprise	Single	667
MICROSOFT	Microsoft Office InfoPath 2010 SP1 x86 32 EN			Maintenance	Term	Enterprise	Single	34
MICROSOFT	Microsoft Office InfoPath 2010 SP2 x64 64 EN			Maintenance	Term	Enterprise	Single	10

				nance				
MICROSOFT	Microsoft Office InfoPath 2010 SP2 x86 32 EN	2010 SP2	WIN	Maintenance	Term	Enterprise	Single	2456
MICROSOFT	Microsoft Office InfoPath 2010 SP2 x86 32 EN			Maintenance	Term	Enterprise	Single	1742
MICROSOFT	Microsoft Office InfoPath 2010 x64 64 EN			Maintenance	Term	Enterprise	Single	17
MICROSOFT	Microsoft Office InfoPath 2010 x86 32 EN			Maintenance	Term	Enterprise	Single	2
MICROSOFT	Microsoft Office InfoPath MUI 2007 (English)	2007	WIN	Maintenance	Term	Enterprise	Single	68
MICROSOFT	Microsoft Office InfoPath MUI 2010 (English)	2010	WIN	Maintenance	Term	Enterprise	Single	43
MICROSOFT	Microsoft Office Live Meeting 2007			Maintenance	Term	Enterprise	Single	3
MICROSOFT	Microsoft Office Office 32-bit Components 2010			Maintenance	Term	Enterprise	Single	4
MICROSOFT	Microsoft Office Office 64-bit Components 2010			Maintenance	Term	Enterprise	Single	6
MICROSOFT	Microsoft Office OneNote 2010 SP1 x64 64 EN			Maintenance	Term	Enterprise	Single	5

				nan ce				
MICROS OFT	Microsoft Office OneNote 2010 SP1 x86 32 EN	2010 SP1	WIN	Mai nte nan ce	Term	Enterprise	Single	667
MICROS OFT	Microsoft Office OneNote 2010 SP1 x86 32 EN			Mai nte nan ce	Term	Enterprise	Single	35
MICROS OFT	Microsoft Office OneNote 2010 SP2 x64 64 EN			Mai nte nan ce	Term	Enterprise	Single	10
MICROS OFT	Microsoft Office OneNote 2010 SP2 x64 64 HU			Mai nte nan ce	Term	Enterprise	Single	9
MICROS OFT	Microsoft Office OneNote 2010 SP2 x86 32 EN	2010 SP2	WIN	Mai nte nan ce	Term	Enterprise	Single	2461
MICROS OFT	Microsoft Office OneNote 2010 SP2 x86 32 EN			Mai nte nan ce	Term	Enterprise	Single	1747
MICROS OFT	Microsoft Office OneNote 2010 x64 64 EN			Mai nte nan ce	Term	Enterprise	Single	17
MICROS OFT	Microsoft Office OneNote 2010 x86 32 EN			Mai nte nan ce	Term	Enterprise	Single	2
MICROS OFT	Microsoft Office OneNote MUI (English) 2010			Mai nte nan ce	Term	Enterprise	Single	11
MICROS OFT	Microsoft Office OneNote MUI 2010 (English)	2010	WIN	Mai nte	Term	Enterprise	Single	51

				nan ce				
MICROS OFT	Microsoft Office Outlook 2003 SP3 x86 32 EN	2003 SP3	WIN	Mai nte nan ce	Term	Enterprise	Single	86
MICROS OFT	Microsoft Office Outlook 2003 SP3 x86 32 EN			Mai nte nan ce	Term	Enterprise	Single	2
MICROS OFT	Microsoft Office Outlook 2007 SP2 x86 32 EN	2007 SP2	WIN	Mai nte nan ce	Term	Enterprise	Single	27
MICROS OFT	Microsoft Office Outlook 2010 SP1 x64 64 EN			Mai nte nan ce	Term	Enterprise	Single	5
MICROS OFT	Microsoft Office Outlook 2010 SP1 x86 32 EN	2010 SP1	WIN	Mai nte nan ce	Term	Enterprise	Single	666
MICROS OFT	Microsoft Office Outlook 2010 SP1 x86 32 EN			Mai nte nan ce	Term	Enterprise	Single	34
MICROS OFT	Microsoft Office Outlook 2010 SP2 x64 64 EN			Mai nte nan ce	Term	Enterprise	Single	10
MICROS OFT	Microsoft Office Outlook 2010 SP2 x86 32 EN	2010 SP2	WIN	Mai nte nan ce	Term	Enterprise	Single	2461
MICROS OFT	Microsoft Office Outlook 2010 SP2 x86 32 EN			Mai nte nan ce	Term	Enterprise	Single	1741
MICROS OFT	Microsoft Office Outlook 2010 x64 64 EN			Mai nte	Term	Enterprise	Single	17

				nance				
MICROSOFT	Microsoft Office Outlook 2010 x86 32 EN			Maintenance	Term	Enterprise	Single	2
MICROSOFT	Microsoft Office Outlook MUI (English) 2010			Maintenance	Term	Enterprise	Single	11
MICROSOFT	Microsoft Office Outlook MUI 2007 (English)	2007	WIN	Maintenance	Term	Enterprise	Single	68
MICROSOFT	Microsoft Office Outlook MUI 2010 (English)	2010	WIN	Maintenance	Term	Enterprise	Single	49
MICROSOFT	Microsoft Office PowerPoint 2003 SP3 x86 32 EN	2003 SP3	WIN	Maintenance	Term	Enterprise	Single	86
MICROSOFT	Microsoft Office PowerPoint 2003 SP3 x86 32 EN			Maintenance	Term	Enterprise	Single	2
MICROSOFT	Microsoft Office PowerPoint 2007 SP2 x86 32 EN	2007 SP2	WIN	Maintenance	Term	Enterprise	Single	27
MICROSOFT	Microsoft Office PowerPoint 2010 SP1 x64 64 EN			Maintenance	Term	Enterprise	Single	5
MICROSOFT	Microsoft Office PowerPoint 2010 SP1 x86 32 EN	2010 SP1	WIN	Maintenance	Term	Enterprise	Single	667
MICROSOFT	Microsoft Office PowerPoint 2010 SP1 x86 32 EN			Maintenance	Term	Enterprise	Single	34

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MICROS OFT	Microsoft Office PowerPoint 2010 SP2 x64 64 EN			Mai nte nan ce	Term	Enterprise	Single	10
MICROS OFT	Microsoft Office PowerPoint 2010 SP2 x86 32 EN	2010 SP2	WIN	Mai nte nan ce	Term	Enterprise	Single	2465
MICROS OFT	Microsoft Office PowerPoint 2010 SP2 x86 32 EN			Mai nte nan ce	Term	Enterprise	Single	1742
MICROS OFT	Microsoft Office PowerPoint 2010 x64 64 EN			Mai nte nan ce	Term	Enterprise	Single	17
MICROS OFT	Microsoft Office PowerPoint 2010 x86 32 EN			Mai nte nan ce	Term	Enterprise	Single	2
MICROS OFT	Microsoft Office PowerPoint MUI (English) 2010			Mai nte nan ce	Term	Enterprise	Single	11
MICROS OFT	Microsoft Office PowerPoint MUI 2007 (English)	2007	WIN	Mai nte nan ce	Term	Enterprise	Single	68
MICROS OFT	Microsoft Office PowerPoint MUI 2010 (English)	2010	WIN	Mai nte nan ce	Term	Enterprise	Single	44
MICROS OFT	Microsoft Office Professional Edition 2003	2003	WIN	Mai nte nan ce	Term	Enterprise	Single	102
MICROS OFT	Microsoft Office Professional Edition 2003			Mai nte	Term	Enterprise	Single	3

				nance				
MICROSOFT	Microsoft Office Professional Plus 2007	2007	WIN	Maintenance	Term	Enterprise	Single	67
MICROSOFT	Microsoft Office Professional Plus 2010	2010	WIN	Maintenance	Term	Enterprise	Single	981
MICROSOFT	Microsoft Office Professional Plus 2010			Maintenance	Term	Enterprise	Single	1018
MICROSOFT	Microsoft Office Professional Plus All Lng Software Assurance Microsoft Volume License 1 License Platform	n/a	WIN	Software Assurance	Term	Enterprise	Single	2,282
MICROSOFT	Microsoft Office Project 2003 Professional Edition SP3 x86 32 EN			Maintenance	Term	Enterprise	Single	1
MICROSOFT	Microsoft Office Project 2010 Professional Edition SP1 x64 64 EN			Maintenance	Term	Enterprise	Single	2
MICROSOFT	Microsoft Office Project 2010 Professional Edition SP1 x86 32 EN			Maintenance	Term	Enterprise	Single	8
MICROSOFT	Microsoft Office Project 2010 Professional Edition SP2 x64 64 EN			Maintenance	Term	Enterprise	Single	2
MICROSOFT	Microsoft Office Project 2010 Professional Edition SP2 x86 32 EN	2010 SP2	WIN	Maintenance	Term	Enterprise	Single	536

MICROSOFT	Microsoft Office Project 2010 Professional Edition SP2 x86 32 EN			Maintenance	Term	Enterprise	Single	402
MICROSOFT	Microsoft Office Project 2010 Professional Edition x86 32 EN	2010	WIN	Maintenance	Term	Enterprise	Single	160
MICROSOFT	Microsoft Office Project 2010 Professional Edition x86 32 EN			Maintenance	Term	Enterprise	Single	5
MICROSOFT	Microsoft Office Project MUI (English) 2010			Maintenance	Term	Enterprise	Single	3
MICROSOFT	Microsoft Office Project Professional 2010			Maintenance	Term	Enterprise	Single	3
MICROSOFT	Microsoft Office Proof (English) 2010			Maintenance	Term	Enterprise	Single	12
MICROSOFT	Microsoft Office Proof (French) 2010			Maintenance	Term	Enterprise	Single	12
MICROSOFT	Microsoft Office Proof (Spanish) 2010			Maintenance	Term	Enterprise	Single	12
MICROSOFT	Microsoft Office Proof 2007 (English)	2007	WIN	Maintenance	Term	Enterprise	Single	83
MICROSOFT	Microsoft Office Proof 2007 (French)	2007	WIN	Maintenance	Term	Enterprise	Single	83

MICROSOFT	Microsoft Office Proof 2007 (Spanish)	2007	WIN	Maintenance	Term	Enterprise	Single	83
MICROSOFT	Microsoft Office Proof 2010 (English)	2010	WIN	Maintenance	Term	Enterprise	Single	50
MICROSOFT	Microsoft Office Proof 2010 (French)	2010	WIN	Maintenance	Term	Enterprise	Single	50
MICROSOFT	Microsoft Office Proof 2010 (Spanish)	2010	WIN	Maintenance	Term	Enterprise	Single	50
MICROSOFT	Microsoft Office Proofing (English) 2010			Maintenance	Term	Enterprise	Single	12
MICROSOFT	Microsoft Office Proofing 2007 (English)	2007	WIN	Maintenance	Term	Enterprise	Single	83
MICROSOFT	Microsoft Office Proofing 2010 (English)	2010	WIN	Maintenance	Term	Enterprise	Single	44
MICROSOFT	Microsoft Office Publisher 2003 SP3 x86 32 EN	2003 SP3	WIN	Maintenance	Term	Enterprise	Single	86
MICROSOFT	Microsoft Office Publisher 2003 SP3 x86 32 EN			Maintenance	Term	Enterprise	Single	2
MICROSOFT	Microsoft Office Publisher 2007 SP2 x86 32 EN	2007 SP2	WIN	Maintenance	Term	Enterprise	Single	27

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MICROSOFT	Microsoft Office Publisher 2010 SP1 x64 64 EN			Maintenance	Term	Enterprise	Single	5
MICROSOFT	Microsoft Office Publisher 2010 SP1 x86 32 EN	2010 SP1	WIN	Maintenance	Term	Enterprise	Single	667
MICROSOFT	Microsoft Office Publisher 2010 SP1 x86 32 EN			Maintenance	Term	Enterprise	Single	34
MICROSOFT	Microsoft Office Publisher 2010 SP2 x64 64 EN			Maintenance	Term	Enterprise	Single	10
MICROSOFT	Microsoft Office Publisher 2010 SP2 x86 32 EN	2010 SP2	WIN	Maintenance	Term	Enterprise	Single	2460
MICROSOFT	Microsoft Office Publisher 2010 SP2 x86 32 EN			Maintenance	Term	Enterprise	Single	1742
MICROSOFT	Microsoft Office Publisher 2010 x64 64 EN			Maintenance	Term	Enterprise	Single	17
MICROSOFT	Microsoft Office Publisher 2010 x86 32 EN			Maintenance	Term	Enterprise	Single	2
MICROSOFT	Microsoft Office Publisher MUI (English) 2010			Maintenance	Term	Enterprise	Single	11
MICROSOFT	Microsoft Office Publisher MUI 2007 (English)	2007	WIN	Maintenance	Term	Enterprise	Single	68

MICROSOFT	Microsoft Office Publisher MUI 2010 (English)	2010	WIN	Maintenance	Term	Enterprise	Single	44
MICROSOFT	Microsoft Office Server Proof (Arabic) 2010			Maintenance	Term	Enterprise	Single	4
MICROSOFT	Microsoft Office Server Proof (English) 2010			Maintenance	Term	Enterprise	Single	4
MICROSOFT	Microsoft Office Server Proof (French) 2010			Maintenance	Term	Enterprise	Single	4
MICROSOFT	Microsoft Office Server Proof (German) 2010			Maintenance	Term	Enterprise	Single	4
MICROSOFT	Microsoft Office Server Proof (Russian) 2010			Maintenance	Term	Enterprise	Single	4
MICROSOFT	Microsoft Office Server Proof (Spanish) 2010			Maintenance	Term	Enterprise	Single	4
MICROSOFT	Microsoft Office Shared 32-bit MUI (English) 2010			Maintenance	Term	Enterprise	Single	4
MICROSOFT	Microsoft Office Shared 64-bit MUI (English) 2010			Maintenance	Term	Enterprise	Single	6
MICROSOFT	Microsoft Office Shared 64-bit Setup Metadata MUI (English) 2010			Maintenance	Term	Enterprise	Single	6

MICROSOFT	Microsoft Office Shared MUI (English) 2007			Maintenance	Term	Enterprise	Single	1
MICROSOFT	Microsoft Office Shared MUI (English) 2010			Maintenance	Term	Enterprise	Single	12
MICROSOFT	Microsoft Office Shared MUI 2007 (English)	2007	WIN	Maintenance	Term	Enterprise	Single	84
MICROSOFT	Microsoft Office Shared MUI 2010 (English)	2010	WIN	Maintenance	Term	Enterprise	Single	54
MICROSOFT	Microsoft Office Shared Setup Metadata MUI (English) 2007			Maintenance	Term	Enterprise	Single	1
MICROSOFT	Microsoft Office Shared Setup Metadata MUI (English) 2010			Maintenance	Term	Enterprise	Single	12
MICROSOFT	Microsoft Office Shared Setup Metadata MUI 2007 (English)	2007	WIN	Maintenance	Term	Enterprise	Single	84
MICROSOFT	Microsoft Office Shared Setup Metadata MUI 2010 (English)	2010	WIN	Maintenance	Term	Enterprise	Single	45
MICROSOFT	Microsoft Office SharePoint Designer 2010			Maintenance	Term	Enterprise	Single	1
MICROSOFT	Microsoft Office SharePoint Designer MUI (English) 2010			Maintenance	Term	Enterprise	Single	1

MICROSOFT	Microsoft Office Sharepoint Server 2010 SP2 x64 64			Maintenance	Term	Enterprise	Single	9
MICROSOFT	Microsoft Office SharePoint Workspace 2010 SP1 x64 64 EN			Maintenance	Term	Enterprise	Single	3
MICROSOFT	Microsoft Office SharePoint Workspace 2010 SP1 x86 32 EN	2010 SP1	WIN	Maintenance	Term	Enterprise	Single	666
MICROSOFT	Microsoft Office SharePoint Workspace 2010 SP1 x86 32 EN			Maintenance	Term	Enterprise	Single	34
MICROSOFT	Microsoft Office SharePoint Workspace 2010 SP2 x64 64 EN			Maintenance	Term	Enterprise	Single	10
MICROSOFT	Microsoft Office SharePoint Workspace 2010 SP2 x86 32 EN	2010 SP2	WIN	Maintenance	Term	Enterprise	Single	2445
MICROSOFT	Microsoft Office SharePoint Workspace 2010 SP2 x86 32 EN			Maintenance	Term	Enterprise	Single	1743
MICROSOFT	Microsoft Office SharePoint Workspace 2010 x64 64 EN			Maintenance	Term	Enterprise	Single	17
MICROSOFT	Microsoft Office SharePoint Workspace 2010 x86 32 EN			Maintenance	Term	Enterprise	Single	2
MICROSOFT	Microsoft Office Visio 2003 Professional Edition SP3 x86 32 EN			Maintenance	Term	Enterprise	Single	1

MICROSOFT	Microsoft Office Visio 2010			Maintenance	Term	Enterprise	Single	3
MICROSOFT	Microsoft Office Visio 2010 Premium Edition SP1 x86 32 EN			Maintenance	Term	Enterprise	Single	10
MICROSOFT	Microsoft Office Visio 2010 Premium Edition SP2 x64 64 EN			Maintenance	Term	Enterprise	Single	2
MICROSOFT	Microsoft Office Visio 2010 Premium Edition SP2 x86 32 EN	2010 SP2	WIN	Maintenance	Term	Enterprise	Single	614
MICROSOFT	Microsoft Office Visio 2010 Premium Edition SP2 x86 32 EN			Maintenance	Term	Enterprise	Single	479
MICROSOFT	Microsoft Office Visio 2010 Premium Edition x86 32 EN	2010 Premium	WIN	Maintenance	Term	Enterprise	Single	175
MICROSOFT	Microsoft Office Visio 2010 Premium Edition x86 32 EN			Maintenance	Term	Enterprise	Single	3
MICROSOFT	Microsoft Office Visio 2010 Professional Edition SP1 x64 64 EN			Maintenance	Term	Enterprise	Single	2
MICROSOFT	Microsoft Office Visio 2010 Professional Edition SP1 x86 32 EN			Maintenance	Term	Enterprise	Single	1
MICROSOFT	Microsoft Office Visio 2010 Professional Edition SP2 x64 64 EN			Maintenance	Term	Enterprise	Single	1

MICROSOFT	Microsoft Office Visio MUI (English) 2010			Maintenance	Term	Enterprise	Single	3
MICROSOFT	Microsoft Office Visio Professional 2003			Maintenance	Term	Enterprise	Single	2
MICROSOFT	Microsoft Office Visio Viewer 2003 (English)	2003	WIN	Maintenance	Term	Enterprise	Single	156
MICROSOFT	Microsoft Office Visio Viewer 2003 (English)			Maintenance	Term	Enterprise	Single	1
MICROSOFT	Microsoft Office Visio Viewer 2003 x86 32 EN	2003	WIN	Maintenance	Term	Enterprise	Single	104
MICROSOFT	Microsoft Office Visio Viewer 2010 x86 32 EN			Maintenance	Term	Enterprise	Single	2
MICROSOFT	Microsoft Office Visual Web Developer 2007			Maintenance	Term	Enterprise	Single	9
MICROSOFT	Microsoft Office Visual Web Developer MUI (English) 2007			Maintenance	Term	Enterprise	Single	1
MICROSOFT	Microsoft Office Web Apps Application Server Components			Maintenance	Term	Enterprise	Single	1
MICROSOFT	Microsoft Office Web Apps English Language Pack			Maintenance	Term	Enterprise	Single	1

MICROSOFT	Microsoft Office Web Apps Proof (Arabic) 2010			Maintenance	Term	Enterprise	Single	1
MICROSOFT	Microsoft Office Web Apps Proof (English) 2010			Maintenance	Term	Enterprise	Single	1
MICROSOFT	Microsoft Office Web Apps Proof (French) 2010			Maintenance	Term	Enterprise	Single	1
MICROSOFT	Microsoft Office Web Apps Proof (German) 2010			Maintenance	Term	Enterprise	Single	1
MICROSOFT	Microsoft Office Web Apps Proof (Russian) 2010			Maintenance	Term	Enterprise	Single	1
MICROSOFT	Microsoft Office Web Apps Proof (Spanish) 2010			Maintenance	Term	Enterprise	Single	1
MICROSOFT	Microsoft Office Web Apps Service Pack 1 (SP1)			Maintenance	Term	Enterprise	Single	1
MICROSOFT	Microsoft Office Web Apps Web Front End Components			Maintenance	Term	Enterprise	Single	1
MICROSOFT	Microsoft Office Web Components 10 x86 32 EN	10	WIN	Maintenance	Term	Enterprise	Single	78
MICROSOFT	Microsoft Office Web Components 10.0 x86 32 EN	10.0	WIN	Maintenance	Term	Enterprise	Single	99

MICROSOFT	Microsoft Office Web Components 10.0 x86 32 EN			Maintenance	Term	Enterprise	Single	55
MICROSOFT	Microsoft Office Web Components 11.0 SP1 x86 32 EN			Maintenance	Term	Enterprise	Single	4
MICROSOFT	Microsoft Office Word 2003			Maintenance	Term	Enterprise	Single	1
MICROSOFT	Microsoft Office Word 2003 SP3 x86 32 EN	2003 SP3	WIN	Maintenance	Term	Enterprise	Single	86
MICROSOFT	Microsoft Office Word 2003 SP3 x86 32 EN			Maintenance	Term	Enterprise	Single	2
MICROSOFT	Microsoft Office Word 2007 SP2 x86 32 EN	2007 SP2	WIN	Maintenance	Term	Enterprise	Single	27
MICROSOFT	Microsoft Office Word 2010 SP1 x64 64 EN			Maintenance	Term	Enterprise	Single	5
MICROSOFT	Microsoft Office Word 2010 SP1 x86 32 EN	2010 SP1	WIN	Maintenance	Term	Enterprise	Single	668
MICROSOFT	Microsoft Office Word 2010 SP1 x86 32 EN			Maintenance	Term	Enterprise	Single	34
MICROSOFT	Microsoft Office Word 2010 SP2 x64 64 EN			Maintenance	Term	Enterprise	Single	10

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MICROSOFT	Microsoft Office Word 2010 SP2 x86 32 EN	2010 SP2	WIN	Maintenance	Term	Enterprise	Single	2466
MICROSOFT	Microsoft Office Word 2010 SP2 x86 32 EN			Maintenance	Term	Enterprise	Single	1743
MICROSOFT	Microsoft Office Word 2010 x64 64 EN			Maintenance	Term	Enterprise	Single	17
MICROSOFT	Microsoft Office Word 2010 x86 32 EN			Maintenance	Term	Enterprise	Single	2
MICROSOFT	Microsoft Office Word MUI (English) 2010			Maintenance	Term	Enterprise	Single	11
MICROSOFT	Microsoft Office Word MUI 2007 (English)	2007	WIN	Maintenance	Term	Enterprise	Single	68
MICROSOFT	Microsoft Office Word MUI 2010 (English)	2010	WIN	Maintenance	Term	Enterprise	Single	44
MICROSOFT	Microsoft Oracle .NET Data Provider			Maintenance	Term	Enterprise	Single	4
MICROSOFT	Microsoft Outlook Express 6.0 for Windows 2003 SP2	6.0 SP2	WIN	Maintenance	Term	Enterprise	Single	87
MICROSOFT	Microsoft Outlook Express 6.0 for Windows 2003 SP2			Maintenance	Term	Enterprise	Single	26

MICROSOFT	Microsoft Outlook Express 6.0 SP2	6.0 SP2	WIN	Maintenance	Term	Enterprise	Single	288
MICROSOFT	Microsoft Outlook Express 6.0 SP2			Maintenance	Term	Enterprise	Single	102
MICROSOFT	Microsoft Outlook Web Access S/MIME			Maintenance	Term	Enterprise	Single	5
MICROSOFT	Microsoft Outlook Web Access S/MIME 6.5	6.5	WIN	Maintenance	Term	Enterprise	Single	339
MICROSOFT	Microsoft Outlook Web Access S/MIME 6.5			Maintenance	Term	Enterprise	Single	15
MICROSOFT	Microsoft Primary Interoperability Assemblies 2005	2005	WIN	Maintenance	Term	Enterprise	Single	65
MICROSOFT	Microsoft Primary Interoperability Assemblies 2005			Maintenance	Term	Enterprise	Single	28
MICROSOFT	Microsoft Project Professional 2010	2010 Pro	WIN	Maintenance	Term	Enterprise	Single	188
MICROSOFT	Microsoft Project Professional 2010			Maintenance	Term	Enterprise	Single	244
MICROSOFT	Microsoft Project Professional Win32 All Languages Software Assurance Microsoft Volume License w/1 ProjectSvr CAL	n/a	WIN	Client Access	Term	Enterprise	Single	431

				license (CAL)				
MICROSOFT	Microsoft Project Server 2010			Maintenance	Term	Enterprise	Single	1
MICROSOFT	Microsoft Project Server English Language Pack			Maintenance	Term	Enterprise	Single	1
MICROSOFT	Microsoft Project Server Web Front End Server			Maintenance	Term	Enterprise	Single	1
MICROSOFT	Microsoft Project Server Win32 All Languages License/Software Assurance Pack Microsoft Volume License	n/a	WIN	Software Assurance	Term	Enterprise	Single	2
MICROSOFT	Microsoft QuickBasic 4.5 x86 32			Maintenance	Term	Enterprise	Single	1
MICROSOFT	Microsoft Remote Desktop Connection 5.2.3790			Maintenance	Term	Enterprise	Single	9
MICROSOFT	Microsoft Remote Desktop Connection 6.0 x64 64			Maintenance	Term	Enterprise	Single	17
MICROSOFT	Microsoft Remote Desktop Connection 6.0.6000			Maintenance	Term	Enterprise	Single	13

MICROSOFT	Microsoft Remote Desktop Connection 6.1			Maintenance	Term	Enterprise	Single	34
MICROSOFT	Microsoft Remote Desktop Connection 7.0			Maintenance	Term	Enterprise	Single	9
MICROSOFT	Microsoft Remote Desktop Connection 8.0			Maintenance	Term	Enterprise	Single	135
MICROSOFT	Microsoft Report Viewer Redistributable 2005			Maintenance	Term	Enterprise	Single	8
MICROSOFT	Microsoft Report Viewer Redistributable 2008 (KB971119)			Maintenance	Term	Enterprise	Single	24
MICROSOFT	Microsoft Report Viewer Redistributable 2008 SP1	2008 SP1	WIN	Maintenance	Term	Enterprise	Single	84
MICROSOFT	Microsoft Report Viewer Redistributable 2008 SP1			Maintenance	Term	Enterprise	Single	95
MICROSOFT	Microsoft RichCopy 4.0			Maintenance	Term	Enterprise	Single	13
MICROSOFT	Microsoft Robocopy GUI			Maintenance	Term	Enterprise	Single	1
MICROSOFT	Microsoft Runtime Redistributables			Maintenance	Term	Enterprise	Single	39

MICROSOFT	Microsoft S/MIME			Maintenance	Term	Enterprise	Single	990
MICROSOFT	Microsoft Search Enhancement Pack 2.0			Maintenance	Term	Enterprise	Single	4
MICROSOFT	Microsoft Search Server 2010 Core			Maintenance	Term	Enterprise	Single	4
MICROSOFT	Microsoft Search Server 2010 English Language Pack			Maintenance	Term	Enterprise	Single	4
MICROSOFT	Microsoft Server Speech Platform Runtime (x64)			Maintenance	Term	Enterprise	Single	9
MICROSOFT	Microsoft Server Speech Recognition Language - TELE (en-US)			Maintenance	Term	Enterprise	Single	9
MICROSOFT	Microsoft Shared Components			Maintenance	Term	Enterprise	Single	4
MICROSOFT	Microsoft Shared Coms English Language Pack			Maintenance	Term	Enterprise	Single	4
MICROSOFT	Microsoft SharePoint 2010 SDK			Maintenance	Term	Enterprise	Single	1
MICROSOFT	Microsoft SharePoint 2010 Service Pack 1 (SP1)			Maintenance	Term	Enterprise	Single	8

MICROSOFT	Microsoft SharePoint and Project Server 2010 Service Pack 1 (SP1)			Maintenance	Term	Enterprise	Single	1
MICROSOFT	Microsoft SharePoint Designer 2010			Maintenance	Term	Enterprise	Single	22
MICROSOFT	Microsoft SharePoint Designer 2010 Service Pack 1 (SP1)			Maintenance	Term	Enterprise	Single	2
MICROSOFT	Microsoft SharePoint Foundation 2010 1033 Lang Pack			Maintenance	Term	Enterprise	Single	4
MICROSOFT	Microsoft SharePoint Foundation 2010 Core			Maintenance	Term	Enterprise	Single	4
MICROSOFT	Microsoft SharePoint Portal			Maintenance	Term	Enterprise	Single	4
MICROSOFT	Microsoft SharePoint Portal English Language Pack			Maintenance	Term	Enterprise	Single	4
MICROSOFT	Microsoft SharePoint Server 2010			Maintenance	Term	Enterprise	Single	9
MICROSOFT	Microsoft SharePoint Server All Lng Software Assurance Microsoft Volume License 1 License	n/a	WIN	Software Assurance	Term	Enterprise	Single	9
MICROSOFT	Microsoft SilverLight	3.0	WIN	Mainte	Term	Enterprise	Single	947

				nance				
MICROSOFT	Microsoft Silverlight			Maintenance	Term	Enterprise	Single	1091
MICROSOFT	Microsoft Silverlight 3 SDK			Maintenance	Term	Enterprise	Single	27
MICROSOFT	Microsoft Silverlight 3.0 SDK	SDK 3.0	WIN	Maintenance	Term	Enterprise	Single	50
MICROSOFT	Microsoft Silverlight 3.0 SDK			Maintenance	Term	Enterprise	Single	42
MICROSOFT	Microsoft Silverlight 4 SDK	SDK 4.0	WIN	Maintenance	Term	Enterprise	Single	28
MICROSOFT	Microsoft Silverlight 4 SDK			Maintenance	Term	Enterprise	Single	27
MICROSOFT	Microsoft Silverlight 4.0.60531.0			Maintenance	Term	Enterprise	Single	1
MICROSOFT	Microsoft Silverlight 4.0.60831			Maintenance	Term	Enterprise	Single	1
MICROSOFT	Microsoft Silverlight 4.1.10111			Maintenance	Term	Enterprise	Single	1
MICROSOFT	Microsoft Silverlight 5 SDK			Mainte	Term	Enterprise	Single	3

				nan ce				
MICROS OFT	Microsoft Silverlight 5.0.61118			Mai nte nan ce	Term	Enterprise	Single	1
MICROS OFT	Microsoft Silverlight 5.1 0125	5.1 0125	WIN	Mai nte nan ce	Term	Enterprise	Single	506
MICROS OFT	Microsoft Silverlight 5.1 0214	5.1 0214	WIN	Mai nte nan ce	Term	Enterprise	Single	1911
MICROS OFT	Microsoft Silverlight 5.1 0411	5.1 0411	WIN	Mai nte nan ce	Term	Enterprise	Single	172
MICROS OFT	Microsoft Silverlight 5.1 0513	5.1 0513	WIN	Mai nte nan ce	Term	Enterprise	Single	1419
MICROS OFT	Microsoft Silverlight 5.1 0913	5.1 0913	WIN	Mai nte nan ce	Term	Enterprise	Single	1714
MICROS OFT	Microsoft Silverlight 5.1.10411			Mai nte nan ce	Term	Enterprise	Single	2
MICROS OFT	Microsoft Silverlight 5.1.20125			Mai nte nan ce	Term	Enterprise	Single	6
MICROS OFT	Microsoft Silverlight 5.1.20513			Mai nte nan ce	Term	Enterprise	Single	7
MICROS OFT	Microsoft Silverlight 5.1.20913			Mai nte	Term	Enterprise	Single	61

				nan ce				
MICROS OFT	Microsoft Silverlight 5.1.30214			Mai nte nan ce	Term	Enterprise	Single	1712
MICROS OFT	Microsoft Silverlight 5.1.30214.0 - KB2932677 x64			Mai nte nan ce	Term	Enterprise	Single	65
MICROS OFT	Microsoft Silverlight 5.1.30514			Mai nte nan ce	Term	Enterprise	Single	7
MICROS OFT	Microsoft Silverlight 5.1.30514.0 - KB2977218 x64			Mai nte nan ce	Term	Enterprise	Single	1687
MICROS OFT	Microsoft Slide Library			Mai nte nan ce	Term	Enterprise	Single	4
MICROS OFT	Microsoft Slide Library English Language Pack			Mai nte nan ce	Term	Enterprise	Single	4
MICROS OFT	Microsoft SMTP Service 7.5			Mai nte nan ce	Term	Enterprise	Single	5
MICROS OFT	Microsoft Snapshot Viewer 9.0			Mai nte nan ce	Term	Enterprise	Single	2
MICROS OFT	Microsoft SOAP Toolkit 3.0			Mai nte nan ce	Term	Enterprise	Single	1
MICROS OFT	Microsoft Software Update - Web Folders 14.0 EN			Mai nte	Term	Enterprise	Single	2

				nance				
MICROSOFT	Microsoft Software Update for Web Folders (English) 14			Maintenance	Term	Enterprise	Single	2
MICROSOFT	Microsoft Speech 5.1 TTS Redistributables			Maintenance	Term	Enterprise	Single	1
MICROSOFT	Microsoft SQL CAL All Languages Software Assurance Microsoft Volume License Device CAL	n/a	WIN	Client Access license (CAL)	Term	Enterprise	Single	2,282
MICROSOFT	Microsoft SQL Server 2005	2005	WIN	Maintenance	Term	Enterprise	Single	32
MICROSOFT	Microsoft SQL Server 2005			Maintenance	Term	Enterprise	Single	23
MICROSOFT	Microsoft SQL Server 2005 - Management Studio	2005	WIN	Maintenance	Term	Enterprise	Single	28
MICROSOFT	Microsoft SQL Server 2005 - Management Studio			Maintenance	Term	Enterprise	Single	12
MICROSOFT	Microsoft SQL Server 2005 (64-bit)			Maintenance	Term	Enterprise	Single	2

MICROSOFT	Microsoft SQL Server 2005 Analysis Services ADOMD.NET			Maintenance	Term	Enterprise	Single	9
MICROSOFT	Microsoft SQL Server 2005 Backward compatibility	2005	WIN	Maintenance	Term	Enterprise	Single	39
MICROSOFT	Microsoft SQL Server 2005 Backward compatibility			Maintenance	Term	Enterprise	Single	23
MICROSOFT	Microsoft SQL Server 2005 Backward compatibility 8.05.2312			Maintenance	Term	Enterprise	Single	14
MICROSOFT	Microsoft SQL Server 2005 Backward compatibility 8.05.2312 Microsoft Corporation	2005 8.05	WIN	Maintenance	Term	Enterprise	Single	35
MICROSOFT	Microsoft SQL Server 2005 Books Online (English)			Maintenance	Term	Enterprise	Single	3
MICROSOFT	Microsoft SQL Server 2005 Books Online (English) (February 2007)			Maintenance	Term	Enterprise	Single	4
MICROSOFT	Microsoft SQL Server 2005 Books Online (English) (May 2007)			Maintenance	Term	Enterprise	Single	1
MICROSOFT	Microsoft SQL Server 2005 Books Online (English) (September 2007)			Maintenance	Term	Enterprise	Single	5
MICROSOFT	Microsoft SQL Server 2005 Enterprise Edition SP4 x86 32 EN			Maintenance	Term	Enterprise	Single	4

MICROSOFT	Microsoft SQL Server 2005 Express Edition			Maintenance	Term	Enterprise	Single	1
MICROSOFT	Microsoft SQL Server 2005 Express Edition SP4 with Advanced Services x86 32 EN			Maintenance	Term	Enterprise	Single	1
MICROSOFT	Microsoft SQL Server 2005 Express Edition SP4 x86 32 EN			Maintenance	Term	Enterprise	Single	2
MICROSOFT	Microsoft SQL Server 2005 Integration Services			Maintenance	Term	Enterprise	Single	3
MICROSOFT	Microsoft SQL Server 2005 Integration Services (64-bit)			Maintenance	Term	Enterprise	Single	1
MICROSOFT	Microsoft SQL Server 2005 Samples			Maintenance	Term	Enterprise	Single	1
MICROSOFT	Microsoft SQL Server 2005 Standard Edition SP4 x64 64 EN			Maintenance	Term	Enterprise	Single	2
MICROSOFT	Microsoft SQL Server 2005 Standard Edition SP4 x86 32 EN			Maintenance	Term	Enterprise	Single	3
MICROSOFT	Microsoft SQL Server 2005 Tools			Maintenance	Term	Enterprise	Single	6
MICROSOFT	Microsoft SQL Server 2005 Tools (64-bit)			Maintenance	Term	Enterprise	Single	1

MICROSOFT	Microsoft SQL Server 2005 Tools 9.3.4035.00			Maintenance	Term	Enterprise	Single	1
MICROSOFT	Microsoft SQL Server 2005 Tools 9.4.5000.00			Maintenance	Term	Enterprise	Single	9
MICROSOFT	Microsoft SQL Server 2005 Tools Express Edition			Maintenance	Term	Enterprise	Single	2
MICROSOFT	Microsoft SQL Server 2005 Upgrade Advisor (English)			Maintenance	Term	Enterprise	Single	1
MICROSOFT	Microsoft SQL Server 2008 (64-bit)			Maintenance	Term	Enterprise	Single	27
MICROSOFT	Microsoft SQL Server 2008 Analysis Management Objects			Maintenance	Term	Enterprise	Single	1
MICROSOFT	Microsoft SQL Server 2008 Analysis Services ADOMD.NET			Maintenance	Term	Enterprise	Single	9
MICROSOFT	Microsoft SQL Server 2008 Browser	2008	WIN	Maintenance	Term	Enterprise	Single	27
MICROSOFT	Microsoft SQL Server 2008 Browser			Maintenance	Term	Enterprise	Single	26
MICROSOFT	Microsoft SQL Server 2008 Common Files	2008	WIN	Maintenance	Term	Enterprise	Single	52

MICROSOFT	Microsoft SQL Server 2008 Common Files			Maintenance	Term	Enterprise	Single	38
MICROSOFT	Microsoft SQL Server 2008 Database Engine Services			Maintenance	Term	Enterprise	Single	1
MICROSOFT	Microsoft SQL Server 2008 Express Edition SP1 x64 64 EN			Maintenance	Term	Enterprise	Single	1
MICROSOFT	Microsoft SQL Server 2008 Express Edition SP3 x64 64 EN	2008 Express SP3	WIN	Maintenance	Term	Enterprise	Single	38
MICROSOFT	Microsoft SQL Server 2008 Express Edition SP3 x64 64 EN			Maintenance	Term	Enterprise	Single	33
MICROSOFT	Microsoft SQL Server 2008 Management Objects			Maintenance	Term	Enterprise	Single	1
MICROSOFT	Microsoft SQL Server 2008 Management Studio			Maintenance	Term	Enterprise	Single	1
MICROSOFT	Microsoft SQL Server 2008 Native Client	2008	WIN	Maintenance	Term	Enterprise	Single	130
MICROSOFT	Microsoft SQL Server 2008 Native Client			Maintenance	Term	Enterprise	Single	129
MICROSOFT	Microsoft SQL Server 2008 Policies			Maintenance	Term	Enterprise	Single	1

MICROSOFT	Microsoft SQL Server 2008 R2			Maintenance	Term	Enterprise	Single	2
MICROSOFT	Microsoft SQL Server 2008 R2 (64-bit)	2008	WIN	Maintenance	Term	Enterprise	Single	28
MICROSOFT	Microsoft SQL Server 2008 R2 (64-bit)			Maintenance	Term	Enterprise	Single	26
MICROSOFT	Microsoft SQL Server 2008 R2 Books Online			Maintenance	Term	Enterprise	Single	11
MICROSOFT	Microsoft SQL Server 2008 R2 Data-Tier Application Framework	2008	WIN	Maintenance	Term	Enterprise	Single	49
MICROSOFT	Microsoft SQL Server 2008 R2 Data-Tier Application Framework			Maintenance	Term	Enterprise	Single	41
MICROSOFT	Microsoft SQL Server 2008 R2 Data-Tier Application Project	2008	WIN	Maintenance	Term	Enterprise	Single	49
MICROSOFT	Microsoft SQL Server 2008 R2 Data-Tier Application Project			Maintenance	Term	Enterprise	Single	41
MICROSOFT	Microsoft SQL Server 2008 R2 Enterprise Edition SP2 x64 64 EN			Maintenance	Term	Enterprise	Single	6
MICROSOFT	Microsoft SQL Server 2008 R2 Management Objects	2008	WIN	Maintenance	Term	Enterprise	Single	53

MICROSOFT	Microsoft SQL Server 2008 R2 Management Objects			Maintenance	Term	Enterprise	Single	45
MICROSOFT	Microsoft SQL Server 2008 R2 Management Objects (x64)	2008	WIN	Maintenance	Term	Enterprise	Single	26
MICROSOFT	Microsoft SQL Server 2008 R2 Management Objects (x64)			Maintenance	Term	Enterprise	Single	28
MICROSOFT	Microsoft SQL Server 2008 R2 Management Studio			Maintenance	Term	Enterprise	Single	4
MICROSOFT	Microsoft SQL Server 2008 R2 Native Client	2008	WIN	Maintenance	Term	Enterprise	Single	47
MICROSOFT	Microsoft SQL Server 2008 R2 Native Client			Maintenance	Term	Enterprise	Single	30
MICROSOFT	Microsoft SQL Server 2008 R2 Policies	2008	WIN	Maintenance	Term	Enterprise	Single	29
MICROSOFT	Microsoft SQL Server 2008 R2 Policies			Maintenance	Term	Enterprise	Single	27
MICROSOFT	Microsoft SQL Server 2008 R2 Report Builder 3.0			Maintenance	Term	Enterprise	Single	2
MICROSOFT	Microsoft SQL Server 2008 R2 Reporting Services			Maintenance	Term	Enterprise	Single	18

MICROSOFT	Microsoft SQL Server 2008 R2 Reporting Services SP1			Maintenance	Term	Enterprise	Single	2
MICROSOFT	Microsoft SQL Server 2008 R2 RsFx Driver			Maintenance	Term	Enterprise	Single	10
MICROSOFT	Microsoft SQL Server 2008 R2 Setup (English)	2008	WIN	Maintenance	Term	Enterprise	Single	30
MICROSOFT	Microsoft SQL Server 2008 R2 Setup (English)			Maintenance	Term	Enterprise	Single	28
MICROSOFT	Microsoft SQL Server 2008 R2 SP2 Express Edition x86 32 EN			Maintenance	Term	Enterprise	Single	2
MICROSOFT	Microsoft SQL Server 2008 R2 Standard Edition SP1 x64 64 EN			Maintenance	Term	Enterprise	Single	2
MICROSOFT	Microsoft SQL Server 2008 R2 Standard Edition SP2 x64 64 EN			Maintenance	Term	Enterprise	Single	18
MICROSOFT	Microsoft SQL Server 2008 R2 Standard Edition x64 64 EN			Maintenance	Term	Enterprise	Single	1
MICROSOFT	Microsoft SQL Server 2008 R2 Transact-SQL Language Service	2008	WIN	Maintenance	Term	Enterprise	Single	49
MICROSOFT	Microsoft SQL Server 2008 R2 Transact-SQL Language Service			Maintenance	Term	Enterprise	Single	41

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MICROSOFT	Microsoft SQL Server 2008 RsFx Driver			Maintenance	Term	Enterprise	Single	6
MICROSOFT	Microsoft SQL Server 2008 Setup Support Files	2008	WIN	Maintenance	Term	Enterprise	Single	55
MICROSOFT	Microsoft SQL Server 2008 Setup Support Files			Maintenance	Term	Enterprise	Single	54
MICROSOFT	Microsoft SQL Server 2008 SP1 R2 Express Edition x64 64 EN			Maintenance	Term	Enterprise	Single	1
MICROSOFT	Microsoft SQL Server 2008 SP2 R2 Express Edition x64 64 EN			Maintenance	Term	Enterprise	Single	4
MICROSOFT	Microsoft SQL Server 2008 Standard Edition SP3 x64 64 EN			Maintenance	Term	Enterprise	Single	1
MICROSOFT	Microsoft SQL Server 2012 Command Line Utilities			Maintenance	Term	Enterprise	Single	2
MICROSOFT	Microsoft SQL Server 2012 Data-Tier App Framework			Maintenance	Term	Enterprise	Single	2
MICROSOFT	Microsoft SQL Server 2012 Express LocalDB			Maintenance	Term	Enterprise	Single	2
MICROSOFT	Microsoft SQL Server 2012 Management Objects			Maintenance	Term	Enterprise	Single	2

MICROSOFT	Microsoft SQL Server 2012 Management Objects (x64)			Maintenance	Term	Enterprise	Single	2
MICROSOFT	Microsoft SQL Server 2012 Native Client			Maintenance	Term	Enterprise	Single	2
MICROSOFT	Microsoft SQL Server 2012 Transact-SQL Compiler Service			Maintenance	Term	Enterprise	Single	2
MICROSOFT	Microsoft SQL Server 2012 Transact-SQL ScriptDom			Maintenance	Term	Enterprise	Single	2
MICROSOFT	Microsoft SQL Server 2012 T-SQL Language Service			Maintenance	Term	Enterprise	Single	2
MICROSOFT	Microsoft SQL Server Browser			Maintenance	Term	Enterprise	Single	16
MICROSOFT	Microsoft SQL Server Compact	3.5	WIN	Maintenance	Term	Enterprise	Single	59
MICROSOFT	Microsoft SQL Server Compact 3.5 SP1 English			Maintenance	Term	Enterprise	Single	1
MICROSOFT	Microsoft SQL Server Compact 3.5 SP1 Query Tools English			Maintenance	Term	Enterprise	Single	1
MICROSOFT	Microsoft SQL Server Compact 3.5 SP2 ENU			Maintenance	Term	Enterprise	Single	61

MICROSOFT	Microsoft SQL Server Compact 3.5 SP2 Query Tools ENU			Maintenance	Term	Enterprise	Single	27
MICROSOFT	Microsoft SQL Server Compact 3.5 SP2 x64 ENU			Maintenance	Term	Enterprise	Single	37
MICROSOFT	Microsoft SQL Server Compact 3.5 SP2 x86 32 EN	3.5 SP2	WIN	Maintenance	Term	Enterprise	Single	136
MICROSOFT	Microsoft SQL Server Compact 3.5 SP2 x86 32 EN			Maintenance	Term	Enterprise	Single	119
MICROSOFT	Microsoft SQL Server Compact 4.0 SP1 x64 ENU			Maintenance	Term	Enterprise	Single	2
MICROSOFT	Microsoft SQL Server Compact Devices 3.5			Maintenance	Term	Enterprise	Single	1
MICROSOFT	Microsoft Sql Server Customer Experience Improvement Program 10.1			Maintenance	Term	Enterprise	Single	1
MICROSOFT	Microsoft Sql Server Customer Experience Improvement Program 10.50	10.5	WIN	Maintenance	Term	Enterprise	Single	45
MICROSOFT	Microsoft Sql Server Customer Experience Improvement Program 10.50			Maintenance	Term	Enterprise	Single	34
MICROSOFT	Microsoft SQL Server Data Tools - enu (11.1.20627.00)			Maintenance	Term	Enterprise	Single	2

MICROSOFT	Microsoft SQL Server Data Tools Build Utilities - enu (11.1.20627.00)			Maintenance	Term	Enterprise	Single	2
MICROSOFT	Microsoft SQL Server Database Publishing Wizard 1.3			Maintenance	Term	Enterprise	Single	1
MICROSOFT	Microsoft SQL Server Database Publishing Wizard 1.4	1.4	WIN	Maintenance	Term	Enterprise	Single	50
MICROSOFT	Microsoft SQL Server Database Publishing Wizard 1.4			Maintenance	Term	Enterprise	Single	42
MICROSOFT	Microsoft SQL Server Enterprise Edition All Lng Software Assurance Microsoft Volume License	n/a	WIN	Software Assurance	Term	Enterprise	Single	26
MICROSOFT	Microsoft SQL Server Management Studio Express			Maintenance	Term	Enterprise	Single	9
MICROSOFT	Microsoft SQL Server Native Client	9.0.5	WIN	Maintenance	Term	Enterprise	Single	139
MICROSOFT	Microsoft SQL Server Native Client			Maintenance	Term	Enterprise	Single	30
MICROSOFT	Microsoft SQL Server Native Client 9.00.1399.06			Maintenance	Term	Enterprise	Single	3
MICROSOFT	Microsoft SQL Server Native Client 9.00.3042.00			Mainte	Term	Enterprise	Single	14

				nance				
MICROSOFT	Microsoft SQL Server Native Client 9.00.4035.00			Maintenance	Term	Enterprise	Single	1
MICROSOFT	Microsoft SQL Server Native Client 9.00.5000.00			Maintenance	Term	Enterprise	Single	21
MICROSOFT	Microsoft SQL Server Native Client 9.00.5000.00 0 Microsoft Corporation	9.0.5	WIN	Maintenance	Term	Enterprise	Single	46
MICROSOFT	Microsoft SQL Server Setup Support Files (English)			Maintenance	Term	Enterprise	Single	25
MICROSOFT	Microsoft SQL Server Setup Support Files 9.0 EN	9.0	WIN	Maintenance	Term	Enterprise	Single	47
MICROSOFT	Microsoft SQL Server Setup Support Files 9.0 EN			Maintenance	Term	Enterprise	Single	18
MICROSOFT	Microsoft SQL Server Standard Edition All Lng Software Assurance Microsoft Volume License	n/a	WIN	Software Assurance	Term	Enterprise	Single	50
MICROSOFT	Microsoft SQL Server System CLR Types			Maintenance	Term	Enterprise	Single	29
MICROSOFT	Microsoft SQL Server System CLR Types (x64)			Maintenance	Term	Enterprise	Single	39

MICROSOFT	Microsoft SQL Server System CLR Types 10.0			Maintenance	Term	Enterprise	Single	3
MICROSOFT	Microsoft SQL Server System CLR Types 10.50			Maintenance	Term	Enterprise	Single	45
MICROSOFT	Microsoft SQL Server VSS Writer			Maintenance	Term	Enterprise	Single	53
MICROSOFT	Microsoft SQL Server VSS Writer 10.1			Maintenance	Term	Enterprise	Single	1
MICROSOFT	Microsoft SQL Server VSS Writer 10.50			Maintenance	Term	Enterprise	Single	1
MICROSOFT	Microsoft SQL Server VSS Writer 9.0	9.0	WIN	Maintenance	Term	Enterprise	Single	97
MICROSOFT	Microsoft SQL Server VSS Writer 9.0			Maintenance	Term	Enterprise	Single	12
MICROSOFT	Microsoft SQL Svr Standard Core All Lng Software Assurance Microsoft Volume License 2 Licenses Core License	n/a	WIN	Software Assurance	Term	Enterprise	Single	38
MICROSOFT	Microsoft Sync Framework Runtime 1.0 x64 64			Maintenance	Term	Enterprise	Single	15
MICROSOFT	Microsoft Sync Framework Runtime v1.0 (x64)			Maint	Term	Enterprise	Single	8

				nance				
MICROSOFT	Microsoft Sync Framework Runtime v1.0 (x86)			Maintenance	Term	Enterprise	Single	1
MICROSOFT	Microsoft Sync Framework Runtime v1.0 SP1 (x64)			Maintenance	Term	Enterprise	Single	27
MICROSOFT	Microsoft Sync Framework SDK 1.0 SP1			Maintenance	Term	Enterprise	Single	42
MICROSOFT	Microsoft Sync Framework SDK v1.0 SP1			Maintenance	Term	Enterprise	Single	27
MICROSOFT	Microsoft Sync Framework Services v1.0 SP1 (x64)			Maintenance	Term	Enterprise	Single	27
MICROSOFT	Microsoft Sync Services for ADO.NET v2.0 (x64)			Maintenance	Term	Enterprise	Single	1
MICROSOFT	Microsoft Sync Services for ADO.NET v2.0 (x86)			Maintenance	Term	Enterprise	Single	1
MICROSOFT	Microsoft Sync Services for ADO.NET v2.0 SP1 (x64)			Maintenance	Term	Enterprise	Single	27
MICROSOFT	Microsoft Sys Ctr Clt Mgmt Suite All Lng Software Assurance Microsoft Volume License 1 License Per OSE	n/a	WIN	Software Assurance	Term	Enterprise	Single	2,225

MICROSOFT	Microsoft Sys Ctr Datacenter All Lng License/Software Assurance Pack Microsoft Volume License 1 License 2 PROC	n/a	WIN	Software Assurance	Term	Enterprise	Single	65
MICROSOFT	Microsoft System Center Application Virtualization Management Server			Maintenance	Term	Enterprise	Single	3
MICROSOFT	Microsoft System Center Application Virtualization Streaming Server			Maintenance	Term	Enterprise	Single	1
MICROSOFT	Microsoft System Center Application Virtualization Streaming Server 4.5			Maintenance	Term	Enterprise	Single	1
MICROSOFT	Microsoft System Center Operations Manager 2007 SP1			Maintenance	Term	Enterprise	Single	1
MICROSOFT	Microsoft System CLR Types for SQL Server 2012			Maintenance	Term	Enterprise	Single	2
MICROSOFT	Microsoft System CLR Types for SQL Server 2012 (x64)			Maintenance	Term	Enterprise	Single	2
MICROSOFT	Microsoft System CLR Types for SQL Server 2012 x64 64			Maintenance	Term	Enterprise	Single	3
MICROSOFT	Microsoft Team Foundation Server 2010 Object Model - ENU			Maintenance	Term	Enterprise	Single	27
MICROSOFT	Microsoft Team Foundation Server Object Model 2010 EN	2010	WIN	Maintenance	Term	Enterprise	Single	50

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MICROS OFT	Microsoft Team Foundation Server Object Model 2010 EN			Mai nte nan ce	Term	Enterprise	Single	42
MICROS OFT	Microsoft Terminal Server Licensing 2003 x86 32			Mai nte nan ce	Term	Enterprise	Single	1
MICROS OFT	Microsoft Text-to-Speech Engine 4.0 x86 32 EN			Mai nte nan ce	Term	Enterprise	Single	2
MICROS OFT	Microsoft Tools and Libraries for Intel(R) Visual Fortran			Mai nte nan ce	Term	Enterprise	Single	1
MICROS OFT	Microsoft User Profiles			Mai nte nan ce	Term	Enterprise	Single	4
MICROS OFT	Microsoft Virtual Machine Additions 13.813			Mai nte nan ce	Term	Enterprise	Single	1
MICROS OFT	Microsoft Virtual Server 2005 R2			Mai nte nan ce	Term	Enterprise	Single	2
MICROS OFT	Microsoft Virtual Server 2005 R2 SP1			Mai nte nan ce	Term	Enterprise	Single	1
MICROS OFT	Microsoft Virtual Server 2005 R2 SP1 Enterprise Edition x86 32			Mai nte nan ce	Term	Enterprise	Single	1
MICROS OFT	Microsoft Visio 2010 Service Pack 1 (SP1)			Mai nte	Term	Enterprise	Single	1

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MICROS OFT	Microsoft Visio Premium 2010	2010 Premium	WIN	Mai nte nan ce	Term	Enterprise	Single	297
MICROS OFT	Microsoft Visio Premium 2010			Mai nte nan ce	Term	Enterprise	Single	344
MICROS OFT	Microsoft Visio Professional 2010			Mai nte nan ce	Term	Enterprise	Single	3
MICROS OFT	Microsoft Visio Services English Language Pack			Mai nte nan ce	Term	Enterprise	Single	4
MICROS OFT	Microsoft Visio Services Web Front End Components			Mai nte nan ce	Term	Enterprise	Single	4
MICROS OFT	Microsoft Visio Viewer 2010	2010	WIN	Mai nte nan ce	Term	Enterprise	Single	43
MICROS OFT	Microsoft Visio Viewer 2010			Mai nte nan ce	Term	Enterprise	Single	5
MICROS OFT	Microsoft Visual Basic 4.0 Professional Edition x86 32			Mai nte nan ce	Term	Enterprise	Single	1
MICROS OFT	Microsoft Visual Basic 6 SP6 x86 32			Mai nte nan ce	Term	Enterprise	Single	4
MICROS OFT	Microsoft Visual Basic 6.0 Enterprise Edition			Mai nte	Term	Enterprise	Single	2

				nan ce				
MICROS OFT	Microsoft Visual Basic 6.0 Enterprise Edition x86 32 EN			Mai nte nan ce	Term	Enterprise	Single	4
MICROS OFT	Microsoft Visual Basic for Applications (R) Core 6.5 x86 32 EN			Mai nte nan ce	Term	Enterprise	Single	118
MICROS OFT	Microsoft Visual Basic for Applications Core 6.5 x86 32 EN (R)	6.5	WIN	Mai nte nan ce	Term	Enterprise	Single	195
MICROS OFT	Microsoft Visual Basic for Applications SDK Versio 6.5	SDK 6.5	WIN	Mai nte nan ce	Term	Enterprise	Single	62
MICROS OFT	Microsoft Visual Basic for Applications SDK Version 6.5			Mai nte nan ce	Term	Enterprise	Single	71
MICROS OFT	Microsoft Visual C++ 2005 8.0 9193 Redistributable	2005 8.0	WIN	Mai nte nan ce	Term	Enterprise	Single	1246
MICROS OFT	Microsoft Visual C++ 2005 8.0.59193 Redistributable			Mai nte nan ce	Term	Enterprise	Single	758
MICROS OFT	Microsoft Visual C++ 2005 ATL Update kb973923 - x64 8.0.50727.4053			Mai nte nan ce	Term	Enterprise	Single	34
MICROS OFT	Microsoft Visual C++ 2005 ATL Update kb973923 - x86 8.0.50727.4053			Mai nte nan ce	Term	Enterprise	Single	67
MICROS OFT	Microsoft Visual C++ 2005 Redistributable			Mai nte	Term	Enterprise	Single	1079

				nan ce				
MICROS OFT	Microsoft Visual C++ 2005 Redistributable (x64)			Mai nte nan ce	Term	Enterprise	Single	1053
MICROS OFT	Microsoft Visual C++ 2005 Redistributable (x64) - KB2467175			Mai nte nan ce	Term	Enterprise	Single	40
MICROS OFT	Microsoft Visual C++ 2005 Redistributable x64 64			Mai nte nan ce	Term	Enterprise	Single	28
MICROS OFT	Microsoft Visual C++ 2005 Service Pack 1 Redistributable Package - KB973544			Mai nte nan ce	Term	Enterprise	Single	759
MICROS OFT	Microsoft Visual C++ 2005 SP1 Redistributable	2005 SP1	WIN	Mai nte nan ce	Term	Enterprise	Single	3004
MICROS OFT	Microsoft Visual C++ 2005 SP1 Redistributable			Mai nte nan ce	Term	Enterprise	Single	1929
MICROS OFT	Microsoft Visual C++ 2005 SP1 Redistributable Package - KB2467175 x64			Mai nte nan ce	Term	Enterprise	Single	46
MICROS OFT	Microsoft Visual C++ 2005 SP1 Redistributable Package - KB2538242 x64			Mai nte nan ce	Term	Enterprise	Single	1927
MICROS OFT	Microsoft Visual C++ 2005 SP1 Redistributable Package - KB2538242 x86			Mai nte nan ce	Term	Enterprise	Single	1931
MICROS OFT	Microsoft Visual C++ 2005 SP1 Redistributable x64 64	2005 SP1	WIN	Mai nte	Term	Enterprise	Single	2932

				nan ce				
MICROS OFT	Microsoft Visual C++ 2005 SP1 Redistributable x64 64			Mai nte nan ce	Term	Enterprise	Single	1929
MICROS OFT	Microsoft Visual C++ 2008 Redistributable - x64 9.0.30729.17			Mai nte nan ce	Term	Enterprise	Single	34
MICROS OFT	Microsoft Visual C++ 2008 Redistributable - x64 9.0.30729.4148			Mai nte nan ce	Term	Enterprise	Single	25
MICROS OFT	Microsoft Visual C++ 2008 Redistributable - x64 9.0.30729.6161			Mai nte nan ce	Term	Enterprise	Single	100
MICROS OFT	Microsoft Visual C++ 2008 Redistributable - x86 9.0.30729			Mai nte nan ce	Term	Enterprise	Single	28
MICROS OFT	Microsoft Visual C++ 2008 Redistributable - x86 9.0.30729.17			Mai nte nan ce	Term	Enterprise	Single	14
MICROS OFT	Microsoft Visual C++ 2008 Redistributable - x86 9.0.30729.4148			Mai nte nan ce	Term	Enterprise	Single	187
MICROS OFT	Microsoft Visual C++ 2008 Redistributable - x86 9.0.30729.4974			Mai nte nan ce	Term	Enterprise	Single	26
MICROS OFT	Microsoft Visual C++ 2008 Redistributable - x86 9.0.30729.6161			Mai nte nan ce	Term	Enterprise	Single	276
MICROS OFT	Microsoft Visual C++ 2008 Redistributable x86 32			Mai nte	Term	Enterprise	Single	11

				nan ce				
MICROS OFT	Microsoft Visual C++ 2008 SP1 Redistributable Package - KB2538243 x64			Mai nte nan ce	Term	Enterprise	Single	70
MICROS OFT	Microsoft Visual C++ 2008 SP1 Redistributable Package - KB2538243 x86			Mai nte nan ce	Term	Enterprise	Single	354
MICROS OFT	Microsoft Visual C++ 2008 SP1 Redistributable x64 64			Mai nte nan ce	Term	Enterprise	Single	91
MICROS OFT	Microsoft Visual C++ 2008 SP1 Redistributable x86 32			Mai nte nan ce	Term	Enterprise	Single	360
MICROS OFT	Microsoft Visual C++ 2010 x64 Designtime - 10.0.30319			Mai nte nan ce	Term	Enterprise	Single	27
MICROS OFT	Microsoft Visual C++ 2010 x64 Redistributable - 10.0.40219			Mai nte nan ce	Term	Enterprise	Single	111
MICROS OFT	Microsoft Visual C++ 2010 x64 Runtime - 10.0.40219			Mai nte nan ce	Term	Enterprise	Single	26
MICROS OFT	Microsoft Visual C++ 2010 x86 Redistributable - 10.0.30319			Mai nte nan ce	Term	Enterprise	Single	18
MICROS OFT	Microsoft Visual C++ 2010 x86 Redistributable - 10.0.40219			Mai nte nan ce	Term	Enterprise	Single	106
MICROS OFT	Microsoft Visual C++ 2010 x86 Runtime - 10.0.40219			Mai nte	Term	Enterprise	Single	26

				nan ce				
MICROS OFT	Microsoft Visual C++ 2010 Redistributable x64 64			Mai nte nan ce	Term	Enterprise	Single	23
MICROS OFT	Microsoft Visual C++ 2010 Redistributable x86 32			Mai nte nan ce	Term	Enterprise	Single	39
MICROS OFT	Microsoft Visual C++ 2010 RTM Redistributable - KB2467173 x64			Mai nte nan ce	Term	Enterprise	Single	23
MICROS OFT	Microsoft Visual C++ 2010 RTM Redistributable - KB2467173 x86			Mai nte nan ce	Term	Enterprise	Single	39
MICROS OFT	Microsoft Visual C++ 2010 SP1 Redistributable - KB2565063 x64			Mai nte nan ce	Term	Enterprise	Single	298
MICROS OFT	Microsoft Visual C++ 2010 SP1 Redistributable - KB2565063 x86			Mai nte nan ce	Term	Enterprise	Single	294
MICROS OFT	Microsoft Visual C++ 2010 SP1 Redistributable x64 64			Mai nte nan ce	Term	Enterprise	Single	301
MICROS OFT	Microsoft Visual C++ 2010 SP1 Redistributable x86 32			Mai nte nan ce	Term	Enterprise	Single	296
MICROS OFT	Microsoft Visual C++ 2010 SP1 Runtime x64 64			Mai nte nan ce	Term	Enterprise	Single	41
MICROS OFT	Microsoft Visual C++ 2010 SP1 Runtime x86 32			Mai nte	Term	Enterprise	Single	41

				nan ce				
MICROS OFT	Microsoft Visual C++ Compilers 2010 Standard Edition x86 32 EN			Mai nte nan ce	Term	Enterprise	Single	40
MICROS OFT	Microsoft Visual F# 2.0 Runtime			Mai nte nan ce	Term	Enterprise	Single	27
MICROS OFT	Microsoft Visual F# Runtime 2.0			Mai nte nan ce	Term	Enterprise	Single	41
MICROS OFT	Microsoft Visual J# 2.0 Redistributable Package	2.0	WIN	Mai nte nan ce	Term	Enterprise	Single	60
MICROS OFT	Microsoft Visual J# 2.0 Redistributable Package			Mai nte nan ce	Term	Enterprise	Single	27
MICROS OFT	Microsoft Visual J# 2.0 Redistributable Package - SE (x64)			Mai nte nan ce	Term	Enterprise	Single	29
MICROS OFT	Microsoft Visual J# 2.0 Redistributable Package - SE x64 64	2.0	WIN	Mai nte nan ce	Term	Enterprise	Single	43
MICROS OFT	Microsoft Visual J# 2.0 Redistributable Package - SE x64 64			Mai nte nan ce	Term	Enterprise	Single	33
MICROS OFT	Microsoft Visual Studio 2005 Premier Partner Edition - ENU			Mai nte nan ce	Term	Enterprise	Single	2
MICROS OFT	Microsoft Visual Studio 2005 Premier Partner Edition x86 32 EN			Mai nte	Term	Enterprise	Single	4

				nan ce				
MICROS OFT	Microsoft Visual Studio 2008 Shell (integrated mode) - ENU			Mai nte nan ce	Term	Enterprise	Single	13
MICROS OFT	Microsoft Visual Studio 2008 Shell (integrated mode) EN			Mai nte nan ce	Term	Enterprise	Single	28
MICROS OFT	Microsoft Visual Studio 2008 Shell EN (integrated mode)	2008	WIN	Mai nte nan ce	Term	Enterprise	Single	32
MICROS OFT	Microsoft Visual Studio 2010 ADO.NET Entity Framework Tools	2010	WIN	Mai nte nan ce	Term	Enterprise	Single	47
MICROS OFT	Microsoft Visual Studio 2010 ADO.NET Entity Framework Tools			Mai nte nan ce	Term	Enterprise	Single	39
MICROS OFT	Microsoft Visual Studio 2010 Professional - ENU			Mai nte nan ce	Term	Enterprise	Single	25
MICROS OFT	Microsoft Visual Studio 2010 Professional Edition SP1 EN	2010 Pro	WIN	Mai nte nan ce	Term	Enterprise	Single	47
MICROS OFT	Microsoft Visual Studio 2010 Professional Edition SP1 EN			Mai nte nan ce	Term	Enterprise	Single	39
MICROS OFT	Microsoft Visual Studio 2010 Service Pack 1			Mai nte nan ce	Term	Enterprise	Single	26
MICROS OFT	Microsoft Visual Studio 2010 SharePoint Developer Tools	2010	WIN	Mai nte	Term	Enterprise	Single	46

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MICROS OFT	Microsoft Visual Studio 2010 SharePoint Developer Tools			Mai nte nan ce	Term	Enterprise	Single	37
MICROS OFT	Microsoft Visual Studio 2010 SharePoint Developer Tools SP1	2010	WIN	Mai nte nan ce	Term	Enterprise	Single	45
MICROS OFT	Microsoft Visual Studio 2010 SharePoint Developer Tools SP1			Mai nte nan ce	Term	Enterprise	Single	37
MICROS OFT	Microsoft Visual Studio 2010 SP1 Prerequisites	2010	WIN	Mai nte nan ce	Term	Enterprise	Single	48
MICROS OFT	Microsoft Visual Studio 2010 SP1 Prerequisites			Mai nte nan ce	Term	Enterprise	Single	41
MICROS OFT	Microsoft Visual Studio 2010 Tools for Office Runtime (x64)	2010	WIN	Mai nte nan ce	Term	Enterprise	Single	29
MICROS OFT	Microsoft Visual Studio 2010 Tools for Office Runtime (x64)			Mai nte nan ce	Term	Enterprise	Single	30
MICROS OFT	Microsoft Visual Studio Macro Tools			Mai nte nan ce	Term	Enterprise	Single	26
MICROS OFT	Microsoft Visual Studio Macro Tools 9.0	9.0	WIN	Mai nte nan ce	Term	Enterprise	Single	48
MICROS OFT	Microsoft Visual Studio Macro Tools 9.0			Mai nte	Term	Enterprise	Single	40

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MICROSOFT	Microsoft Visual Studio Team Fndation Svr CAL All Lng Software Assurance Microsoft Volume License 1 License Device CAL Device CAL	n/a	WIN	Client Access license (CAL)	Term	Enterprise	Single	63
MICROSOFT	Microsoft Visual Studio Tools for Applications 2.0 - ENU			Maintenance	Term	Enterprise	Single	28
MICROSOFT	Microsoft Visual Studio Tools for Applications 2.0 EN	2.0	WIN	Maintenance	Term	Enterprise	Single	88
MICROSOFT	Microsoft Visual Studio Tools for Applications 2.0 EN			Maintenance	Term	Enterprise	Single	75
MICROSOFT	Microsoft Visual Studio Tools for the Office system 3.0 SP1 Runtime			Maintenance	Term	Enterprise	Single	22
MICROSOFT	Microsoft Visual Studio Ultimate w/MSDN All Lng Software Assurance Microsoft Volume License 1 License	n/a	WIN	Software Assurance	Term	Enterprise	Single	41
MICROSOFT	Microsoft Visual Studio Web Authoring Component			Maintenance	Term	Enterprise	Single	7
MICROSOFT	Microsoft Visual Studio Web Authoring Component 12.0			Maintenan	Term	Enterprise	Single	8

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MICROSOFT	Microsoft Web Analytics English Language Pack			Maintenance	Term	Enterprise	Single	4
MICROSOFT	Microsoft Web Analytics Web Front End Components			Maintenance	Term	Enterprise	Single	4
MICROSOFT	Microsoft Web Deploy 3.0			Maintenance	Term	Enterprise	Single	8
MICROSOFT	Microsoft Web Deployment Tool 1.1	1.1	WIN	Maintenance	Term	Enterprise	Single	50
MICROSOFT	Microsoft Web Deployment Tool 1.1			Maintenance	Term	Enterprise	Single	42
MICROSOFT	Microsoft Web Platform Installer 4.0			Maintenance	Term	Enterprise	Single	3
MICROSOFT	Microsoft Web Publishing Wizard 1.53			Maintenance	Term	Enterprise	Single	8
MICROSOFT	Microsoft Web Services Enhancements (WSE) 3.0 Runtime			Maintenance	Term	Enterprise	Single	2
MICROSOFT	Microsoft WebFldrs XP 9.50.7523 Microsoft Corporation	9.5	WIN	Maintenance	Term	Enterprise	Single	116
MICROSOFT	Microsoft Win Rmt Dsktp Svcs CAL All Lng Software Assurance Microsoft Volume	n/a	WIN	Client	Term	Enterprise	Single	1,214

	License 1 License Device CAL Device CAL			Access license (CAL)				
MICROSOFT	Microsoft Windows - Active Directory Domain Services (AD DS) x64 64			Maintenance	Term	Enterprise	Single	13
MICROSOFT	Microsoft Windows - Active Directory Lightweight Directory Service (AD LDS) x64 64			Maintenance	Term	Enterprise	Single	3
MICROSOFT	Microsoft Windows 7 Enterprise SP1 x64 64	Win7 SP1	WIN	Maintenance	Term	Enterprise	Single	2719
MICROSOFT	Microsoft Windows 7 Enterprise SP1 x64 64			Maintenance	Term	Enterprise	Single	1760
MICROSOFT	Microsoft Windows Desktop Search 4.0 x64 64			Maintenance	Term	Enterprise	Single	1
MICROSOFT	Microsoft Windows GroupPolicy Server Tools 6.0.6001.18000 - Windows 2008			Maintenance	Term	Enterprise	Single	6
MICROSOFT	Microsoft Windows GroupPolicy Server Tools 6.1.7601 7514 - Windows 2008 R2	6.1.7601	WIN	Maintenance	Term	Enterprise	Single	80
MICROSOFT	Microsoft Windows GroupPolicy Server Tools 6.1.7601.17514 - Windows 2008 R2			Maintenance	Term	Enterprise	Single	110

MICROSOFT	Microsoft Windows GroupPolicy Server Tools 6.2.9200.16384 - Windows 2012			Maintenance	Term	Enterprise	Single	1
MICROSOFT	Microsoft Windows Imaging Component 3.0	3.0	WIN	Maintenance	Term	Enterprise	Single	192
MICROSOFT	Microsoft Windows Imaging Component 3.0			Maintenance	Term	Enterprise	Single	23
MICROSOFT	Microsoft Windows Installer 3.1.4001.5512 2 x86 32	3.1.4001	WIN	Maintenance	Term	Enterprise	Single	118
MICROSOFT	Microsoft Windows Installer 3.1.4001.5512 x86 32			Maintenance	Term	Enterprise	Single	1
MICROSOFT	Microsoft Windows Installer 4.5.6001.22159 x64 64			Maintenance	Term	Enterprise	Single	4
MICROSOFT	Microsoft Windows Installer 4.5.6001.22159 x86 32			Maintenance	Term	Enterprise	Single	3
MICROSOFT	Microsoft Windows Installer Clean Up 3.0			Maintenance	Term	Enterprise	Single	6
MICROSOFT	Microsoft Windows Live ID Sign-in Assistant 6.500			Maintenance	Term	Enterprise	Single	4
MICROSOFT	Microsoft Windows Media Center Win 7 SP1 x64 64			Maintenance	Term	Enterprise	Single	1682

MICROSOFT	Microsoft Windows Media Connect2 11.0			Maintenance	Term	Enterprise	Single	5
MICROSOFT	Microsoft Windows Mobile 5.0 SDK R2 for Pocket PC			Maintenance	Term	Enterprise	Single	1
MICROSOFT	Microsoft Windows Movie Maker 2.1			Maintenance	Term	Enterprise	Single	106
MICROSOFT	Microsoft Windows Performance Toolkit			Maintenance	Term	Enterprise	Single	1
MICROSOFT	Microsoft Windows PowerShell 2.0	2.0	WIN	Maintenance	Term	Enterprise	Single	2951
MICROSOFT	Microsoft Windows PowerShell 2.0			Maintenance	Term	Enterprise	Single	1953
MICROSOFT	Microsoft Windows Professional All Lng Software Assurance Microsoft Volume License 1 License Platform	n/a	WIN	Software Assurance	Term	Enterprise	Single	2,282
MICROSOFT	Microsoft Windows Remote Server Administration Tools 6.1.7601.17514 - Windows 7			Maintenance	Term	Enterprise	Single	36
MICROSOFT	Microsoft Windows Resource Kit Tools - FRSDiag.exe 1.7			Maintenance	Term	Enterprise	Single	1
MICROSOFT	Microsoft Windows Resource Kit Tools - SubInAcl.exe 5.2			Mainte	Term	Enterprise	Single	2

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MICROS OFT	Microsoft Windows Resource Kit Tools 5.2	5.2	WIN	Mai nte nan ce	Term	Enterprise	Single	70
MICROS OFT	Microsoft Windows Resource Kit Tools 5.2			Mai nte nan ce	Term	Enterprise	Single	21
MICROS OFT	Microsoft Windows Scripting Host 5.7			Mai nte nan ce	Term	Enterprise	Single	1
MICROS OFT	Microsoft Windows Scripting Host 5.8			Mai nte nan ce	Term	Enterprise	Single	1978
MICROS OFT	Microsoft Windows SDK for Visual Studio 2008 Headers and Libraries			Mai nte nan ce	Term	Enterprise	Single	1
MICROS OFT	Microsoft Windows SDK for Windows Server 2008			Mai nte nan ce	Term	Enterprise	Single	1
MICROS OFT	Microsoft Windows Server 2003 - Active Directory Service	2003	WIN	Mai nte nan ce	Term	Enterprise	Single	47
MICROS OFT	Microsoft Windows Server 2003 - Active Directory Service			Mai nte nan ce	Term	Enterprise	Single	6
MICROS OFT	Microsoft Windows Server 2003 - DNS			Mai nte nan ce	Term	Enterprise	Single	6
MICROS OFT	Microsoft Windows Server 2003 - DNS x64			Mai nte	Term	Enterprise	Single	1

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MICROS OFT	Microsoft Windows Server 2003 Enterprise Edition SP2 x86 32 EN	2003	WIN	Mai nte nan ce	Term	Enterprise	Single	50
MICROS OFT	Microsoft Windows Server 2003 Enterprise Edition SP2 x86 32 EN			Mai nte nan ce	Term	Enterprise	Single	11
MICROS OFT	Microsoft Windows Server 2003 R2 Feature Pack			Mai nte nan ce	Term	Enterprise	Single	23
MICROS OFT	Microsoft Windows Server 2003 SP2 Enterprise Edition x64 64 EN			Mai nte nan ce	Term	Enterprise	Single	6
MICROS OFT	Microsoft Windows Server 2003 Standard Edition SP2 x86 32 EN			Mai nte nan ce	Term	Enterprise	Single	8
MICROS OFT	Microsoft Windows Server 2008 - Active Directory Service x64	2008	WIN	Mai nte nan ce	Term	Enterprise	Single	34
MICROS OFT	Microsoft Windows Server 2008 - Active Directory x64			Mai nte nan ce	Term	Enterprise	Single	2
MICROS OFT	Microsoft Windows Server 2008 - Desktop Experience x64 64			Mai nte nan ce	Term	Enterprise	Single	1
MICROS OFT	Microsoft Windows Server 2008 Enterprise Edition SP2 x64 64 EN			Mai nte nan ce	Term	Enterprise	Single	10
MICROS OFT	Microsoft Windows Server 2008 R2 - Active Directory Service x64	2008	WIN	Mai nte	Term	Enterprise	Single	108

				nan ce				
MICROS OFT	Microsoft Windows Server 2008 R2 - Active Directory x64			Mai nte nan ce	Term	Enterprise	Single	21
MICROS OFT	Microsoft Windows Server 2008 R2 - Desktop Experience x64 64	2008	WIN	Mai nte nan ce	Term	Enterprise	Single	100
MICROS OFT	Microsoft Windows Server 2008 R2 - Desktop Experience x64 64			Mai nte nan ce	Term	Enterprise	Single	92
MICROS OFT	Microsoft Windows Server 2008 R2 - DNS x64 64			Mai nte nan ce	Term	Enterprise	Single	14
MICROS OFT	Microsoft Windows Server 2008 R2 - Failover Clustering x64 64			Mai nte nan ce	Term	Enterprise	Single	1
MICROS OFT	Microsoft Windows Server 2008 R2 - Ink and Handwriting Service x64 64	2008	WIN	Mai nte nan ce	Term	Enterprise	Single	101
MICROS OFT	Microsoft Windows Server 2008 R2 - Ink and Handwriting Service x64 64			Mai nte nan ce	Term	Enterprise	Single	93
MICROS OFT	Microsoft Windows Server 2008 R2 - Remote Desktop Web Access x64 64			Mai nte nan ce	Term	Enterprise	Single	3
MICROS OFT	Microsoft Windows Server 2008 R2 - SMTP Server x64 64			Mai nte nan ce	Term	Enterprise	Single	1
MICROS OFT	Microsoft Windows Server 2008 R2 Enterprise SP1 x64 64	2008	WIN	Mai nte	Term	Enterprise	Single	57

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MICROS OFT	Microsoft Windows Server 2008 R2 Enterprise SP1 x64 64			Mai nte nan ce	Term	Enterprise	Single	45
MICROS OFT	Microsoft Windows Server 2008 R2 Enterprise x64 64			Mai nte nan ce	Term	Enterprise	Single	6
MICROS OFT	Microsoft Windows Server 2008 R2 Standard SP1 x64 64	2008	WIN	Mai nte nan ce	Term	Enterprise	Single	114
MICROS OFT	Microsoft Windows Server 2008 R2 Standard SP1 x64 64			Mai nte nan ce	Term	Enterprise	Single	105
MICROS OFT	Microsoft Windows Server 2008 R2 Standard x64 64			Mai nte nan ce	Term	Enterprise	Single	2
MICROS OFT	Microsoft Windows Server 2008 Standard Edition SP2 x64 64 EN			Mai nte nan ce	Term	Enterprise	Single	5
MICROS OFT	Microsoft Windows Server 2008 Standard Edition without Hyper-V SP2 x64 64 EN			Mai nte nan ce	Term	Enterprise	Single	17
MICROS OFT	Microsoft Windows Server 2012 - Active Directory x64			Mai nte nan ce	Term	Enterprise	Single	1
MICROS OFT	Microsoft Windows Server 2012 - Desktop Experience x64 64			Mai nte nan ce	Term	Enterprise	Single	1
MICROS OFT	Microsoft Windows Server 2012 Standard x64 64			Mai nte	Term	Enterprise	Single	1

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MICROSOFT	Microsoft Windows Server Datacenter All Lng Software Assurance Microsoft Volume License 1 License 2 PROC	n/a	WIN	Software Assurance	Term	Enterprise	[Other]	65
MICROSOFT	Microsoft Windows Server Standard All Lng Software Assurance Microsoft Volume License 1 License 2 PROC	n/a	WIN	Software Assurance	Term	Enterprise	[Other]	100
MICROSOFT	Microsoft Windows Server Update Services 3.0 SP2			Maintenance	Term	Enterprise	Single	4
MICROSOFT	Microsoft Windows Server Update Services 3.0 SP2 Console			Maintenance	Term	Enterprise	Single	1
MICROSOFT	Microsoft Windows System Image Manager 6.0			Maintenance	Term	Enterprise	Single	1
MICROSOFT	Microsoft Windows XP Professional SP3 x86 32 EN	XP SP3	WIN	Maintenance	Term	Enterprise	Single	117
MICROSOFT	Microsoft Windows XP Professional SP3 x86 32 EN			Maintenance	Term	Enterprise	Single	1
MICROSOFT	Microsoft Word Server			Maintenance	Term	Enterprise	Single	4
MICROSOFT	Microsoft Word Server English Language Pack			Maint	Term	Enterprise	Single	4

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MICROS OFT	Microsoft XML Notepad 2007			Mai nte nan ce	Term	Enterprise	Single	3
MICROS OFT	Microsoft XML Paper Specification Shared Components Pack 1.0	1.0	WIN	Mai nte nan ce	Term	Enterprise	Single	152
MICROS OFT	Microsoft XML Paper Specification Shared Components Pack 1.0			Mai nte nan ce	Term	Enterprise	Single	15
MICROS OFT	Microsoft XML Parser 8.40.9419.2			Mai nte nan ce	Term	Enterprise	Single	1
MICROS OFT	Microsoft XML Parser 8.50.2162.6			Mai nte nan ce	Term	Enterprise	Single	1
MICROS OFT	Microsoft® Project Server 2010			Mai nte nan ce	Term	Enterprise	Single	1
	MiKTeX 2.9			Mai nte nan ce	Term	Enterprise	Single	1
	Mozilla Firefox 10.0 (x86 en-US)			Mai nte nan ce	Term	Enterprise	Single	1
	Mozilla Firefox 12.0 (x86 en-US)			Mai nte nan ce	Term	Enterprise	Single	5
	Mozilla Firefox 14.0.1			Mai nte	Term	Enterprise	Single	1

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	Mozilla Firefox 17.0.1			Mai nte nan ce	Term	Enterprise	Single	1
	Mozilla Firefox 18.0			Mai nte nan ce	Term	Enterprise	Single	1
	Mozilla Firefox 20.0.1			Mai nte nan ce	Term	Enterprise	Single	2
	Mozilla Firefox 22.0			Mai nte nan ce	Term	Enterprise	Single	1
	Mozilla Firefox 22.0 (x86 en-US)			Mai nte nan ce	Term	Enterprise	Single	1
	Mozilla Firefox 23.0.1			Mai nte nan ce	Term	Enterprise	Single	1
	Mozilla Firefox 25.0			Mai nte nan ce	Term	Enterprise	Single	1
	Mozilla Firefox 25.0.1 (x86 en-US)			Mai nte nan ce	Term	Enterprise	Single	1
	Mozilla Firefox 26.0	26.0	WIN	Mai nte nan ce	Term	Enterprise	Single	38
	Mozilla Firefox 27.0.1			Mai nte	Term	Enterprise	Single	1

				nan ce				
	Mozilla Firefox 28.0	28.0	WIN	Mai nte nan ce	Term	Enterprise	Single	39
	Mozilla Firefox 28.0			Mai nte nan ce	Term	Enterprise	Single	7
	Mozilla Firefox 29.0	29.0	WIN	Mai nte nan ce	Term	Enterprise	Single	36
	Mozilla Firefox 29.0			Mai nte nan ce	Term	Enterprise	Single	1
	Mozilla Firefox 30.0	30.0	WIN	Mai nte nan ce	Term	Enterprise	Single	38
	Mozilla Firefox 30.0			Mai nte nan ce	Term	Enterprise	Single	1
	Mozilla Firefox 31.0			Mai nte nan ce	Term	Enterprise	Single	40
	Mozilla Firefox 31.0 (x86 en-US)			Mai nte nan ce	Term	Enterprise	Single	1
	Mozilla Firefox 32.0			Mai nte nan ce	Term	Enterprise	Single	7
	Mozilla Firefox 32.0 (x86 en-US)			Mai nte	Term	Enterprise	Single	4

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	Mozilla Firefox 7.0.1 (x86 en-US)			Maintenance	Term	Enterprise	Single	1
	Mozilla Firefox 9.0.1 (x86 en-US)			Maintenance	Term	Enterprise	Single	1
	Mozilla Maintenance Service			Maintenance	Term	Enterprise	Single	10
	MSChart_KB2500170			Maintenance	Term	Enterprise	Single	10
	MSXML 4.0 SP2 (KB925672)			Maintenance	Term	Enterprise	Single	1
	MSXML 4.0 SP2 (KB927978)			Maintenance	Term	Enterprise	Single	9
	MSXML 4.0 SP2 (KB936181)			Maintenance	Term	Enterprise	Single	18
	MSXML 4.0 SP2 (KB954430)			Maintenance	Term	Enterprise	Single	88
	MSXML 4.0 SP2 (KB973688)			Maintenance	Term	Enterprise	Single	69
	MSXML 4.0 SP2 Parser and SDK			Mainte	Term	Enterprise	Single	6

				nance				
	MSXML 4.0 SP3 Parser			Maintenance	Term	Enterprise	Single	2
	MSXML 4.0 SP3 Parser (KB2721691)			Maintenance	Term	Enterprise	Single	10
	MSXML 4.0 SP3 Parser (KB2758694)			Maintenance	Term	Enterprise	Single	36
	MSXML 6 Service Pack 2 (KB954459)			Maintenance	Term	Enterprise	Single	11
	MSXML 6 Service Pack 2 (KB973686)			Maintenance	Term	Enterprise	Single	28
	MSXML 6.0 Parser (KB933579)			Maintenance	Term	Enterprise	Single	1
	MULTILOG 7.03			Maintenance	Term	Enterprise	Single	4
	NeoSpeech Kate			Maintenance	Term	Enterprise	Single	2
	NeoSpeech Paul			Maintenance	Term	Enterprise	Single	2
	Nero 7 Ultra Edition	7.0	WIN	Mainte	Term	Enterprise	Single	189

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	Nero 7 Ultra Edition			Mai nte nan ce	Term	Enterprise	Single	53
	Nero DriveSpeed 3.0.6.0			Mai nte nan ce	Term	Enterprise	Single	187
	Nero DriveSpeed 3.0.6.0 0 Ahead Software	3.06	WIN	Mai nte nan ce	Term	Enterprise	Single	394
	Nessus64			Mai nte nan ce	Term	Enterprise	Single	1
	NetApp Management Console 3.1			Mai nte nan ce	Term	Enterprise	Single	1
	NetApp OnCommand Core Package			Mai nte nan ce	Term	Enterprise	Single	1
	NetApp OnCommand System Manager 2.0			Mai nte nan ce	Term	Enterprise	Single	2
	NetApp System Manager 1.1			Mai nte nan ce	Term	Enterprise	Single	1
	NetApp Windows Host Utilities			Mai nte nan ce	Term	Enterprise	Single	2
	NetApp® Virtual Storage Console 4.0 for VMware vSphere			Mai nte	Term	Enterprise	Single	2

				nance				
	NetZoom 14			Maintenance	Term	Enterprise	Single	4
	NetZoom 9			Maintenance	Term	Enterprise	Single	1
	Notepad++			Maintenance	Term	Enterprise	Single	954
	Notepad++ 6.1.2			Maintenance	Term	Enterprise	Single	1771
	NSMCCS			Maintenance	Term	Enterprise	Single	8
	NTOSpider 5.4.163			Maintenance	Term	Enterprise	Single	1
	NVIDIA Drivers			Maintenance	Term	Enterprise	Single	3
	Open Text Exceed 14			Maintenance	Term	Enterprise	Single	32
	Open Text Exceed 14 x64			Maintenance	Term	Enterprise	Single	3
	Open Text Exceed 14.0	14	WIN	Mainte	Term	Enterprise	Single	74

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	Open Text Exceed 14.0			Maintenance	Term	Enterprise	Single	58
	Open Text HostExplorer 14.0	14	WIN	Maintenance	Term	Enterprise	Single	74
	Open Text HostExplorer 14.0			Maintenance	Term	Enterprise	Single	58
	Open Text InetD 14.0			Maintenance	Term	Enterprise	Single	13
	OPNET Application Capture Agent 3.6			Maintenance	Term	Enterprise	Single	2
	OptimalTrace QACenter Integration 5.0			Maintenance	Term	Enterprise	Single	1
	Optiplex 755 Audio (Win7)			Maintenance	Term	Enterprise	Single	315
	Optiplex 755 Sound Drivers			Maintenance	Term	Enterprise	Single	314
	Optiplex 755 SoundMax Audio Drivers (Win7)			Maintenance	Term	Enterprise	Single	210
ORACLE	Oracle Advanced Security 10.2.0.3 3.0 Oracle Corporation	10.2.0.3	WIN	Mainte	Term	Enterprise	Single	45

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ORACLE	Oracle Advanced Security 11.2.0.1 1.0 Oracle Corporation	11.2.0.1	WIN	Mai nte nan ce	Term	Enterprise	Single	2761
ORACLE	Oracle Advanced Security 11.2.0.1.0			Mai nte nan ce	Term	Enterprise	Single	1754
ORACLE	Oracle Advanced Security 11.2.0.3 3.0 [Unix] Oracle Corporation	11.2.0.3	LINUX	Mai nte nan ce	Term	Enterprise	Single	66
ORACLE	Oracle Client 10.1.0.2 2.0 - Runtime Oracle Corporation	10.1.0.2	WIN	Mai nte nan ce	Term	Enterprise	Single	70
ORACLE	Oracle Client 10.1.0.2.0 - Runtime			Mai nte nan ce	Term	Enterprise	Single	47
ORACLE	Oracle Data Mining 10.2.0.3 3.0 Oracle Corporation	10.2.0.3	WIN	Mai nte nan ce	Term	Enterprise	Single	34
ORACLE	Oracle Data Mining 10.2.0.5 5.0 Oracle Corporation	10.2.0.5	WIN	Mai nte nan ce	Term	Enterprise	Single	35
ORACLE	Oracle Data Mining 11.2.0.3 3.0 [Unix] Oracle Corporation	11.2.0.3	LINUX	Mai nte nan ce	Term	Enterprise	Single	64
ORACLE	Oracle Data Provider for .NET Help 10.2	10.2	WIN	Mai nte nan ce	Term	Enterprise	Single	43
ORACLE	Oracle Data Provider for .NET Help 10.2			Mai nte	Term	Enterprise	Single	26

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ORACLE	Oracle Database 10g Express Edition			Mai nte nan ce	Term	Enterprise	Single	22
ORACLE	Oracle Database 10g Express Edition 10.2.1015			Mai nte nan ce	Term	Enterprise	Single	23
ORACLE	Oracle Database 10g Express Edition 10.2.1015 Oracle Corporation	10.2.1015	WIN	Mai nte nan ce	Term	Enterprise	Single	40
ORACLE	Oracle Database 10g Release 2 - Client 10.2.0.1 1.0 Oracle Corporation	10.2.0.1	WIN	Mai nte nan ce	Term	Enterprise	Single	51
ORACLE	Oracle Database 10g Release 2 - Client 10.2.0.1.0			Mai nte nan ce	Term	Enterprise	Single	29
ORACLE	Oracle Database 10g Release 2 10.2.0.3 3 Enterprise Edition Oracle Corporation	10.2.0.3	WIN	Mai nte nan ce	Term	Enterprise	Single	34
ORACLE	Oracle Database 11g - Enterprise Edition (11.2.0.3.0)	11.2.0.3	WIN	Mai nte nan ce	Term	Enterprise	Single	68
ORACLE	Oracle Database 11g Release 2 - Client x86 32 (11.2.0.1.0)	11.2.0.1	WIN	Mai nte nan ce	Term	Enterprise	Single	2733
ORACLE	Oracle Database 11g Release 2 (11.2.0.1.0) - Client x86 32			Mai nte nan ce	Term	Enterprise	Single	1751
ORACLE	Oracle Database 11g Release 2 (11.2.0.2) - Express Edition			Mai nte	Term	Enterprise	Single	1

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ORACLE	Oracle Database 11g(11.2.0.1.0) - Enterprise Edition			Mai nte nan ce	Term	Enterprise	Single	3
ORACLE	Oracle Database 8.1.7.4			Mai nte nan ce	Term	Enterprise	Single	2
ORACLE	Oracle Designer 10.1.2.0.2			Mai nte nan ce	Term	Enterprise	Single	1
ORACLE	Oracle Developer Suite 10g (10.1.2.0.2)			Mai nte nan ce	Term	Enterprise	Single	1
ORACLE	Oracle Diagnostics Pack 9.2.0.1.0 [Solaris]			Mai nte nan ce	Term	Enterprise	Single	1
ORACLE	Oracle Discoverer 4.1			Mai nte nan ce	Term	Enterprise	Single	1
ORACLE	Oracle Discoverer Administrator Edition 10.1.2.1.0			Mai nte nan ce	Term	Enterprise	Single	1
ORACLE	Oracle Discoverer Desktop Edition 10.1.2.1.0			Mai nte nan ce	Term	Enterprise	Single	1
ORACLE	Oracle Discoverer Desktop Edition 9.0.4			Mai nte nan ce	Term	Enterprise	Single	1
ORACLE	Oracle Enterprise Linux Server 5.8 x86 64			Mai nte	Term	Enterprise	Single	1

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ORACLE	Oracle Forms Builder 10.1.2.0.2			Mai nte nan ce	Term	Enterprise	Single	1
ORACLE	Oracle Forms Developer 6i			Mai nte nan ce	Term	Enterprise	Single	3
ORACLE	Oracle Jdeveloper Studio Edition 11.1.1.3 3.0 Oracle Corporation	11.1.1.3	WIN	Mai nte nan ce	Term	Enterprise	Single	285
ORACLE	Oracle Jdeveloper Studio Edition 11.1.1.3.0			Mai nte nan ce	Term	Enterprise	Single	197
ORACLE	Oracle JInitiator 1.3.1.21			Mai nte nan ce	Term	Enterprise	Single	1
ORACLE	Oracle Net Manager 10.1.0.2.0 [Unix]			Mai nte nan ce	Term	Enterprise	Single	4
ORACLE	Oracle Net Manager 9.2.0.1.0			Mai nte nan ce	Term	Enterprise	Single	1
ORACLE	Oracle Partitioning 10.2.0.3 3.0 Oracle Corporation	10.2.0.3	WIN	Mai nte nan ce	Term	Enterprise	Single	34
ORACLE	Oracle Partitioning 10.2.0.3.0			Mai nte nan ce	Term	Enterprise	Single	4
ORACLE	Oracle Partitioning 11.2.0.1.0			Mai nte	Term	Enterprise	Single	3

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ORACLE	Oracle Partitioning 11.2.0.3 3.0 [Unix] Oracle Corporation	11.2.0.3	LINUX	Mai nte nan ce	Term	Enterprise	Single	42
ORACLE	Oracle Partitioning 11.2.0.3.0 [Unix]			Mai nte nan ce	Term	Enterprise	Single	3
ORACLE	Oracle Real Application Cluster 10g Release 1 10.1.0.5			Mai nte nan ce	Term	Enterprise	Single	4
ORACLE	Oracle Real Application Cluster 10g Release 1 10.1.0.5 5 Oracle Corporation	10.1.0.5	WIN	Mai nte nan ce	Term	Enterprise	Single	29
ORACLE	Oracle Reports Builder 10.1.2.0.2			Mai nte nan ce	Term	Enterprise	Single	1
ORACLE	Oracle SOA Suite 10g (10.1.3.10)			Mai nte nan ce	Term	Enterprise	Single	1
ORACLE	Oracle SQL Developer 3.0	3.0	WIN	Mai nte nan ce	Term	Enterprise	Single	477
ORACLE	Oracle SQL Developer 3.0			Mai nte nan ce	Term	Enterprise	Single	327
ORACLE	Oracle9i Client 9.2.0.1 1.0 Oracle Corporation	9.2.0.1	WIN	Mai nte nan ce	Term	Enterprise	Single	276
ORACLE	Oracle9i Client 9.2.0.1.0			Mai nte	Term	Enterprise	Single	97

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	Orion Engineer's Tool Kit - v11.0	11	WIN	Maintenance	Term	Enterprise	Single	1
	Orion Fail Over Engine - v11.0	11	WIN	Maintenance	Term	Enterprise	Single	1
	Orion IP Address Manager - v11.0	11	WIN	Maintenance	Term	Enterprise	Single	1
	Orion Netflow Traffic Analyzer - v4.0	4	WIN	Maintenance	Term	Enterprise	Single	1
	Orion Performance Monitor - v11.1	11.1	WIN	Maintenance	Term	Enterprise	Single	1
Trident	OS/EM Software		z/OS	Maintenance	Term	Processor	Site	1
	PageGate v4.0			Maintenance	Term	Enterprise	Single	1
	PageGate v5.0			Maintenance	Term	Enterprise	Single	1
	Panasonic Document Scanner Device Driver 5.6			Maintenance	Term	Enterprise	Single	1
	PARSCALE 4.1			Mainte	Term	Enterprise	Single	4

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	parted			Maintenance	Term	Enterprise	Single	1
	passwd			Maintenance	Term	Enterprise	Single	1
	PASW Statistics 18			Maintenance	Term	Enterprise	Single	4
	PASW Statistics 18.0			Maintenance	Term	Enterprise	Single	2
	PASW Statistics 18.0.1			Maintenance	Term	Enterprise	Single	6
	Path Copy 1.0			Maintenance	Term	Enterprise	Single	35
	Path Copy Copy 11.0			Maintenance	Term	Enterprise	Single	11
	Path Editor			Maintenance	Term	Enterprise	Single	107
IBM	Performance Toolkit for VM S&S	5741SNS	z/VM	Maintenance	Term	Processor	Site	1
	PHP 4.3.1			Maint	Term	Enterprise	Single	14

Asset Management

				nan ce				
IBM	Pi and Special Fonts Object		z/OS	Mai nte nan ce	Term	Processor	Site	1
IBM	Pi and Special Fonts Source	5771ABC	z/OS	Mai nte nan ce	Term	Processor	Site	1
	PKWARE Policy Manager 14.00.0019			Mai nte nan ce	Term	Enterprise	Single	1
	PKZIP for Windows 12.50			Mai nte nan ce	Term	Enterprise	Single	28
	PowerChute Network Shutdown			Mai nte nan ce	Term	Enterprise	Single	3
	PowerDVD 5.5			Mai nte nan ce	Term	Enterprise	Single	2
	Presto! PageManager 7.10			Mai nte nan ce	Term	Enterprise	Single	1
IBM	PSF V4 for z/OS	5655M32	z/OS	Mai nte nan ce	Term	Processor	Site	1
	PuTTY 0.53			Mai nte nan ce	Term	Enterprise	Single	16
	PuTTY 0.53b			Mai nte	Term	Enterprise	Single	16

				nance				
	PuTTY 0.57			Maintenance	Term	Enterprise	Single	73
	PuTTY 0.60			Maintenance	Term	Enterprise	Single	23
	PuTTY 0.62			Maintenance	Term	Enterprise	Single	22
	PuTTY SSH authentication agent 0.60			Maintenance	Term	Enterprise	Single	5
	PuTTYgen 0.60			Maintenance	Term	Enterprise	Single	5
	PuTTYgen 0.62			Maintenance	Term	Enterprise	Single	5
	PVS PowerShell SDK x64			Maintenance	Term	Enterprise	Single	2
	Python 2.5 numpy-1.0.3			Maintenance	Term	Enterprise	Single	1
	Python 2.5.1			Maintenance	Term	Enterprise	Single	2
	Python 2.7.6 (64-bit)			Mainte	Term	Enterprise	Single	4

				nan ce				
	Quest ActiveRoles Management Shell for Active Directory (x64)			Mai nte nan ce	Term	Enterprise	Single	1
	Quest Installer			Mai nte nan ce	Term	Enterprise	Single	1
	Quest Knowledge Xpert 10.1			Mai nte nan ce	Term	Enterprise	Single	8
	Quest Knowledge Xpert for PLSQL 10.1			Mai nte nan ce	Term	Enterprise	Single	8
	Quest Knowledge Xpert Oracle Common 10.1			Mai nte nan ce	Term	Enterprise	Single	8
	Quest Software License Server 4.2			Mai nte nan ce	Term	Enterprise	Single	1
	Quest Software License Server 4.2.3			Mai nte nan ce	Term	Enterprise	Single	1
	Quest Software Toad Data Modeler			Mai nte nan ce	Term	Enterprise	Single	73
	Quest Software Toad Data Modeler 3.4.16			Mai nte nan ce	Term	Enterprise	Single	7
	Quest Software Toad Data Modeler 3.6			Mai nte	Term	Enterprise	Single	4

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	Quest Software Toad Data Modeler 3.6.6			Mai nte nan ce	Term	Enterprise	Single	4
	Quest Software Toad Data Modeler 4.1.5			Mai nte nan ce	Term	Enterprise	Single	93
	Quest Software Toad Data Modeler 4.1.5 Quest Software Inc.	4.1.5	WIN	Mai nte nan ce	Term	Enterprise	Single	123
	Quest Software Toad for Data Analysts 2.5.1			Mai nte nan ce	Term	Enterprise	Single	6
	Quest Software Toad for Data Analysts 3.1	3.1	WIN	Mai nte nan ce	Term	Enterprise	Single	123
	Quest Software Toad for Data Analysts 3.1			Mai nte nan ce	Term	Enterprise	Single	163
	Quest Software Toad for MySQL Freeware 6.3			Mai nte nan ce	Term	Enterprise	Single	72
	Quest Software Toad for Oracle 10.1			Mai nte nan ce	Term	Enterprise	Single	3
	Quest Software Toad for Oracle 10.6.0			Mai nte nan ce	Term	Enterprise	Single	4
	Quest Software Toad for Oracle 11.5	11.5	WIN	Mai nte	Term	Enterprise	Single	127

				nance				
	Quest Software Toad for Oracle 11.5			Maintenance	Term	Enterprise	Single	95
	Quest SQL Optimizer for Oracle			Maintenance	Term	Enterprise	Single	178
	Quest SQL Optimizer for Oracle 8.0			Maintenance	Term	Enterprise	Single	4
	Quest SQL Optimizer for Oracle 8.6	8.6	WIN	Maintenance	Term	Enterprise	Single	123
	Quest SQL Optimizer for Oracle 8.6			Maintenance	Term	Enterprise	Single	93
	Quest SQL Optimizer for Oracle Common			Maintenance	Term	Enterprise	Single	1
	Quest SQL Optimizer for Oracle Common 2.5.0			Maintenance	Term	Enterprise	Single	8
	Quest SQL Optimizer for Oracle Common 3.0.0			Maintenance	Term	Enterprise	Single	4
Jolly Giant	QWS3270 Plus x86 32			Maintenance	Term	Enterprise	Single	4
Jolly Giant	QWS3270 Secure		WIN	Maint	Term	Enterprise	Unlimited	1

				nance				
Jolly Giant	QWS3270 Secure			Maintenance	Term	Enterprise	Single	164
IBM	RACF V1 - VM only	5740XXH	z/VM	Maintenance	Term	Processor	Site	1
	RAPIDS Aware Components			Maintenance	Term	Enterprise	Single	131
	Rational License Server			Maintenance	Term	Enterprise	Single	2
	Realtek High Definition Audio Driver			Maintenance	Term	Enterprise	Single	73
	Realtek High Definition Audio Driver 6.0			Maintenance	Term	Enterprise	Single	90
	RealVNC Server			Maintenance	Term	Enterprise	Single	18
RED_HAT	Red Hat Enterprise Linux Server 5.10 x86 64	5.1	LINUX	Maintenance	Term	Enterprise	Single	300
RED_HAT	Red Hat Enterprise Linux Server 5.10 x86 64			Maintenance	Term	Enterprise	Single	1
RED_HAT	Red Hat Enterprise Linux Server 5.5 x86 64			Maintenance	Term	Enterprise	Single	1

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RED_HA T	Red Hat Enterprise Linux Server 5.8 x86 64			Mai nte nan ce	Term	Enterprise	Single	1
RED_HA T	Red Hat Enterprise Linux Server 5.9 x86 64			Mai nte nan ce	Term	Enterprise	Single	1
	Reflection for HP 14.0			Mai nte nan ce	Term	Enterprise	Single	4
	Reflection for IBM 14.0			Mai nte nan ce	Term	Enterprise	Single	4
	Reflection for UNIX and OpenVMS 13.0			Mai nte nan ce	Term	Enterprise	Single	1
	Reflection FTP Client 13.0			Mai nte nan ce	Term	Enterprise	Single	1
	Reflection FTP Client 14.0	14	WIN	Mai nte nan ce	Term	Enterprise	Single	795
	Reflection FTP Client 14.0			Mai nte nan ce	Term	Enterprise	Single	623
	Reflection FTP Client 14.1			Mai nte nan ce	Term	Enterprise	Single	13
	Release of CA Wily Introscope - Introscope Workstation			Mai nte	Term	Enterprise	Single	7

				nance				
	Release of SAS 9.3			Maintenance	Term	Enterprise	Single	8
	Release of SQL Server (Generic Definition)			Maintenance	Term	Enterprise	Single	102
	Release of TeamQuest Manager (Generic)			Maintenance	Term	Enterprise	Single	173
	Release of Toad For Oracle			Maintenance	Term	Enterprise	Single	86
	Resource Access Control Fac S&S	5741SNS	z/OS	Maintenance	Term	Processor	Site	1
	RightFax Product Suite			Maintenance	Term	Enterprise	Single	1
	RightFax Product Suite - Client			Maintenance	Term	Enterprise	Single	134
	SAP BusinessObjects Enterprise XI 4.0			Maintenance	Term	Enterprise	Single	1
SAS	SAS 9.3			Maintenance	Term	Enterprise	Single	53
SAS	SAS Add-ons for 25 PC users, Windows Products include: Access to PCFF	SAS-ADDON-25PCM	WIN	Maint	Term	Client Sessions	Concurrent Users	1

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SAS	SAS Add-ons for 25 PC users, Windows Products include: FSP	SAS-ADDON-25PCM	WIN	Mai nte nan ce	Term	Client Sessions	Concurre nt Users	1
SAS	SAS Add-ons for 25 PC users, Windows Products include: Graph	SAS-ADDON-25PCM	WIN	Mai nte nan ce	Term	Client Sessions	Concurre nt Users	1
SAS	SAS Add-ons for each additional PC user, Windows Products include: Access to PCFF	SAS-ADDON-26PCM	WIN	Mai nte nan ce	Term	Client Sessions	Concurre nt Users	25
SAS	SAS Add-ons for each additional PC user, Windows Products include: FSP	SAS-ADDON-26PCM	WIN	Mai nte nan ce	Term	Client Sessions	Concurre nt Users	25
SAS	SAS Add-ons for each additional PC user, Windows Products include: Graph	SAS-ADDON-26PCM	WIN	Mai nte nan ce	Term	Client Sessions	Concurre nt Users	25
SAS	SAS Analytic Add-ons for 25 PC users, Windows Products include: ETS	SAS-ANLADD-25PCM	WIN	Mai nte nan ce	Term	Client Sessions	Concurre nt Users	1
SAS	SAS Analytic Add-ons for 25 PC users, Windows Products include: IML	SAS-ANLADD-25PCM	WIN	Mai nte nan ce	Term	Client Sessions	Concurre nt Users	1
SAS	SAS Analytic Add-ons for 25 PC users, Windows Products include: STAT	SAS-ANLADD-25PCM	WIN	Mai nte nan ce	Term	Client Sessions	Concurre nt Users	1
SAS	SAS Analytic Add-ons for each additional PC User Products include: ETS	SAS-ANLADD-26PCM	WIN	Mai nte nan ce	Term	Client Sessions	Concurre nt Users	25
SAS	SAS Analytic Add-ons for each additional PC User Products include: IML	SAS-ANLADD-26PCM	WIN	Mai nte	Term	Client Sessions	Concurre nt Users	25

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SAS	SAS Analytic Add-ons for each additional PC User Products include: STAT	SAS-ANLADD-26PCM	WIN	Mai nte nan ce	Term	Client Sessions	Concurre nt Users	25
SAS	SAS Enterprise Guide 5.1			Mai nte nan ce	Term	Enterprise	Single	27
SAS	SAS/STAT for a Class J Mainframe - Product ID 381/STAT	SAS-IBM-J-12-IND	z/OS	Mai nte nan ce	Term	Processor	Site	1
SAS	SAS/STAT for a HP Windows Server w/2 Quad core processors - Product ID 523902/STAT	SAS-10356-8	WIN	Mai nte nan ce	Term	Processor	Site	1
	Sawmill 7.3.2 for IronPort			Mai nte nan ce	Term	Enterprise	Single	1
	SCAP Compliance Checker			Mai nte nan ce	Term	Enterprise	Single	2
	SCAP Compliance Checker 2.0 (remove only)			Mai nte nan ce	Term	Enterprise	Single	1
	SCAP Compliance Checker 3.0.1 (remove only)			Mai nte nan ce	Term	Enterprise	Single	1
	SCAP Compliance Checker 3.1 (remove only)			Mai nte nan ce	Term	Enterprise	Single	2
	Scientific Word 5.5			Mai nte	Term	Enterprise	Single	1

				nance				
	Scientific WorkPlace 4.1			Maintenance	Term	Enterprise	Single	2
	Screen Capture Module 1.5			Maintenance	Term	Enterprise	Single	155
IBM	SDK for z/OS	5655I56	z/OS	Maintenance	Term	Processor	Site	1
IBM	SDK for z/OS S&S	5655I48	z/OS	Maintenance	Term	Processor	Site	1
PKWare	SecureZip	SEZ08-1400-ENG-FC1	z/OS	Maintenance	Term	Processor	Site	1
PKWare	SecureZIP for Windows 12.50.0013			Maintenance	Term	Enterprise	Single	49
PKWare	SecureZIP for Windows 14.00.0023			Maintenance	Term	Enterprise	Single	962
PKWare	SecureZip, Sol Sparc	SEZ01-1200-ENG-FC1	Solaris	Maintenance	Term	Enterprise	Site	68
PKWare	SecureZip, WinSrv	SEZ19-1200-ENG-FC1	WIN	Maintenance	Term	Enterprise	Concurrent Users	576

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PKWare	SecureZip, WinSrv	SEZ00-1400-ENG-FB1	WIN	Maintenance	Term	Enterprise	Concurrent Users	2500
	Sentinel LM 7.3.0 Server			Maintenance	Term	Enterprise	Single	1
	Sentinel Protection Installer 7.2.2			Maintenance	Term	Enterprise	Single	1
	Sentinel RMS License Manager 8.2.2			Maintenance	Term	Enterprise	Single	1
	Sentinel RMS License Manager 8.3.0			Maintenance	Term	Enterprise	Single	1
	Sentinel System Driver Installer 7.5.0			Maintenance	Term	Enterprise	Single	3
	Sidewinder G2 Admin Console 3.0			Maintenance	Term	Enterprise	Single	1
	Silk Test 13.5			Maintenance	Term	Enterprise	Single	1
	Silk TrueLog Explorer 9.0			Maintenance	Term	Enterprise	Single	1
IBM	SL LINUX SUPPORT/SUBSCRIPT z	Full Shift		[Other]	Term	[Other]	Site	1
	SmartBear TestComplete 9			Maint	Term	Enterprise	Single	6

				nance				
	SmartBear TestExecute 9			Maintenance	Term	Enterprise	Single	3
	SmartDir 6.0			Maintenance	Term	Enterprise	Single	2
	SmartFilter Administration			Maintenance	Term	Enterprise	Single	1
	SmartUSB56 Voice Modem			Maintenance	Term	Enterprise	Single	1
IBM	SMP/E	5655G44	z/OS	Maintenance	Term	Processor	Site	1
	Snagit 11.0			Maintenance	Term	Enterprise	Single	2
	Snagit 12			Maintenance	Term	Enterprise	Single	1
	SnagIt 6			Maintenance	Term	Enterprise	Single	10
	SnagIt 6 x86 32			Maintenance	Term	Enterprise	Single	10
	SnagIt 6.3			Maint	Term	Enterprise	Single	1

				nance				
	SnagIt 9			Maintenance	Term	Enterprise	Single	1
	SnagIt 9.0.2			Maintenance	Term	Enterprise	Single	1
	Snagit 9.1.0			Maintenance	Term	Enterprise	Single	1
	Snagit 9.1.3			Maintenance	Term	Enterprise	Single	51
	Snare version 4.0.2 (Open Source)			Maintenance	Term	Enterprise	Single	1
	SoapUI 4.6.4 4.6.4			Maintenance	Term	Enterprise	Single	1
IBM	SoftwareXcel Enterprise Edition	00003A4C6		[Other]	Term	[Other]	Site	1
IBM	Softwarexcel Enterprise VU	00003A4C6		[Other]	Term	[Other]	Site	1
	SolarWinds IP Address Manager v1.5			Maintenance	Term	Enterprise	Single	1
	SolarWinds IP Address Tracker			Maintenance	Term	Enterprise	Single	1
	SolarWinds Job Engine v1.3			Maint	Term	Enterprise	Single	1

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	SolarWinds LANsurveyor			Mai nte nan ce	Term	Enterprise	Single	1
	SolarWinds Orion NetFlow Traffic Analyzer SLX v3.5			Mai nte nan ce	Term	Enterprise	Single	1
	Solarwinds Orion Network Atlas v1.0.5			Mai nte nan ce	Term	Enterprise	Single	1
	SolarWinds Orion Network Performance Monitor 9.5 SLX			Mai nte nan ce	Term	Enterprise	Single	1
	SolarWinds SCP Server			Mai nte nan ce	Term	Enterprise	Single	1
	SolarWinds TFTP Server			Mai nte nan ce	Term	Enterprise	Single	1
	SolarWinds TFTP Server 9.1			Mai nte nan ce	Term	Enterprise	Single	1
	SolarWinds Toolset v10			Mai nte nan ce	Term	Enterprise	Single	1
	SolarWinds Toolset v10.4			Mai nte nan ce	Term	Enterprise	Single	1
IBM	Sonoran Sans Font Object		z/OS	Mai nte	Term	Processor	Site	1

				nance				
IBM	Sonoran Sans Font Source	5771ABB	z/OS	Maintenance	Term	Processor	Site	1
IBM	Sonoran Serif Font Object		z/OS	Maintenance	Term	Processor	Site	1
IBM	Sonoran Serif Font Source	5771ABA	z/OS	Maintenance	Term	Processor	Site	1
	SPECTRUM Integration V3.5 with Unicenter NSM			Maintenance	Term	Enterprise	Single	1
	SPSS	19	WIN	Maintenance	Term	Enterprise	[Unknown]	4
	SPSS Sentinel License Manager 7.3.0.9			Maintenance	Term	Enterprise	Single	1
	SQL 2008 R2 Reporting Services SharePoint 2010 Add-in			Maintenance	Term	Enterprise	Single	9
	SQL Server 2008 R2 Analysis Services			Maintenance	Term	Enterprise	Single	1
	SQL Server 2008 R2 BI Development Studio			Maintenance	Term	Enterprise	Single	4
	SQL Server 2008 R2 Client Tools			Mainte	Term	Enterprise	Single	8

				nan ce				
	SQL Server 2008 R2 Common Files			Mai nte nan ce	Term	Enterprise	Single	12
	SQL Server 2008 R2 Database Engine Services			Mai nte nan ce	Term	Enterprise	Single	10
	SQL Server 2008 R2 Database Engine Shared			Mai nte nan ce	Term	Enterprise	Single	10
	SQL Server 2008 R2 Full text search			Mai nte nan ce	Term	Enterprise	Single	3
	SQL Server 2008 R2 Integration Services			Mai nte nan ce	Term	Enterprise	Single	7
	SQL Server 2008 R2 Management Studio			Mai nte nan ce	Term	Enterprise	Single	12
	SQL Server 2008 R2 Reporting Services			Mai nte nan ce	Term	Enterprise	Single	4
	SQL Server 2008 R2 SP1 Common Files			Mai nte nan ce	Term	Enterprise	Single	1
	SQL Server 2008 R2 SP1 Management Studio			Mai nte nan ce	Term	Enterprise	Single	1
	Sql Server Customer Experience Improvement Program			Mai nte	Term	Enterprise	Single	10

				nance				
	SQL Server System CLR Types			Maintenance	Term	Enterprise	Single	1
New Era Software, Inc	Stand Alone Environment	11-250	z/OS	Maintenance	Term	Processor	Site	1
IBM	Sterling Connect: Direct z/OS SE S&S	5655X10	z/OS	Maintenance	Term	Processor	Concurrent Users	5
	StruxureWare Central 7.0.0 (remove only)			Maintenance	Term	Enterprise	Single	3
	StruxureWare Data Center Expert 7.2.1 (remove only)			Maintenance	Term	Enterprise	Single	1
	StruxureWare Data Center Operation 7.3.6 (remove only)			Maintenance	Term	Enterprise	Single	5
Applied Technology Group, LLC	SUSE Linux Enterprise Server for IBM zSeries Priority Support for SAP		z/OS	Maintenance	Term	Processor	Site	1
	Sybase Adaptive Server Enterprise 15.0 [Solaris]			Maintenance	Term	Enterprise	Single	1
	Sybase Backup Server 15.0 [Solaris]			Maintenance	Term	Enterprise	Single	1
SYMANTEC	Symantec Backup Exec (TM) 12.5 for Windows Servers			Maint	Term	Enterprise	Single	1

				nance				
SYMANTEC	Symantec Backup Exec Exchange Retrieve			Maintenance	Term	Enterprise	Single	1
SYMANTEC	Symantec Backup Exec System Recovery			Maintenance	Term	Enterprise	Single	20
SYMANTEC	Symantec Backup Exec System Recovery 7.0			Maintenance	Term	Enterprise	Single	9
SYMANTEC	Symantec Backup Exec System Recovery 8.5			Maintenance	Term	Enterprise	Single	1
SYMANTEC	Symantec Backup Exec System Recovery Manager			Maintenance	Term	Enterprise	Single	1
SYMANTEC	Symantec Ghost Console and Standard Tools			Maintenance	Term	Enterprise	Single	1
SYMANTEC	Symantec License Inventory Agent 4.1 [Solaris]			Maintenance	Term	Enterprise	Single	1
SYMANTEC	Symantec LiveUpdate 2.0 x86 32 EN			Maintenance	Term	Enterprise	Single	2
SYMANTEC	Symantec LiveUpdate 3.2 x86 32 EN			Maintenance	Term	Enterprise	Single	7
SYMANTEC	Symantec LiveUpdate 3.3 x86 32 EN	3.3	WIN	Maintenance	Term	Enterprise	Single	50

				nance				
SYMANTEC	Symantec LiveUpdate 3.3 x86 32 EN			Maintenance	Term	Enterprise	Single	48
SYMANTEC	Symantec NetBackup			Maintenance	Term	Enterprise	Single	1
SYMANTEC	Symantec NetBackup - Java 7.0			Maintenance	Term	Enterprise	Single	4
SYMANTEC	Symantec NetBackup Client			Maintenance	Term	Enterprise	Single	19
SYMANTEC	Symantec Netbackup Client 6.0 [Unix]			Maintenance	Term	Enterprise	Single	1
SYMANTEC	Symantec Netbackup Client 7.0 [Unix]	7.0	SOLARIS	Maintenance	Term	Enterprise	Single	431
SYMANTEC	Symantec Netbackup Client 7.0 [Unix]			Maintenance	Term	Enterprise	Single	11
SYMANTEC	Symantec Netbackup Client 7.0.1 [Unix]			Maintenance	Term	Enterprise	Single	9
SYMANTEC	Symantec Netbackup Client 7.0.1 [Unix] Symantec Corporation	7.0.1	LINUX	Maintenance	Term	Enterprise	Single	400
SYMANTEC	Symantec NetBackup Java 7.0.1 (7.0 Release Update 1)			Maintenance	Term	Enterprise	Single	1

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SYMAN TEC	Symantec PGP Desktop 10.2			Mai nte nan ce	Term	Enterprise	Single	2
SYMAN TEC	Symantec Service Management Framework 1.3 [Solaris]			Mai nte nan ce	Term	Enterprise	Single	1
SYMAN TEC	Symantec System Center			Mai nte nan ce	Term	Enterprise	Single	1
SYMAN TEC	Symantec System Recovery 2011			Mai nte nan ce	Term	Enterprise	Single	6
SYMAN TEC	Symantec Veritas Cluster Manager (Java Console)			Mai nte nan ce	Term	Enterprise	Single	2
SYMAN TEC	Symantec Veritas Enterprise Administrator Central Control Grid 5.0 [Solaris]			Mai nte nan ce	Term	Enterprise	Single	1
SYMAN TEC	Symantec Veritas License Utilities 3.2 [Solaris]	3.2	SOLARIS	Mai nte nan ce	Term	Enterprise	Single	30
SYMAN TEC	Symantec Veritas License Utilities 3.2 [Solaris]			Mai nte nan ce	Term	Enterprise	Single	3
SYMAN TEC	Symantec Veritas Storage Foundation Action Agent 5.0 [Solaris]			Mai nte nan ce	Term	Enterprise	Single	1
SYMAN TEC	Symantec Veritas Storage Foundation Managed Host 5.0 [Solaris]			Mai nte	Term	Enterprise	Single	1

				nance				
SYMANTEC	Symantec Web Server 5.0 [Solaris]			Maintenance	Term	Enterprise	Single	1
	SysInternals Portmon 3.0.2			Maintenance	Term	Enterprise	Single	1
	Sysinternals Process Explorer 10.21			Maintenance	Term	Enterprise	Single	19
	System Center 2007 Hotfix Utility			Maintenance	Term	Enterprise	Single	1
	System Center Operations Manager 2007			Maintenance	Term	Enterprise	Single	5
	System Center Operations Manager 2007 Agent			Maintenance	Term	Enterprise	Single	7
	System Center Operations Manager 2007 Audit Collection Server			Maintenance	Term	Enterprise	Single	1
	System Center Operations Manager 2007 R2 Agent			Maintenance	Term	Enterprise	Single	1
	TANDBERG Management Suite			Maintenance	Term	Enterprise	Single	1
	TeamQuest Alert 10.3 PF 20101004			Maint	Term	Enterprise	Single	3

				nance				
	TeamQuest Alert 11.1 PF 20130304			Maintenance	Term	Enterprise	Single	3
	TeamQuest Alert 11.2 PF 20140303			Maintenance	Term	Enterprise	Single	2
	TeamQuest Analyzer & Reporter & Alert	TQALZRPTA-CLASSB-T2-V10-M	Solaris	Maintenance	Term	Enterprise	Site	360
	TeamQuest Encyrption	TQENC-CLASSB-T2-V10	Solaris	Maintenance	Term	Enterprise	Site	360
	TeamQuest IT Service Analyzer/Reporter 10.3 PF 20110901			Maintenance	Term	Enterprise	Single	1
	TeamQuest Manager 10.1 PF 20080402			Maintenance	Term	Enterprise	Single	1
	TeamQuest Manager 10.1 PF 20081001			Maintenance	Term	Enterprise	Single	1
	TeamQuest Manager 10.2 PF 20100201			Maintenance	Term	Enterprise	Single	3
	TeamQuest Manager 10.3 PF 20101004			Maintenance	Term	Enterprise	Single	3
	TeamQuest Manager 10.3 PF 20110921			Mainte	Term	Enterprise	Single	5

				nance				
	TeamQuest Manager 10.3 PF 20111027			Maintenance	Term	Enterprise	Single	90
	TeamQuest Model 10.3 PF 20110901			Maintenance	Term	Enterprise	Single	1
	TeamQuest Model 11.2 PF 20140701			Maintenance	Term	Enterprise	Single	2
	TeamQuest Model TQGETM	TQM-CLASSA-T2-V10-M	Solaris	Maintenance	Term	Enterprise	Site	295
	TeamQuest Network Agent	TQNA-CLASSB-T2-V10-M	Solaris	Maintenance	Term	Enterprise	Site	360
	TeamQuest View 10.3 PF 20101004			Maintenance	Term	Enterprise	Single	3
	TeamQuest View 10.3 PF 20110901			Maintenance	Term	Enterprise	Single	3
	TeamQuest View 11.1 PF 20130304			Maintenance	Term	Enterprise	Single	5
	TeamQuest View 11.2 PF 20140701			Maintenance	Term	Enterprise	Single	14
	TestPartner	2.0	WIN	Maint	Term	Enterprise	Single	61

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	Toad for Oracle 10			Mai nte nan ce	Term	Enterprise	Single	2
	Toad for Oracle 11.5			Mai nte nan ce	Term	Enterprise	Single	71
	TortoiseSVN 1.7.10.23359 (64 bit)			Mai nte nan ce	Term	Enterprise	Single	1
	TortoiseSVN 1.7.11.23600 (64 bit)			Mai nte nan ce	Term	Enterprise	Single	109
	TortoiseSVN 1.7.99.23978 (64 bit)			Mai nte nan ce	Term	Enterprise	Single	33
	TortoiseSVN 1.8.1.24570 (64 bit)			Mai nte nan ce	Term	Enterprise	Single	75
	TortoiseSVN 1.8.4.24972 (64 bit)			Mai nte nan ce	Term	Enterprise	Single	1
	Tripwire Enterprise Agent 2.8			Mai nte nan ce	Term	Enterprise	Single	77
	Tripwire Enterprise Console			Mai nte nan ce	Term	Enterprise	Single	1
	U.S. Federal VMware Horizon View Standard Edition: 10 Pack	VS5-ENT-C	VM	Mai nte	Term	Enterprise	Single	3

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	U.S. Federal VMware Service Manager Cloud Provisioning Bundle	VS5-ENT-C	VM	Mai nte nan ce	Term	Enterprise	Single	1
	U.S. Federal VMware vCenter Operations 5.6 Management Suite Enterprise	VS5.6-ENT-C	VM	Mai nte nan ce	Term	Enterprise	Single	3
	U.S. Federal VMware vCenter Server 5 Standard for vSphere 5 (Per Instance)	VS5-ENT-C	VM	Mai nte nan ce	Term	Enterprise	Single	11
	U.S. Federal VMware vCenter Site Recovery Manager 5 Enterprise (25 VM Pack)	VS5-ENT-C	VM	Mai nte nan ce	Term	Enterprise	Single	3
	U.S. Federal VMware vCenter Site Recovery Manager 5 Standard (25 VM Pack)	VS5-ENT-C	VM	Mai nte nan ce	Term	Enterprise	Single	8
	U.S. Federal VMware vCloud Director (25 VM Pack)	VS5-ENT-C	VM	Mai nte nan ce	Term	Enterprise	Single	3
	U.S. Federal VMware vCloud Suite 5 Advanced	VS5-ENT-C	VM	Mai nte nan ce	Term	Enterprise	Single	104
	U.S. Federal VMware vSphere 5 Enterprise Plus for 1 processor	VS5-ENT-C	VM	Mai nte nan ce	Term	Enterprise	Single	374
	U.S. Federal VMware vSphere with Operations Management Enterprise for 1 processor	VS5-ENT-C	VM	Mai nte nan ce	Term	Enterprise	Single	294
	UltraEdit 14.10			Mai nte	Term	Enterprise	Single	5

				nance				
	UltraEdit-32			Maintenance	Term	Enterprise	Single	2
	UltraEdit-32 11.00.0			Maintenance	Term	Enterprise	Single	2
	Unicenter Asset Intelligence (CAINTEL) - r12.8	12.8.0.1	WIN	Maintenance	Term	Enterprise	Single	1
	Unicenter Asset Portfolio Management			Maintenance	Term	Enterprise	Single	1
	Unicenter Asset Portfolio Manager (UAPM) - r11.3	11.3	WIN	Maintenance	Term	Enterprise	Single	1
	Unicenter DSM Agent + Asset Management Plugin			Maintenance	Term	Enterprise	Single	4
	Unicenter DSM Agent + Asset Management Plugin (English only Edition)			Maintenance	Term	Enterprise	Single	3
	Unicenter DSM Agent + Basic Inventory Plugin (English only Edition)			Maintenance	Term	Enterprise	Single	1
	Unicenter DSM Agent + Data Transport Plugin			Maintenance	Term	Enterprise	Single	7
	Unicenter DSM Agent + Remote Control Plugin			Mainte	Term	Enterprise	Single	4

				nan ce				
	Unicenter DSM Agent + Remote Control Plugin (English only Edition)			Mai nte nan ce	Term	Enterprise	Single	1
	Unicenter DSM Agent + Software Delivery Plugin			Mai nte nan ce	Term	Enterprise	Single	6
	Unicenter DSM Agent + Software Delivery Plugin (English only Edition)			Mai nte nan ce	Term	Enterprise	Single	1
	Unicenter DSM DMPrimer			Mai nte nan ce	Term	Enterprise	Single	36
	Unicenter Management for Microsoft Exchange			Mai nte nan ce	Term	Enterprise	Single	1
	Unicenter Management for Web Servers			Mai nte nan ce	Term	Enterprise	Single	1
	Unicenter NSM			Mai nte nan ce	Term	Enterprise	Single	124
	Unicenter NSM Cisco Integration			Mai nte nan ce	Term	Enterprise	Single	1
	Unicenter NSM Systems Performance			Mai nte nan ce	Term	Enterprise	Single	8
	Unicenter NSM TrapManager			Mai nte	Term	Enterprise	Single	2

				nan ce				
	Unicenter Remote Monitoring			Mai nte nan ce	Term	Enterprise	Single	1
	Unicenter Service Desk			Mai nte nan ce	Term	Enterprise	Single	2
	Unicenter Service Desk Dashboard			Mai nte nan ce	Term	Enterprise	Single	139
	Unicenter Software Delivery			Mai nte nan ce	Term	Enterprise	Single	3
	UnicenterNSM			Mai nte nan ce	Term	Enterprise	Single	8
	Universal Addressing Module- Canada		Solaris	Mai nte nan ce	Term	Enterprise	Site	1
	Universal Addressing Module- International		Solaris	Mai nte nan ce	Term	Enterprise	Site	1
	Universal Addressing Module Web – US Component		Solaris	Mai nte nan ce	Term	Enterprise	Site	1
Pitney Bowes	US Postal Database		Solaris	Mai nte nan ce	Term	Enterprise	Site	1
Pitney Bowes	US Postal Database Monthly	MVS -Internet Delivery	z/OS	Mai nte	Term	Processor	Site	1

				nan ce				
Vanguard	Vanguard Administrator		z/OS	Mai nte nan ce	Term	Processor	Site	1
Vanguard	Vanguard Advisor		z/OS	Mai nte nan ce	Term	Processor	Site	1
Vanguard	Vanguard Analyzer		z/OS	Mai nte nan ce	Term	Processor	Site	1
	VC Runtimes MSI 9.0.21022			Mai nte nan ce	Term	Enterprise	Single	8
	vCenter Orchestrator			Mai nte nan ce	Term	Enterprise	Single	2
	vconfig			Mai nte nan ce	Term	Enterprise	Single	1
	VeraSMART			Mai nte nan ce	Term	Enterprise	Single	1
	Verdiem Surveyor Administrator			Mai nte nan ce	Term	Enterprise	Single	5
	Verdiem Surveyor Client			Mai nte nan ce	Term	Enterprise	Single	955
	Verdiem Surveyor Client 5.2	5.2	WIN	Mai nte	Term	Enterprise	Single	3639

				nan ce				
	Verdiem Surveyor Client 5.2			Mai nte nan ce	Term	Enterprise	Single	1702
	Verdiem Surveyor Reporter			Mai nte nan ce	Term	Enterprise	Single	1
	Verdiem Surveyor Server			Mai nte nan ce	Term	Enterprise	Single	1
	VERITAS NetBackup Client			Mai nte nan ce	Term	Enterprise	Single	3
	VERITAS NetBackup Client 5.1.0			Mai nte nan ce	Term	Enterprise	Single	2
	Visual C++ 9.0 Runtime for Dragon NaturallySpeaking 64bit (x64)			Mai nte nan ce	Term	Enterprise	Single	1
	Visual Studio 2005 Tools for Office Second Edition Runtime			Mai nte nan ce	Term	Enterprise	Single	1
	Visual Studio 2010 Prerequisites - English			Mai nte nan ce	Term	Enterprise	Single	27
	Visual Studio 2010 Tools for SQL Server Compact 3.5 SP2 ENU			Mai nte nan ce	Term	Enterprise	Single	27
	Visual Studio 2012 Update 1 (KB2707250)			Mai nte	Term	Enterprise	Single	1

				nance				
	Visual Studio Tools for the Office system 3.0 Runtime			Maintenance	Term	Enterprise	Single	1
	Visual Studio Tools for the Office system 3.0 Runtime Service Pack 1 (KB949258)			Maintenance	Term	Enterprise	Single	1
VMWARE	VMware Data Recovery			Maintenance	Term	Enterprise	Single	1
VMWARE	VMware OVF Tool			Maintenance	Term	Enterprise	Single	1
VMWARE	VMware Tools			Maintenance	Term	Enterprise	Single	111
VMWARE	VMware Tools 3.1.0 build 52542 x86 32			Maintenance	Term	Enterprise	Single	15
VMWARE	VMware vCenter Converter			Maintenance	Term	Enterprise	Single	2
VMWARE	VMware vCenter Converter Agent			Maintenance	Term	Enterprise	Single	1
VMWARE	VMware vCenter Converter Client			Maintenance	Term	Enterprise	Single	1
VMWARE	VMware vCenter Converter Client 4.2.1			Maintenance	Term	Enterprise	Single	2

				nan ce				
VMWARE	VMware vCenter Converter Standalone			Mai nte nan ce	Term	Enterprise	Single	2
VMWARE	VMware vCenter Converter Standalone 4.0.1 Build 161434 x86 32			Mai nte nan ce	Term	Enterprise	Single	1
VMWARE	VMware vCenter Converter Standalone Agent			Mai nte nan ce	Term	Enterprise	Single	8
VMWARE	VMware vCenter Converter Standalone Agent 4.0.1 Build 161434 x86 32			Mai nte nan ce	Term	Enterprise	Single	5
VMWARE	VMware vCenter Server			Mai nte nan ce	Term	Enterprise	Single	2
VMWARE	VMware vCenter Server 5 Standard for vSphere 5 (Per Instance)	VS5-ENT-C	VM	Mai nte nan ce	Term	Enterprise	Single	1
VMWARE	VMware vCenter Server 5 Standard for vSphere 5 (Per Instance)	VS5-ENT-C	VM	Mai nte nan ce	Term	Enterprise	Single	2
VMWARE	VMware vCenter Update Manager			Mai nte nan ce	Term	Enterprise	Single	2
VMWARE	VMware vCenter Update Manager Client 4.0u2			Mai nte nan ce	Term	Enterprise	Single	1
VMWARE	VMware vCenter Update Manager Client 4.1 Update 1			Mai nte	Term	Enterprise	Single	2

				nan ce				
VMWARE	VMware vCenter Update Manager Client 4.1 Update 2			Mai nte nan ce	Term	Enterprise	Single	3
VMWARE	VMware vCenter Update Manager Client 4.1 Update 3			Mai nte nan ce	Term	Enterprise	Single	2
VMWARE	VMware vCenter Update Manager Guest Agent			Mai nte nan ce	Term	Enterprise	Single	16
VMWARE	VMware View Client 5.1			Mai nte nan ce	Term	Enterprise	Single	4
VMWARE	VMware View Client 5.2.1 Build 937772			Mai nte nan ce	Term	Enterprise	Single	3
VMWARE	VMware vSphere 5 Enterprise for 1 processor	VS5-ENT-C	VM	Mai nte nan ce	Term	Enterprise	Single	62
VMWARE	VMware vSphere 5 Enterprise Plus for 1 processor	VS5-ENT-C	VM	Mai nte nan ce	Term	Enterprise	Single	100
VMWARE	VMware vSphere Client 4.0			Mai nte nan ce	Term	Enterprise	Single	3
VMWARE	VMware vSphere Client 4.1			Mai nte nan ce	Term	Enterprise	Single	18
VMWARE	VMware vSphere Client 4.1.0 Build 17435 x86 32			Mai nte	Term	Enterprise	Single	22

				nance				
VMWARE	VMware vSphere Client 4.1.0 Build 17435 x86 32 VMware, Inc.	4.1.0	WIN	Maintenance	Term	Enterprise	Single	29
VMWARE	VMware vSphere Client 5.0			Maintenance	Term	Enterprise	Single	12
VMWARE	VMware vSphere Client 5.1			Maintenance	Term	Enterprise	Single	2
VMWARE	VMware vSphere Client 5.5			Maintenance	Term	Enterprise	Single	2
VMWARE	VMware vSphere Host Update Utility 4.0			Maintenance	Term	Enterprise	Single	1
VMWARE	VMware vSphere Update Manager Client 5.0 Update 2			Maintenance	Term	Enterprise	Single	1
VMWARE	VMware vSphere Update Manager Client 5.0 Update 3			Maintenance	Term	Enterprise	Single	1
VMWARE	VMware vSphere Update Manager Client 5.5 Update 2			Maintenance	Term	Enterprise	Single	1
IBM	VS FORTRAN Comp/Lib/Debug V2	5668806	z/OS	Maintenance	Term	Processor	Site	1
	VZAccess Manager 7.3			Maintenance	Term	Enterprise	Single	1

				nan ce				
	WCF RIA Services V1.0 SP1			Mai nte nan ce	Term	Enterprise	Single	23
	WCF RIA Services V1.0 SP2			Mai nte nan ce	Term	Enterprise	Single	3
	Wily Transaction Generator 7.0			Mai nte nan ce	Term	Enterprise	Single	2
	WinCvs 2.0	2.0	WIN	Mai nte nan ce	Term	Enterprise	Single	579
	WinCvs 2.0			Mai nte nan ce	Term	Enterprise	Single	449
	Windows Media Player 10.0			Mai nte nan ce	Term	Enterprise	Single	24
	Windows Media Player 11			Mai nte nan ce	Term	Enterprise	Single	7
	Windows Media Player 12			Mai nte nan ce	Term	Enterprise	Single	1849
	Windows Presentation Foundation			Mai nte nan ce	Term	Enterprise	Single	6
	WinPcap 3.0			Mai nte	Term	Enterprise	Single	4

				nance				
	WinPcap 4.0.2			Maintenance	Term	Enterprise	Single	3
	WinPcap 4.1			Maintenance	Term	Enterprise	Single	9
	WinPcap 4.1.1			Maintenance	Term	Enterprise	Single	1
	WinPcap 4.1.2			Maintenance	Term	Enterprise	Single	5
	WinSCP 4.2.7			Maintenance	Term	Enterprise	Single	1
	WinSCP 5.5.3			Maintenance	Term	Enterprise	Single	1
	WinZip			Maintenance	Term	Enterprise	Single	37
	WinZip 10.0			Maintenance	Term	Enterprise	Single	3
	WinZip 11.0	11.0	WIN	Maintenance	Term	Enterprise	Single	125
	WinZip 11.0			Mainte	Term	Enterprise	Single	21

				nan ce				
	WinZip 11.1	11.1	WIN	Mai nte nan ce	Term	Enterprise	Single	274
	WinZip 11.1			Mai nte nan ce	Term	Enterprise	Single	289
	WinZip 9.0 SR-1	9.0	WIN	Mai nte nan ce	Term	Enterprise	Single	47
	WinZip 9.0 SR-1			Mai nte nan ce	Term	Enterprise	Single	3
	WinZip Command Line Support Add-On 2.0			Mai nte nan ce	Term	Enterprise	Single	3
	WinZip Command Line Support Add-On 2.2	2.2	WIN	Mai nte nan ce	Term	Enterprise	Single	145
	WinZip Command Line Support Add-On 2.2			Mai nte nan ce	Term	Enterprise	Single	119
	WinZip Self-Extractor 2.0			Mai nte nan ce	Term	Enterprise	Single	2
	Wireshark 1.10.3 (32-bit)			Mai nte nan ce	Term	Enterprise	Single	4
	Wireshark 1.10.5 (32-bit)			Mai nte	Term	Enterprise	Single	2

				nan ce				
	Wireshark 1.10.6 (32-bit)			Mai nte nan ce	Term	Enterprise	Single	4
	Wireshark 1.10.8 (32-bit)			Mai nte nan ce	Term	Enterprise	Single	1
	Wireshark 1.12.0 (32-bit)			Mai nte nan ce	Term	Enterprise	Single	5
	Wireshark 1.12.1 (32-bit)			Mai nte nan ce	Term	Enterprise	Single	8
	Wireshark 1.6.4			Mai nte nan ce	Term	Enterprise	Single	1
	Wireshark 1.6.7 (32-bit)			Mai nte nan ce	Term	Enterprise	Single	4
	Wireshark 1.8.7 (32-bit)			Mai nte nan ce	Term	Enterprise	Single	1
	Wolfram Mathematica 6			Mai nte nan ce	Term	Enterprise	Single	3
	Wolfram Notebook Indexer 2.0			Mai nte nan ce	Term	Enterprise	Single	3
	WRQ Reflection for Secure IT 6.0			Mai nte	Term	Enterprise	Single	4

				nance				
	WRQ Reflection X 13.0			Maintenance	Term	Enterprise	Single	1
	XenApp Advanced Configuration			Maintenance	Term	Enterprise	Single	7
	Xerox CentreWare for Unicenter 3.6.14			Maintenance	Term	Enterprise	Single	2
	XML Core Services 3.0 SP10	3.0	WIN	Maintenance	Term	Enterprise	Single	127
	XML Core Services 3.0 SP10			Maintenance	Term	Enterprise	Single	59
	XML Core Services 3.0 SP11	3.0	WIN	Maintenance	Term	Enterprise	Single	2902
	XML Core Services 3.0 SP11			Maintenance	Term	Enterprise	Single	1915
	XML Core Services 4.0	4.0	WIN	Maintenance	Term	Enterprise	Single	214
	XML Core Services 4.0			Maintenance	Term	Enterprise	Single	144
	XML Core Services 4.0 SP2	4.0	WIN	Mainte	Term	Enterprise	Single	55

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	XML Core Services 5.0 on Microsoft Office 2003 SP3	5.0	WIN	Mai nte nan ce	Term	Enterprise	Single	209
	XML Core Services 5.0 on Microsoft Office 2003 SP3			Mai nte nan ce	Term	Enterprise	Single	73
	XML Core Services 5.0 SP1			Mai nte nan ce	Term	Enterprise	Single	4
	XML Core Services 6.0 SP2	6.0	WIN	Mai nte nan ce	Term	Enterprise	Single	239
	XML Core Services 6.0 SP2			Mai nte nan ce	Term	Enterprise	Single	62
IBM	z/OS V1 Base	5694A01	z/OS	Mai nte nan ce	Term	Processor	Site	1
IBM	z/OS V1 C/C++ without Debug	5694A01	z/OS	Mai nte nan ce	Term	Processor	Site	1
IBM	z/OS V1 DFSMS dsshsm	5694A01	z/OS	Mai nte nan ce	Term	Processor	Site	1
IBM	z/OS V1 DFSMS rmm	5694A01	z/OS	Mai nte nan ce	Term	Processor	Site	1
IBM	z/OS V1 DFSORT	5694A01	z/OS	Mai nte	Term	Processor	Site	1

				nance				
IBM	z/OS V1 HLASM Toolkit	5694A01	z/OS	Maintenance	Term	Processor	Site	1
IBM	z/OS V1 RMF	5694A01	z/OS	Maintenance	Term	Processor	Site	1
IBM	z/OS V1 SDSF	5694A01	z/OS	Maintenance	Term	Processor	Site	1
IBM	z/OS V1 Security Server	5694A01	z/OS	Maintenance	Term	Processor	Site	1
IBM	z/VM Version 5 S&S	5741SNS	z/VM	Maintenance	Term	Processor	Site	1
	ZoomText 10.1			Maintenance	Term	Enterprise	Single	2

Mainframe Software List

Publisher	Software Title	Edition	OS	License Model	License Term	License Basis	License Factor
Vanguard	Vanguard Administrator		z/OS	Maintenance	Term	Processor	Site

Asset Management

Vanguard	Vanguard Advisor		z/OS	Maintenance	Term	Processor	Site
Vanguard	Vanguard Analyzer		z/OS	Maintenance	Term	Processor	Site
ASG Federal, Inc	Jobscan		z/OS	Maintenance	Term	Processor	Site
IBM	Sterling Connect: Direct z/OS SE S&S	5655X10	z/OS	Maintenance	Term	Processor	Concurrent Users
IBM	File Manager V12 S&S	5697G60	z/OS	Maintenance	Term	Processor	Site
IBM	IBM Tiv Mgmt Services z/OS S&S	5698S53	z/OS	Maintenance	Term	Processor	Site
IBM	z/VM Version 5 S&S	5741SNS	z/VM	Maintenance	Term	Processor	Site
IBM	Performance Toolkit for VM S&S	5741SNS	z/VM	Maintenance	Term	Processor	Site
IBM	Resource Access Control Fac S&S	5741SNS	z/OS	Maintenance	Term	Processor	Site
IBM	Debug Tool V12 S&S	5655J19	z/OS	Maintenance	Term	Processor	Site
IBM	IBM Tivoli OMEGAMON XE z/OS V5 S&S	5608S81	z/OS	Maintenance	Term	Processor	Site
IBM	COBOL V4	5655S71	z/OS	Maintenance	Term	Processor	Site
IBM	ACF/VTAM V4 VM/ESA Inter E.	5654010	z/VM	Maintenance	Term	Processor	Site
IBM	C FOR VM/ESA V3	5654033	z/OS	Maintenance	Term	Processor	Site
IBM	Enterprise PL/I for z/OS V4	5655W67	z/OS	Maintenance	Term	Processor	Site
IBM	PSF V4 for z/OS	5655M32	z/OS	Maintenance	Term	Processor	Site
IBM	Compatibility Fonts	5655M32	z/OS	Maintenance	Term	Processor	Site
IBM	ACF/SSP Version 4 MVS	5655041	z/OS	Maintenance	Term	Processor	Site
IBM	DITTO/ESA for MVS	5655103	z/OS	Maintenance	Term	Processor	Site
IBM	VS FORTRAN Comp/Lib/Debug V2	5668806	z/OS	Maintenance	Term	Processor	Site
IBM	IBM VM RSCS Networking V3	5684096	z/VM	Maintenance	Term	Processor	Site
IBM	Display Management System V2	5684113	z/OS	Maintenance	Term	Processor	Site
IBM	DFSORT/CMS Version 2	5684134	z/OS	Maintenance	Term	Processor	Site
IBM	DITTO for VSE and VM V3	5688052	z/VM	Maintenance	Term	Processor	Site
IBM	IBM C/370 Library Version 2	5688188	z/OS	Maintenance	Term	Processor	Site
IBM	z/OS V1 Base	5694A01	z/OS	Maintenance	Term	Processor	Site
IBM	z/OS V1 C/C++ without Debug	5694A01	z/OS	Maintenance	Term	Processor	Site
IBM	z/OS V1 DFSMS dsshsm	5694A01	z/OS	Maintenance	Term	Processor	Site

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IBM	z/OS V1 DFSMS rmm	5694A01	z/OS	Maintenance	Term	Processor	Site
IBM	z/OS V1 DFSORT	5694A01	z/OS	Maintenance	Term	Processor	Site
IBM	z/OS V1 HLASM Toolkit	5694A01	z/OS	Maintenance	Term	Processor	Site
IBM	z/OS V1 RMF	5694A01	z/OS	Maintenance	Term	Processor	Site
IBM	z/OS V1 Security Server	5694A01	z/OS	Maintenance	Term	Processor	Site
IBM	z/OS V1 SDSF	5694A01	z/OS	Maintenance	Term	Processor	Site
IBM	IBM Compiler for REXX/370	5695013	z/OS	Maintenance	Term	Processor	Site
IBM	IBM Library for REXX/370	5695014	z/OS	Maintenance	Term	Processor	Site
IBM	High Level Ass. Toolkit	5696234	z/OS	Maintenance	Term	Processor	Site
IBM	High Level Assembler	5696234	z/OS	Maintenance	Term	Processor	Site
IBM	RACF V1 - VM only	5740XXH	z/VM	Maintenance	Term	Processor	Site
IBM	Java for OS 390	5655A46	z/OS	Maintenance	Term	Processor	Site
IBM	SMP/E	5655G44	z/OS	Maintenance	Term	Processor	Site
IBM	IBM ported tools z/OS	5655M29	z/OS	Maintenance	Term	Processor	Site
IBM	Sonoran Serif Font Source	5771ABA	z/OS	Maintenance	Term	Processor	Site
IBM	Sonoran Serif Font Object		z/OS	Maintenance	Term	Processor	Site
IBM	Sonoran Sans Font Source	5771ABB	z/OS	Maintenance	Term	Processor	Site
IBM	Sonoran Sans Font Object		z/OS	Maintenance	Term	Processor	Site
IBM	Pi and Special Fonts Source	5771ABC	z/OS	Maintenance	Term	Processor	Site
IBM	Pi and Special Fonts Object		z/OS	Maintenance	Term	Processor	Site
IBM	Data Fonts Object	5771ADA	z/OS	Maintenance	Term	Processor	Site
IBM	Data Fonts Source		z/OS	Maintenance	Term	Processor	Site
IBM	Math and Science Font Source AFP	5771ADT	z/OS	Maintenance	Term	Processor	Site
IBM	Math and Science Font Source AFP		z/OS	Maintenance	Term	Processor	Site
IBM	Device Supp Facilities	5655257	z/OS	Maintenance	Term	Processor	Site
IBM	EREP	5654260	z/OS	Maintenance	Term	Processor	Site
IBM	3270 PC file transfer	5665311	z/OS	Maintenance	Term	Processor	Site
IBM	EREP V3 VM	5654260	z/OS	Maintenance	Term	Processor	Site
IBM	Device Supp Facilities ICKDS	5655257	z/OS	Maintenance	Term	Processor	Site

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IBM	SDK for z/OS S&S	5655I48	z/OS	Maintenance	Term	Processor	Site
IBM	SDK for z/OS	5655I56	z/OS	Maintenance	Term	Processor	Site
IBM	IBM Ported Tools for z/OS	5655M23	z/OS	Maintenance	Term	Processor	Site
IBM	DFSMS/VM Primary	5741A05	z/VM	Maintenance	Term	Processor	Site
IBM	IBM 31-bit SDK for z/OS V6	5655R31	z/OS	Maintenance	Term	Processor	Site
PKWARE	SecureZip	SEZ08-1400-ENG-FC1	z/OS	Maintenance	Term	Processor	Site
PKWARE	SecureZip, WinSrv	SEZ19-1200-ENG-FC1	WIN	Maintenance	Term	Enterprise	Concurrent Users
PKWARE	SecureZip, WinSrv	SEZ00-1400-ENG-FB1	WIN	Maintenance	Term	Enterprise	Concurrent Users
PKWARE	SecureZip, Sol Sparc	SEZ01-1200-ENG-FC1	Solaris	Maintenance	Term	Enterprise	Site
NewEra	Stand Alone Environment	11-250	z/OS	Maintenance	Term	Processor	Site
Pitney Bowes	Code-1 Plus	IBM: OS/390 MVS - Internet Delivery	z/OS	Maintenance	Term	Processor	Site
Pitney Bowes	US Postal Database Monthly	MVS -Internet Delivery	z/OS	Maintenance	Term	Processor	Site
Pitney Bowes	CODE-1 Plus		Solaris	Maintenance	Term	Enterprise	Site
Pitney Bowes	US Postal Database		Solaris	Maintenance	Term	Enterprise	Site
Pitney Bowes	Universal Addressing Module Web – US Component		Solaris	Maintenance	Term	Enterprise	Site
Pitney Bowes	Code-1 Plus International		Solaris	Maintenance	Term	Enterprise	Site
Pitney Bowes	Code-1 Plus International		z/os	Maintenance	Term	Processor	Site
Pitney Bowes	Canadian Code- 1 Plus		Solaris	Maintenance	Term	Enterprise	Site
Pitney Bowes	Canadian Code- 1 Plus		z/OS	Maintenance	Term	Processor	Site
Pitney Bowes	Universal Addressing Module-Canada		Solaris	Maintenance	Term	Enterprise	Site
Pitney Bowes	Universal Addressing Module-International		Solaris	Maintenance	Term	Enterprise	Site
Applied Technology Group, LLC	SUSE Linux Enterprise Server for IBM zSeries Priority Support for SAP		z/OS	Maintenance	Term	Processor	Site
IBM	IBM STERLING CONNECT:DIRECT STD	SIMULTANEOUS SESSION ANNL SW S&S	Unix	Maintenance	Term	Client Sessions	Concurrent Users
CA	CA View	VIEBAS002	z/OS	Maintenance	Term	Processor	Site

CA	CA View Extended Retention	VIEERO002	z/OS	Maintenance	Term	Processor	Site
CA	CA Workload CA 7	SEVBAS002	z/OS	Maintenance	Term	Processor	Site
CA	CA Opera	OPERAB002	z/OS	Maintenance	Term	Processor	Site
CA	CA VM: Backup	VMBKUP004	z/OS	Maintenance	Term	Processor	Site
CA	CA VM: Tape	VMTAPE004	z/OS	Maintenance	Term	Processor	Site
SAS/Executive Information Systems, LLC	Base SAS for a Class J Mainframe - Product ID 381/SAS	SAS-IBM-J-2-IND	z/OS	Maintenance	Term	Processor	Site
SAS/Executive Information Systems, LLC	SAS/STAT for a Class J Mainframe - Product ID 381/STAT	SAS-IBM-J-12-IND	z/OS	Maintenance	Term	Processor	Site
SAS/Executive Information Systems, LLC	Base SAS for a HP Windows Server w/2 Quad core processors – Product ID 523902/SAS	SAS-10320-8	WIN	Maintenance	Term	Processor	Site
SAS/Executive Information Systems, LLC	SAS/STAT for a HP Windows Server w/2 Quad core processors - Product ID 523902/STAT	SAS-10356-8	WIN	Maintenance	Term	Processor	Site
SAS/Executive Information Systems, LLC	Base SAS for 25 PC user, Windows – Product ID 404790/USERBPKG	SAS-BASESAS 25PCM	WIN	Maintenance	Term	Client Sessions	Concurrent Users
SAS/Executive Information Systems, LLC	Base SAS for each additional PC users, Windows – Product ID 404790/USERBPKG	SAS-BASESAS 26 PCM	WIN	Maintenance	Term	Client Sessions	Concurrent Users
SAS/Executive Information Systems, LLC	SAS Add-ons for 25 PC users, Windows Products include: FSP	SAS-ADDON-25PCM	WIN	Maintenance	Term	Client Sessions	Concurrent Users
SAS/Executive Information Systems, LLC	SAS Add-ons for 25 PC users, Windows Products include: Graph	SAS-ADDON-25PCM	WIN	Maintenance	Term	Client Sessions	Concurrent Users
SAS/Executive Information Systems, LLC	SAS Add-ons for 25 PC users, Windows Products include: Access to PCFF	SAS-ADDON-25PCM	WIN	Maintenance	Term	Client Sessions	Concurrent Users
SAS/Executive Information Systems, LLC	SAS Add-ons for each additional PC user, Windows Products include: FSP	SAS-ADDON-26PCM	WIN	Maintenance	Term	Client Sessions	Concurrent Users

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SAS/Executive Information Systems, LLC	SAS Add-ons for each additional PC user, Windows Products include: Graph	SAS-ADDON-26PCM	WIN	Maintenance	Term	Client Sessions	Concurrent Users
SAS/Executive Information Systems, LLC	SAS Add-ons for each additional PC user, Windows Products include: Access to PCFF	SAS-ADDON-26PCM	WIN	Maintenance	Term	Client Sessions	Concurrent Users
SAS/Executive Information Systems, LLC	SAS Analytic Add-ons for 25 PC users, Windows Products include: STAT	SAS-ANLADD-25PCM	WIN	Maintenance	Term	Client Sessions	Concurrent Users
SAS/Executive Information Systems, LLC	SAS Analytic Add-ons for 25 PC users, Windows Products include: IML	SAS-ANLADD-25PCM	WIN	Maintenance	Term	Client Sessions	Concurrent Users
SAS/Executive Information Systems, LLC	SAS Analytic Add-ons for 25 PC users, Windows Products include: ETS	SAS-ANLADD-25PCM	WIN	Maintenance	Term	Client Sessions	Concurrent Users
SAS/Executive Information Systems, LLC	SAS Analytic Add-ons for each additional PC User Products include: STAT	SAS-ANLADD-26PCM	WIN	Maintenance	Term	Client Sessions	Concurrent Users
SAS/Executive Information Systems, LLC	SAS Analytic Add-ons for each additional PC User Products include: IML	SAS-ANLADD-26PCM	WIN	Maintenance	Term	Client Sessions	Concurrent Users
SAS/Executive Information Systems, LLC	SAS Analytic Add-ons for each additional PC User Products include: ETS	SAS-ANLADD-26PCM	WIN	Maintenance	Term	Client Sessions	Concurrent Users
IBM	SoftwareXcel Enterprise Edition	00003A4C6		[Other]	Term	[Other]	Site
IBM	Softwarexcel Enterprise VU	00003A4C6		[Other]	Term	[Other]	Site
IBM	SL LINUX SUPPORT/SUBSCRIPT z	Full Shift		[Other]	Term	[Other]	Site
Trident	OS/EM Software		z/OS	Maintenance	Term	Processor	Site
Jolly Giant	QWS3270 Secure		WIN	Maintenance	Term	Enterprise	Unlimited
Rocket Software, Inc	ABARS Manager Maintenance	MST-ABAR-MP-100	z/OS	Maintenance	Term	Processor	Site
Rocket Software, Inc	Incremental ABARS maintenance	MST-INCA-MP-100	z/OS	Maintenance	Term	Processor	Site

Asset Management

Databases

ITO Server Team:
Currently, there are 70 SQL Servers Instances and 250 odd databases.

ITO Data Center Branch:
Currently, there are 144 SIPR/NIPR ORACLE DB instances spread across 60 servers, there are 20 SYBASE DB instances spread across 5 servers.

Note: This does not include impending DB instances apart of the current project list.

Historical Information

Last full Asset Inventory and general disposition of current ITAM maintenance:

A. Original Touch and Tag inventory conducted enterprise wide, completed in Q4/2013. Since then, the approach for annual inventory is a perpetual and incremental inventory based on location / function / asset class due to the number of sites and assets which make it impractical to do one concurrent sweep of all Assets at once.

B. Current completion status of latest inventory for major ITAM enclaves within DMDC Enterprise:

- Seaside Data Center (NIPR) - Completed January 2015
- Columbus Data Center - Completed October 2014
- Seaside Data Center (SIPR) - Completed February 2015
- Cheyenne Mtn. Data Center (SIPR) - Completed February 2015
- Boyers PA (user location) - Completed January 2015
- Fort Knox - Currently in progress
- Seaside (user location/Non-Data Center assets) - Planned for Q2/2015
- Mark Center - Planned for Q3/2015
- All other ancillary locations - Planned for Q4/2015

C. General disposition of current ITAM maintenance:

Asset Management

Full inventory reviews occur annually and done incrementally and iteratively per site/location/functional area.
The general process for near-real-time (daily/weekly) data quality assurance checks for all CMDB assets affected via asset move requests and employee departure requests:

- For each affected user, a list of that person's assigned CMDB assets are entered in the CR description field as "ASSET PRECHECK".
- These affected CI's are also linked to the ticket itself via the Config Items tab, which links the ticket system to the asset repository.
- The asset manager works with the support teams to resolve any discrepancies that are found between the asset pre-check and the assets moved or recovered, so that the CMDB reflects an accurate and complete record for each affected asset when the ticket is closed.

Major Incident Management (aka SRT) Support

Appendix G

<u>Level of Effort (FTE hours) – as of Jan 2015</u>

Service Description:
Incident Management function during all SRT Production Outage evolutions. This is essentially the 'Command & Control' element for the Production Outages and works in conjunction with the SRT coordination function (which is under a separate contract with another provider). Requirement is to respond to any SRT event and perform triage, diagnosis and resolution for IT Operations SRTs as well as Non-ITO related SRT's and non-DMDC caused SRT's where DMDC services may still be involved, in addition to issues that turn out to be a Non-SRT (escalation of non-production issues such as Test region).

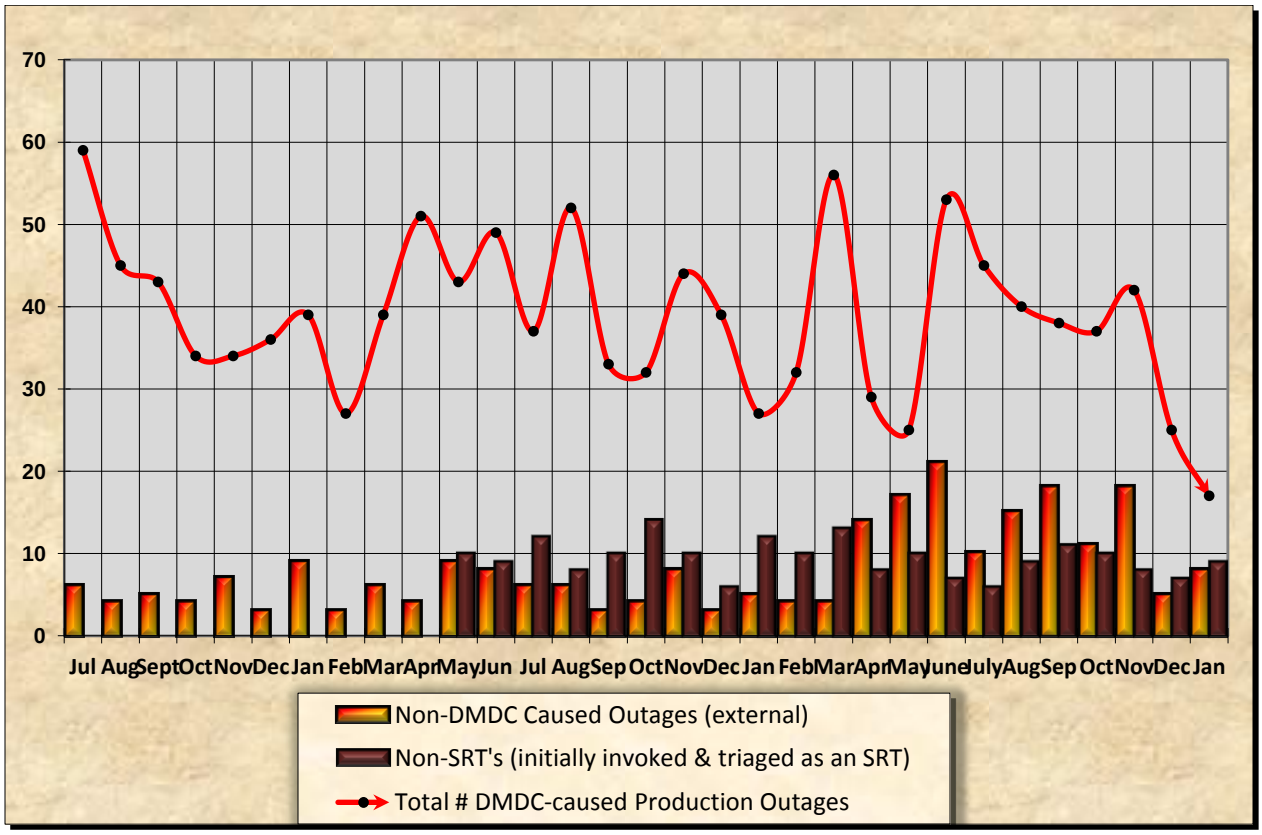
Resource Scope (reforecast and revised as of January, 2015):

* *Average of 260 FTE man hours per month* (from Incident Coordinators to serve as on-call Incident Managers). When not on active SRT's, these personnel perform proactive performance/event/fault monitoring and management (comparable to NOC functionality) during the work day.

* *Average of 610 FTE man hours per month* on the core SRT function (by all ITOps Teams) for Level-II and Level-III Technical SME on-call engagement.

* As <u>40% of SRT calls original during 'off-hours'</u>, availability factor for overall FTE resources is even higher (to ensure operational continuity during work day).

Major Incident Management (SRT)
Frequency / Volume Trends (30 month trend)



01/21/2015

CAPACITY MANAGEMENT – 2014 ANNUAL REPORT (HIGHLIGHTS)

A. ACCOMPLISHMENTS

1. Completed 36 Systems/Application Right-Sizing Projects (Capacity Assessments)
2. Generated ~199 TeamQuest Server Reports (Capacity Intelligence)
3. Performed TeamQuest deployments and/or maintenance on ~158 servers.
4. TQ monitoring covered ~286 PROD Linux/Unix Servers (~95+%).
5. TQ monitoring covered ~69 NPROD Linux/Unix Servers.
6. Proactively mitigated 90+ TQ alerts before potential incidents occurred.
7. Maintained Capacity Management KPI Dashboard.
8. Maintained Storage Capacity Dashboards:
   - NetApp - SS
   - NetApp - OH
   - HDS SAN - SS
   - HDS SAN - OH
9. Maintained VMWare Capacity Dashboards:
   a. VMWare – SS (commander vSphere)
   b. VMWare – OH (president vSphere)

B. CAPACITY HEALTH ISSUES

1. PDR servers reaching peak CPU performance and low on memory - Need to optimize applications, servers, DBs; optimize apps run schedules; add more RAC Nodes (In-Progress). Look into higher density memory DIMMS.
2. Storage shortage - Currently standing (just stood) up new HUS150 and NetApp 5550 storage arrays in SS and OH.
3. Undersized VMs (vCPU, memory) - Currently being identified and upgraded.
4. Current SS and OH vSpheres might need additional MEMORY and CPU before mid-2015.
5. Ganges PROD DB server running low on memory.
6. Hornet (VLER development) running low on memory.
7. skyblue/rose development DB servers reaching CPU and Memory capacity (affecting developers' productivity) - Upgrade/procure new servers and higher memory DIMMS; or port to VMWare if feasible and pending VMWare resources.

CAPACITY MANAGEMENT - KPI DASHBOARD 01/07/2015

LEGEND:

KPI = Key Performance Indicator
CSF = Critical Success Factor
CMIS = Capacity Management Information Systems

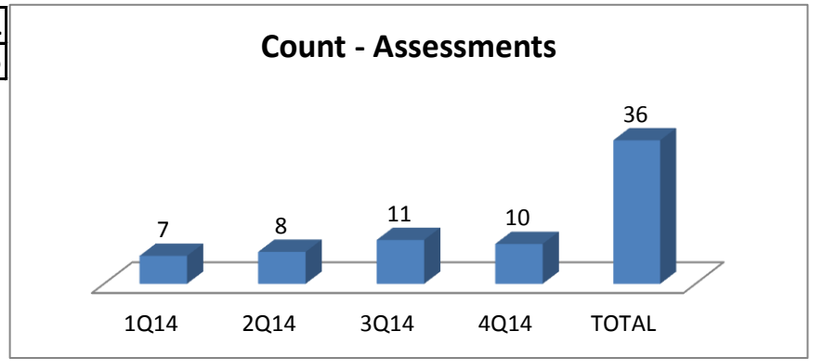
1Q14 = Jan-Mar 2014
2Q14 = Apr-Jun 2014
3Q14 = Jul-Sep 2014
4Q14 = Oct-Dec 2014

KPI: Capacity Assessments Completed

BENEFITS: Systems & Application Right Sizing.

CSF: Provides IT services with appropriate capacity to match business needs.

QTR	1Q14	2Q14	3Q14	4Q14	TOTAL
Count - Assessments	7	8	11	10	36
Rolling Count - Assessments	7	15	26	36	

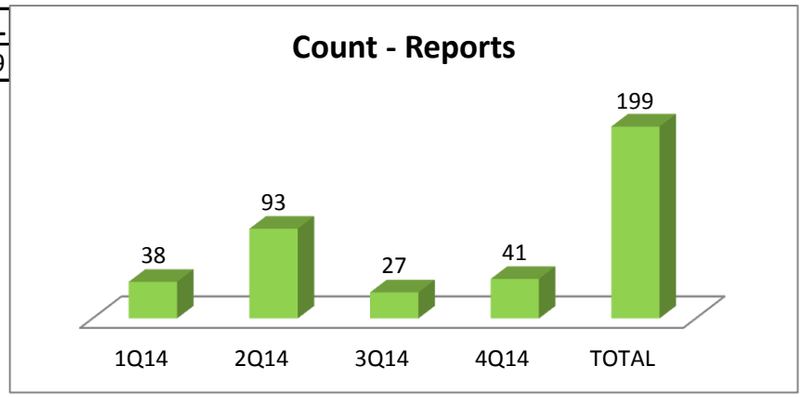


KPI: Capacity Intelligence - Reports/Dashboards

BENEFITS: Monitoring, Trending, Forecasting, Planning.

CSF: Provides adequate capacity forecasts & Protects IT services from capacity related incidents.

QTR	1Q14	2Q14	3Q14	4Q14	TOTAL
Count - Reports	38	93	27	41	199
Rolling Count - Reports	38	131	158	199	

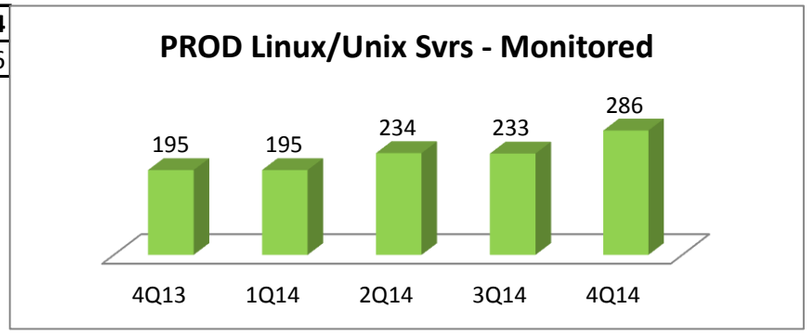


KPI: Capacity Tool Support - CMIS/TQ Operations

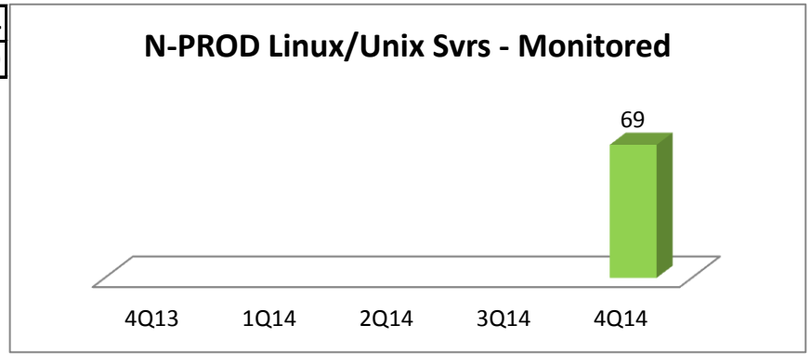
BENEFITS: Effective and Efficient Capacity & Performance Monitoring, Historical Data for Trending, Analysis & Reporting.

CSF: Protects IT services from capacity related incidents.

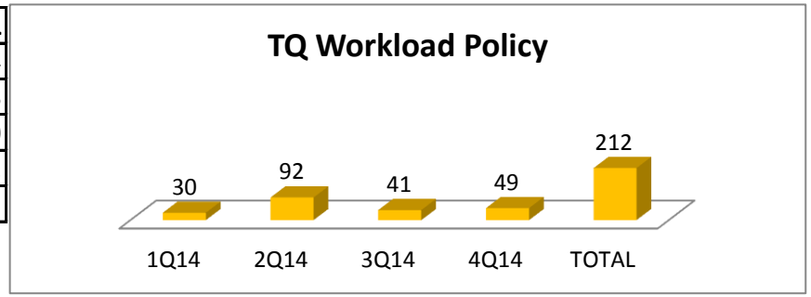
TQ -MONITORED (PROD)					
QTR	4Q13	1Q14	2Q14	3Q14	4Q14
PROD Linux/Unix Svrs	195	195	234	233	286



TQ - MONITORED (NON-PROD)					
QTR	4Q13	1Q14	2Q14	3Q14	4Q14
N-PROD Linux/Unix Svrs					69



TQ - WORKLOAD POLICY					
QTR	1Q14	2Q14	3Q14	4Q14	TOTAL
Unix	7	12	4	1	24
Linux	23	53	34	48	158
Windows	0	27	3	0	30
TOTAL	30	92	41	49	212
Rolling TOTAL WL Policy	30	122	163	212	

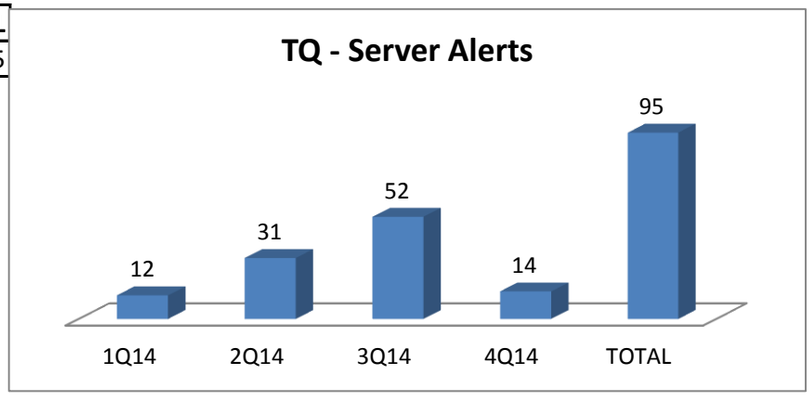


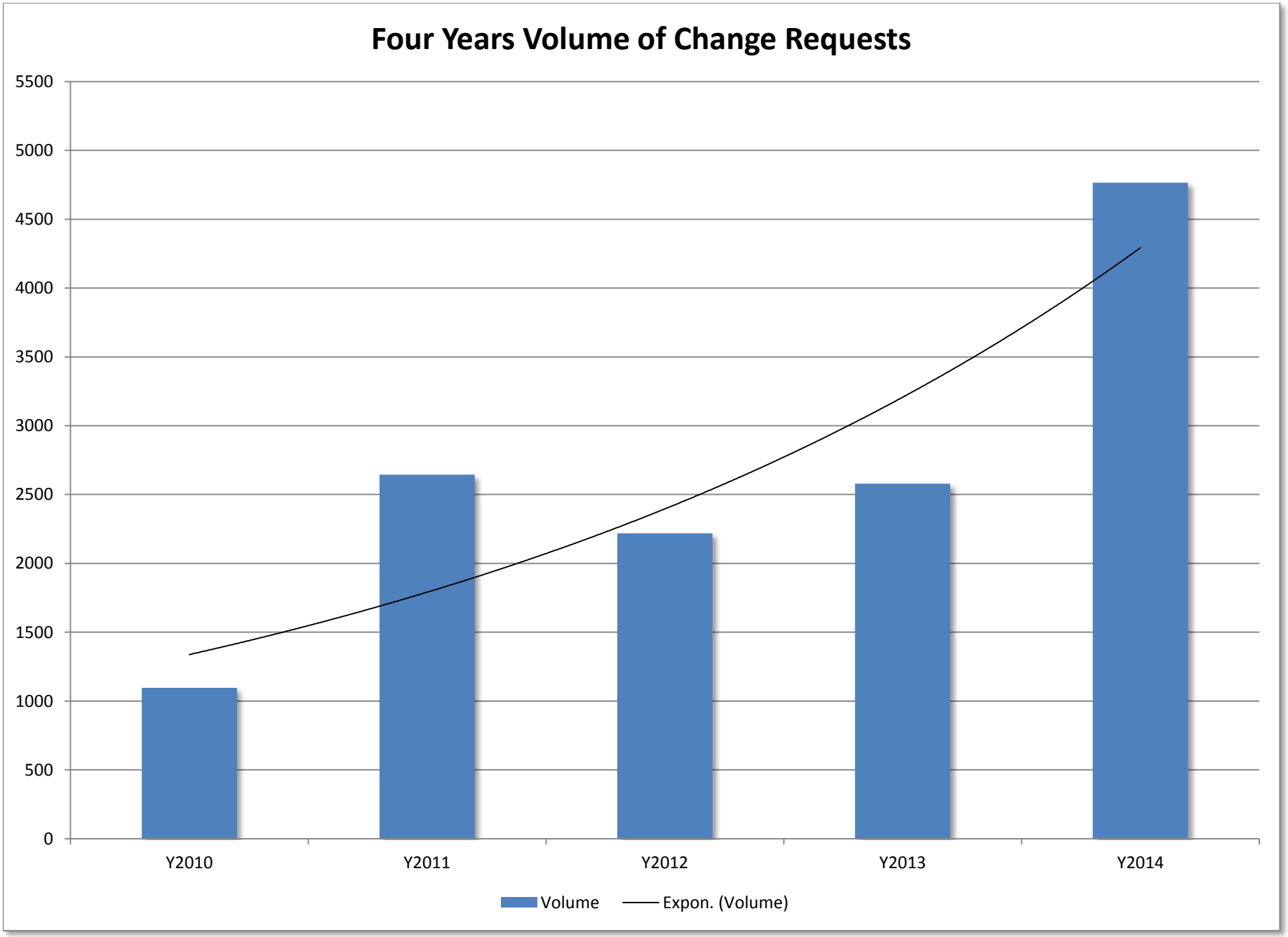
KPI: SRT Avoidance Due to TQ CMIS Monitoring

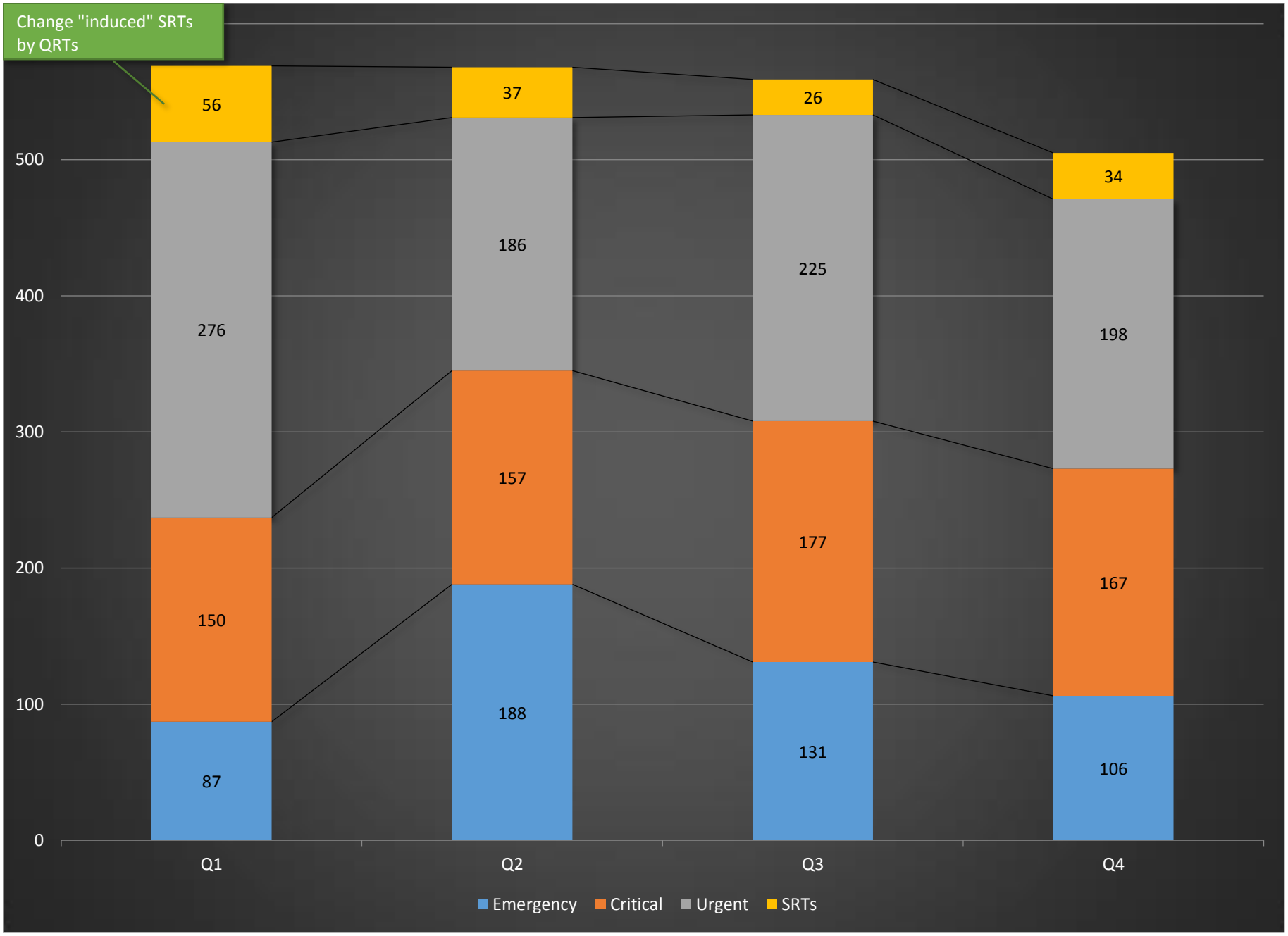
BENEFITS: Prevents Potential SRTs

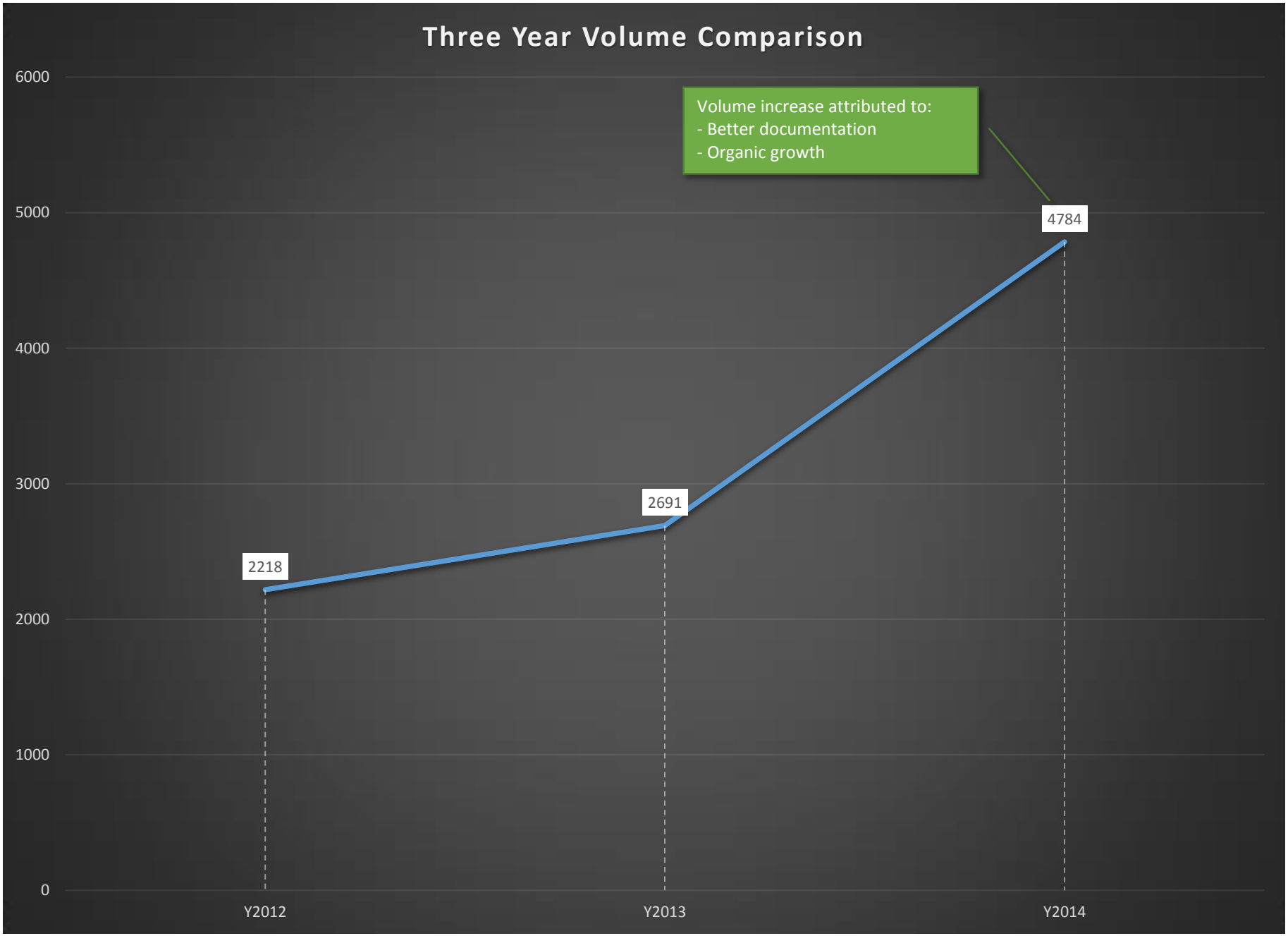
CSF: Increases IT Service Availability

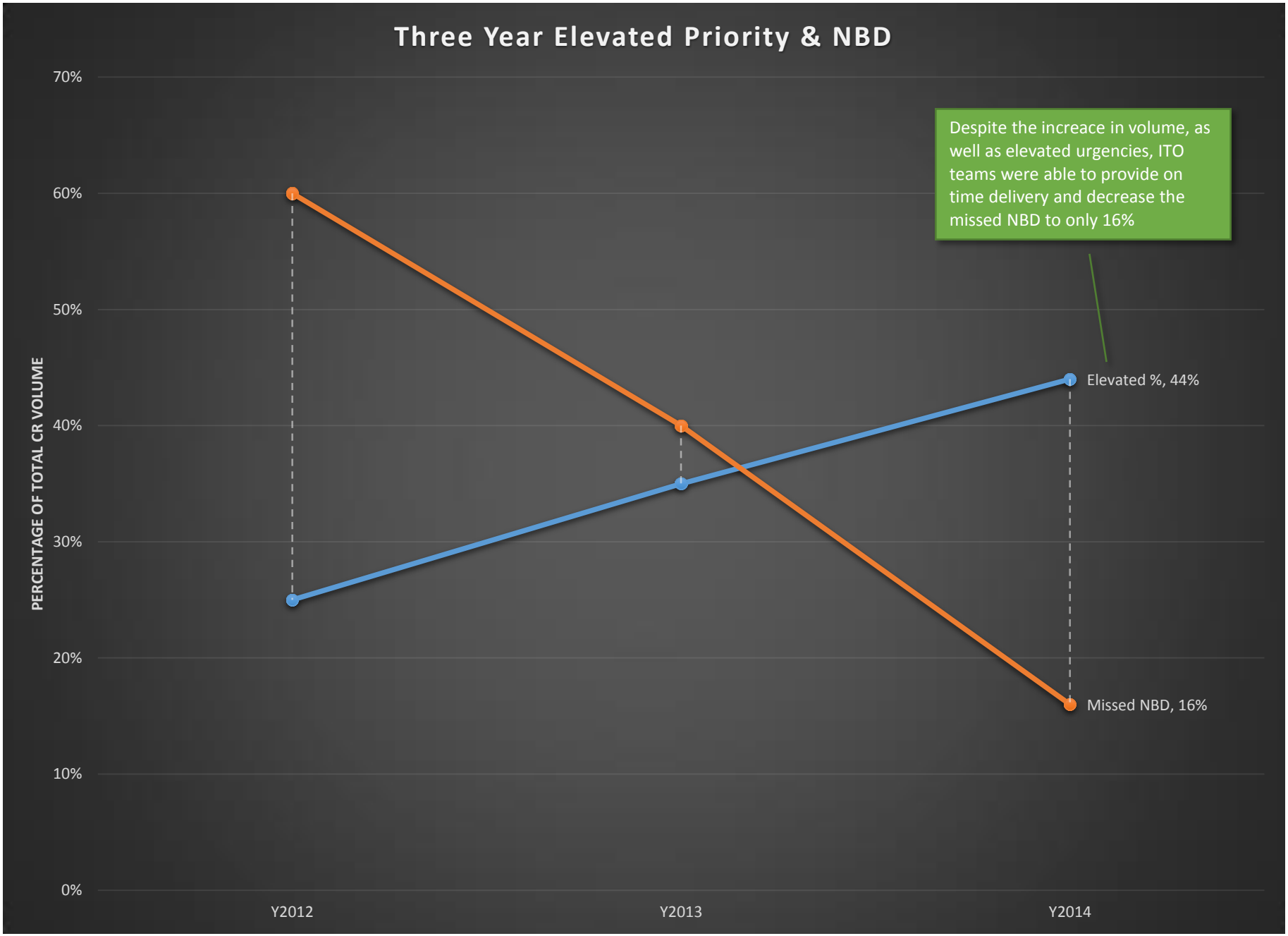
QTR	1Q14	2Q14	3Q14	4Q14	TOTAL
Server Alerts	12	31	52	14	95

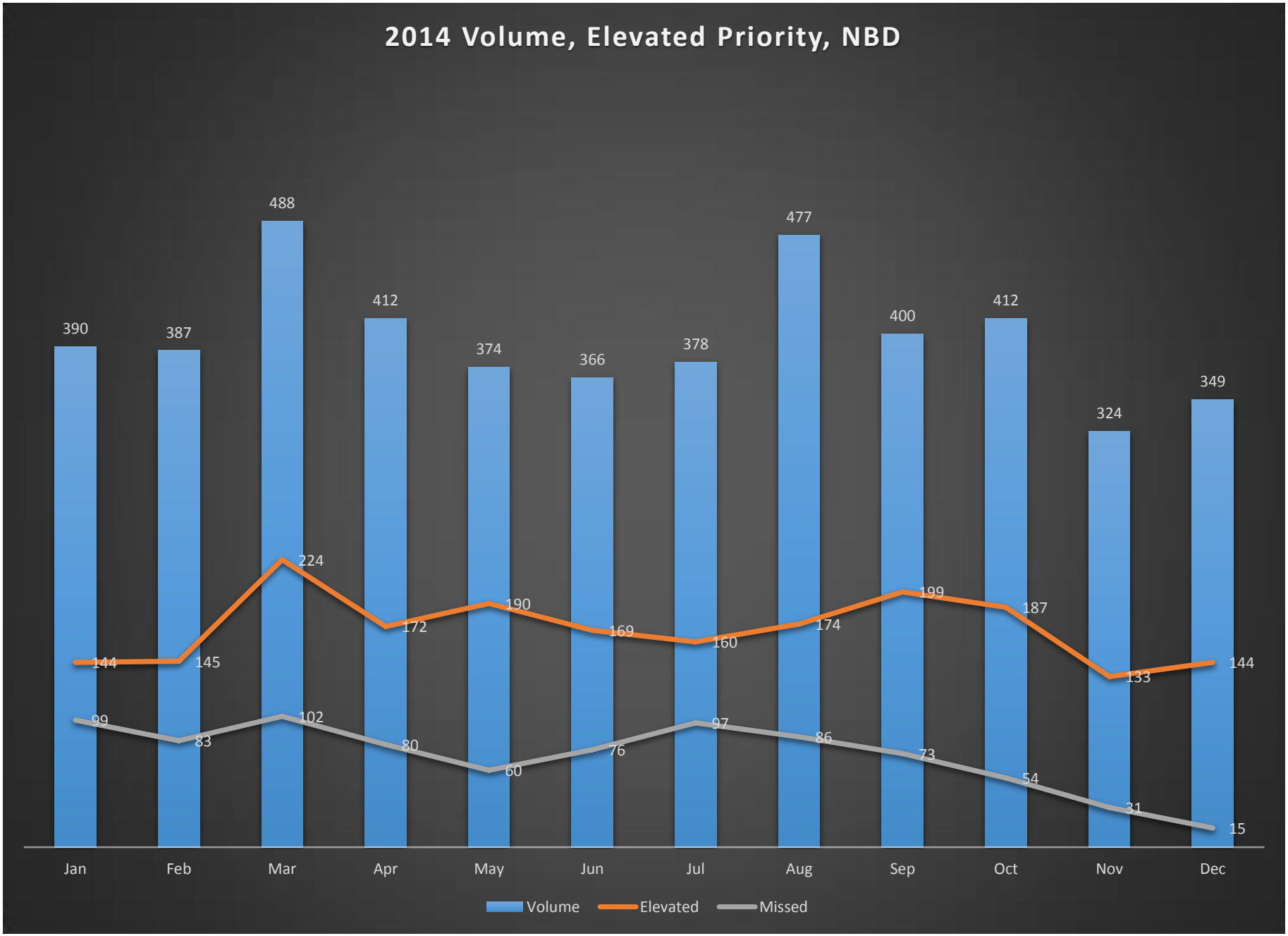


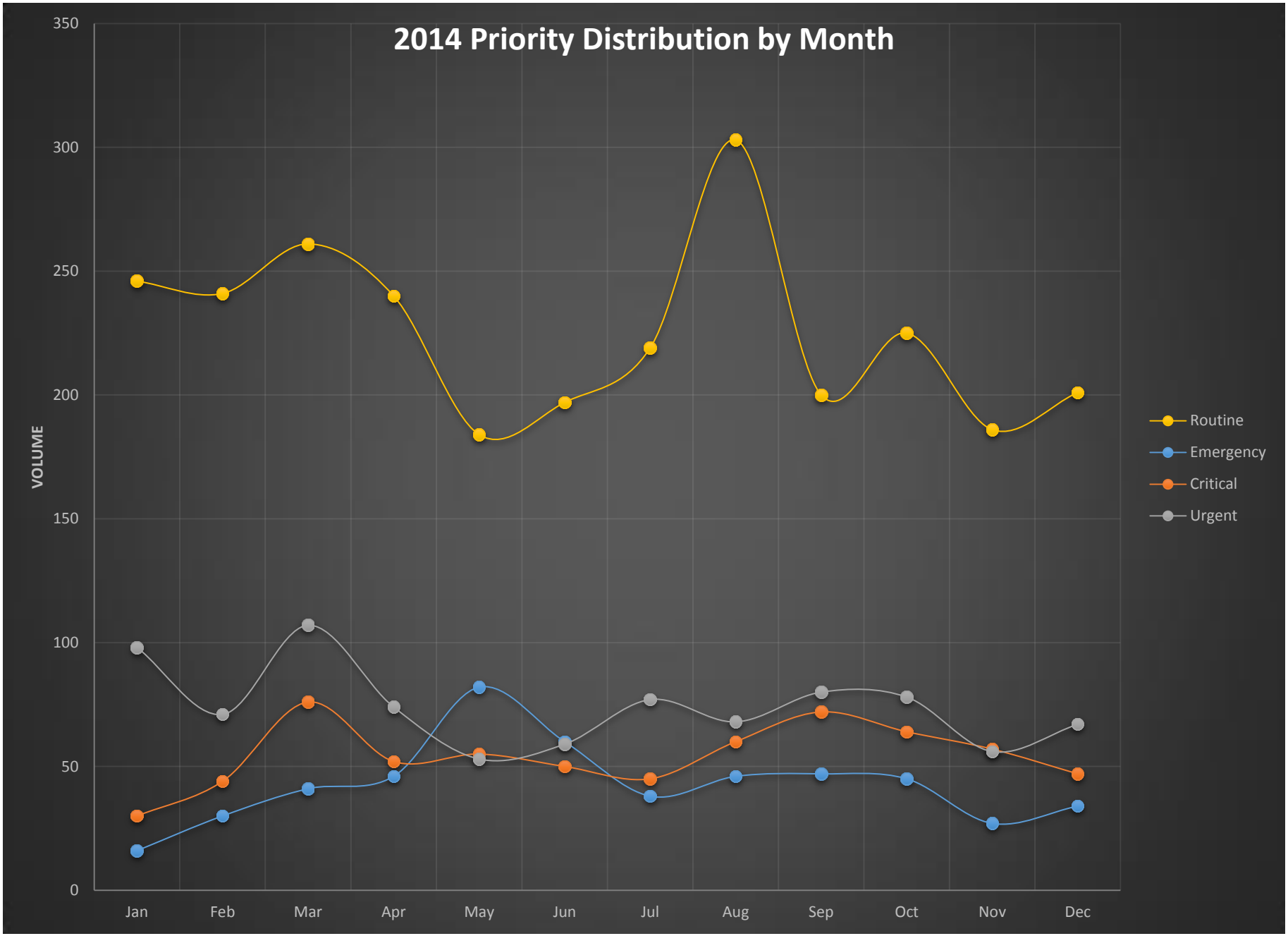

Four Years Volume of Change Requests
5500
5000
4500
4000
3500
3000
2500
2000
1500
1000
500
0
Y2010
Y2011
Y2012
Y2013
Y2014
Volume
Expon. (Volume)

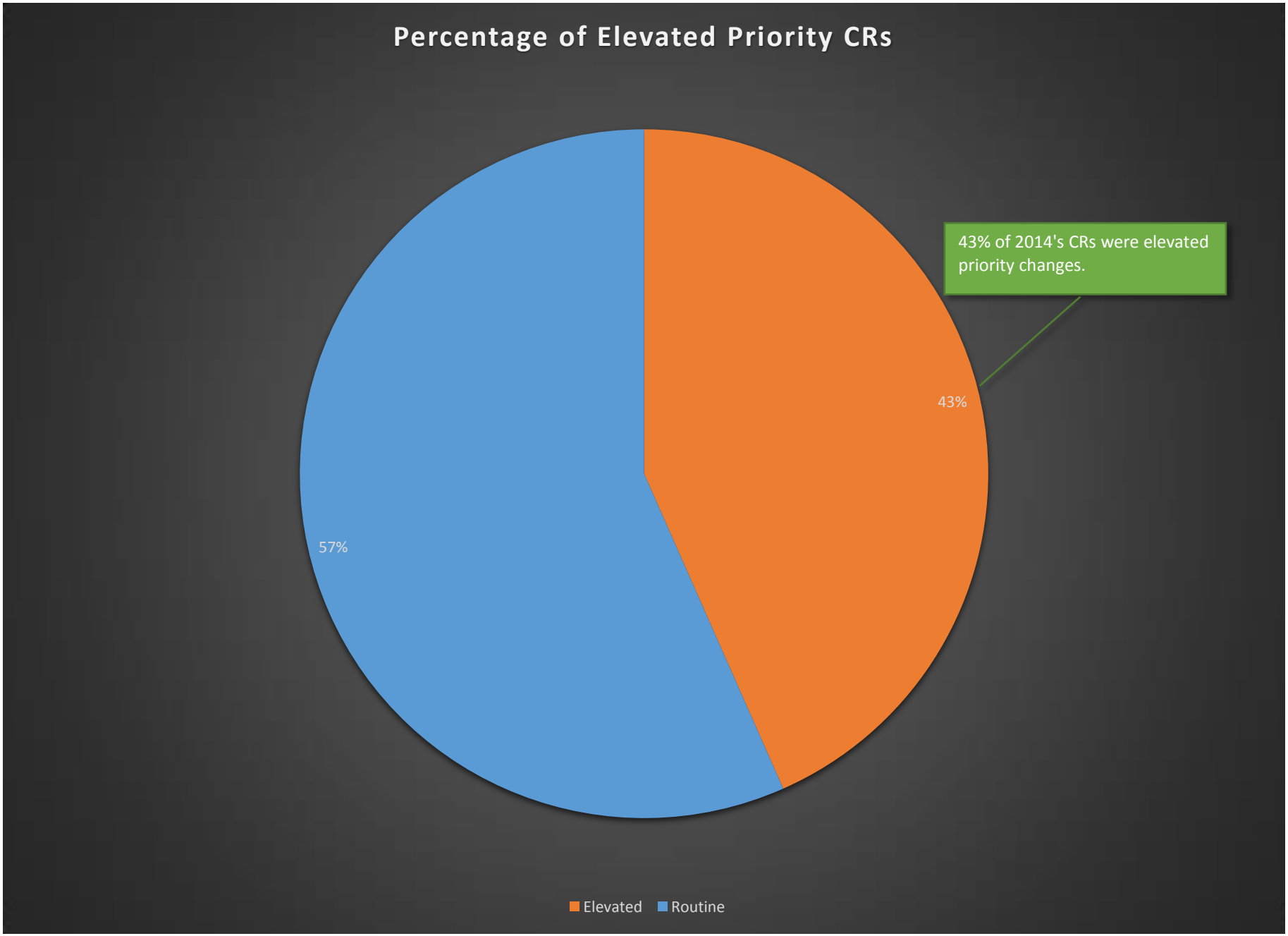

Change "induced" SRTs by QRTs
500
400
300
200
100
0
56
276
150
87
37
186
157
188
26
225
177
131
34
198
167
106
Q1
Q2
Q3
Q4
Emergency
Critical
Urgent
SRTs

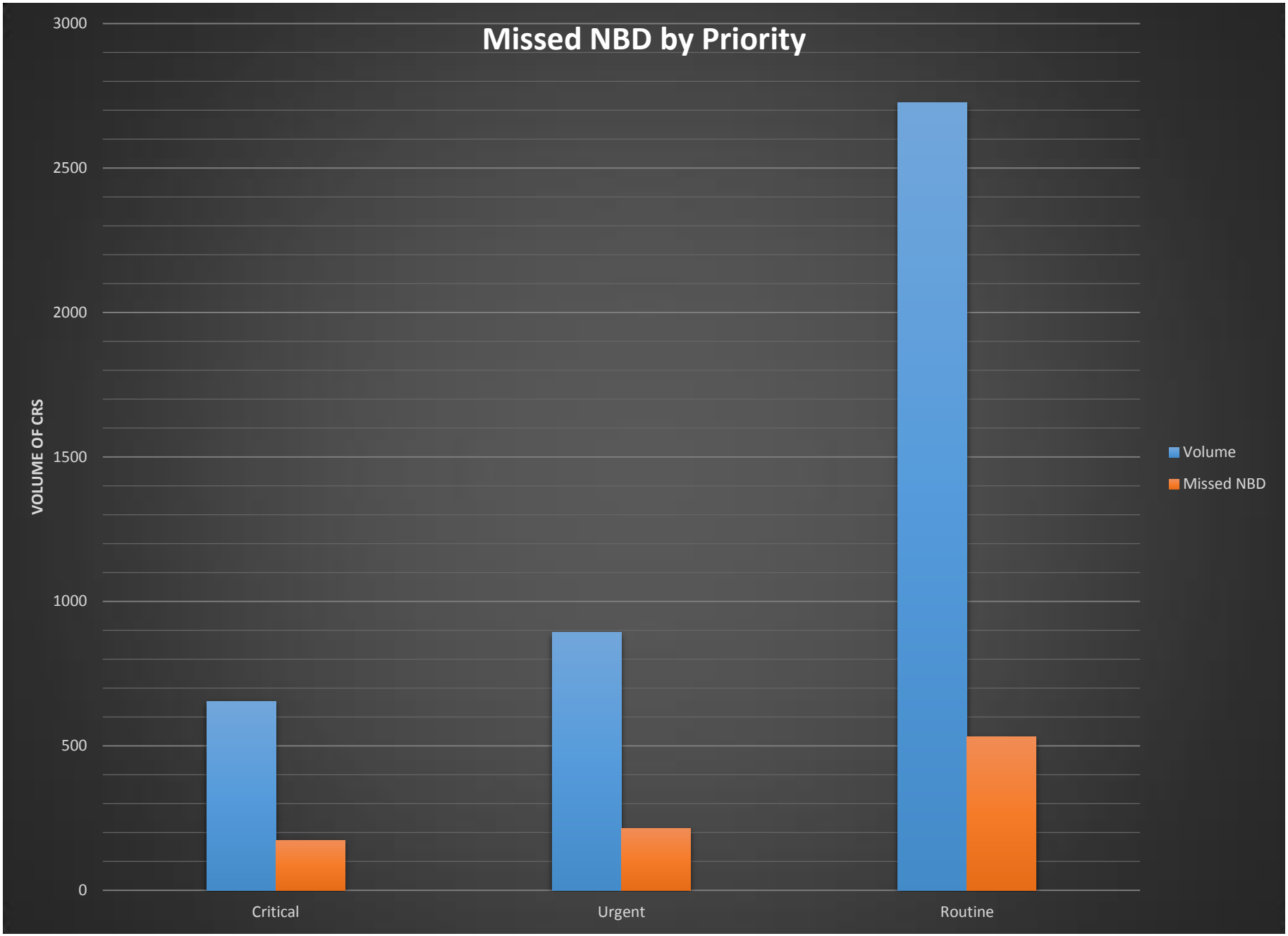

Three Year Volume Comparison
6000
5000
4000
3000
2000
1000
0
Volume increase attributed to:
- Better documentation
- Organic growth
2218
2691
4784
Y2012
Y2013
Y2014

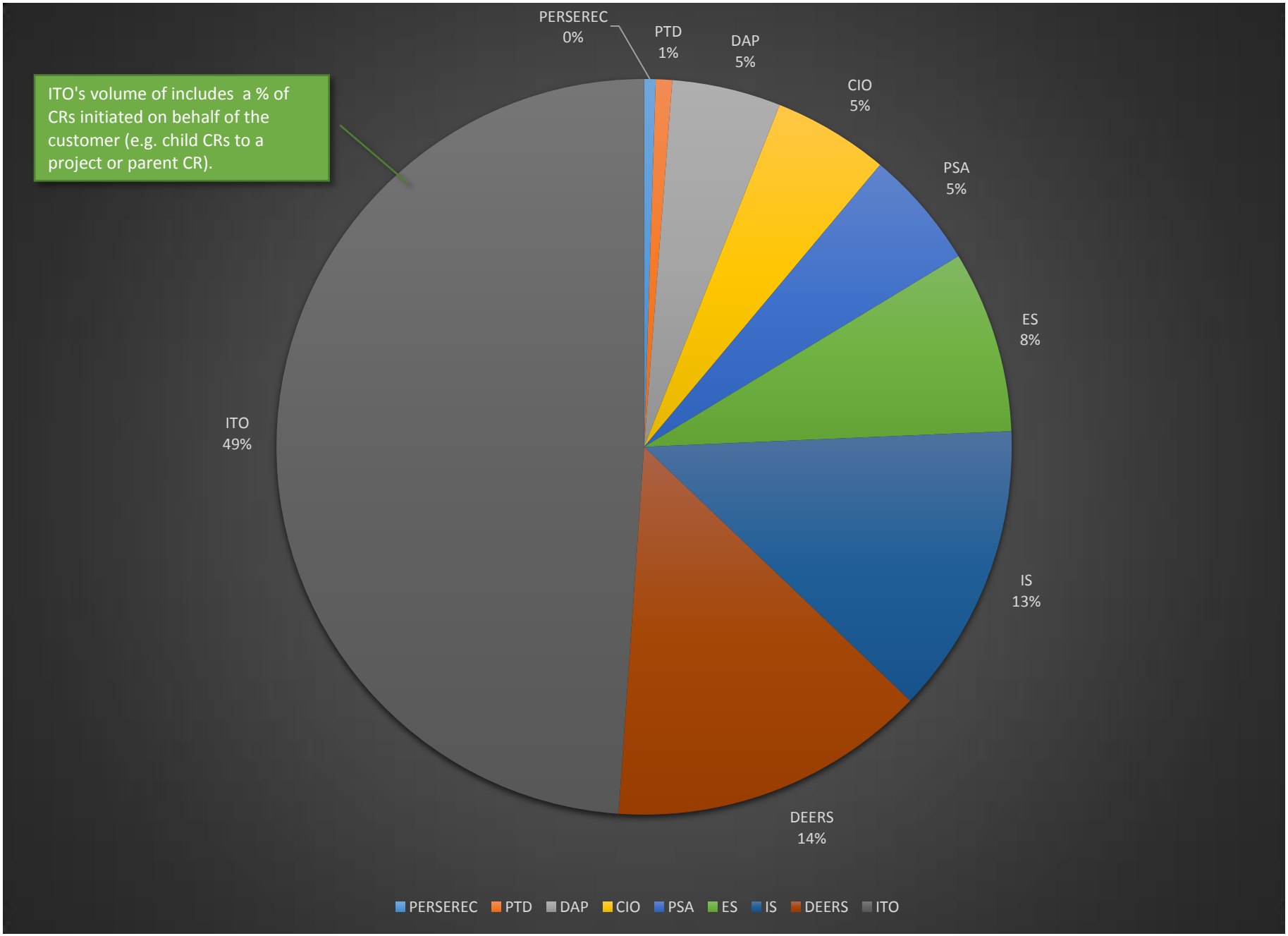

Three Year Elevated Priority & NBD
70%
60%
50%
40%
30%
20%
10%
0%
PERCENTAGE OF TOTAL CR VOLUME
Y2012
Y2013
Y2014
Despite the increace in volume, as well as elevated urgencies, ITO teams were able to provide on time delivery and decrease the missed NBD to only 16%
Elevated %, 44%
Missed NBD, 16%


2014 Volume, Elevated Priority, NBD
390
387
488
412
374
366
378
477
400
412
324
349
144
145
224
172
190
169
160
174
199
187
133
144
99
83
102
80
60
76
97
86
73
54
31
15
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Volume
Elevated
Missed


2014 Priority Distribution by Month
VOLUME
350
300
250
200
150
100
50
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Routine
Emergency
Critical
Urgent

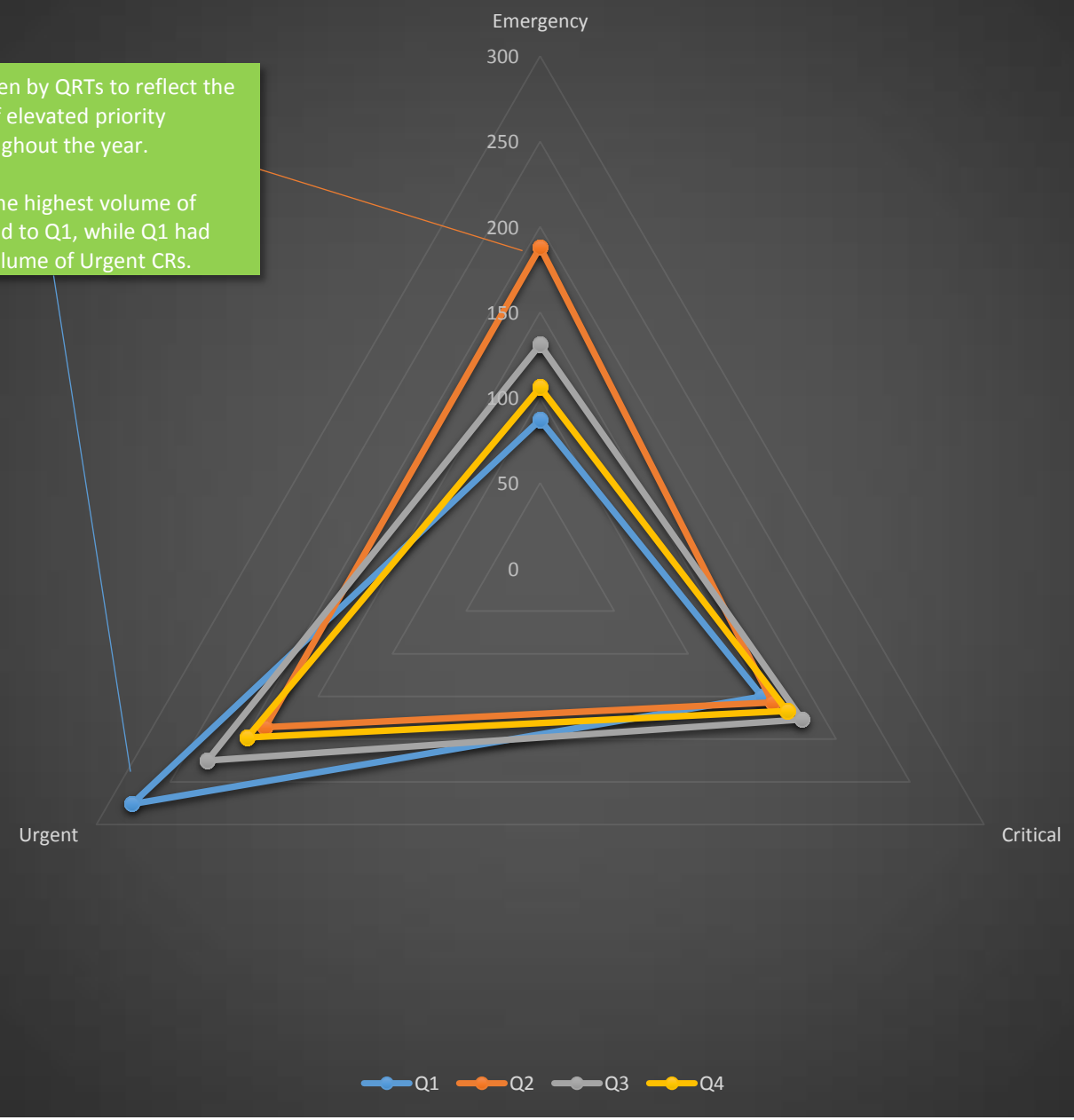

Percentage of Elevated Priority CRs
43% of 2014's CRs were elevated priority changes.
43%
57%
Elevated
Routine

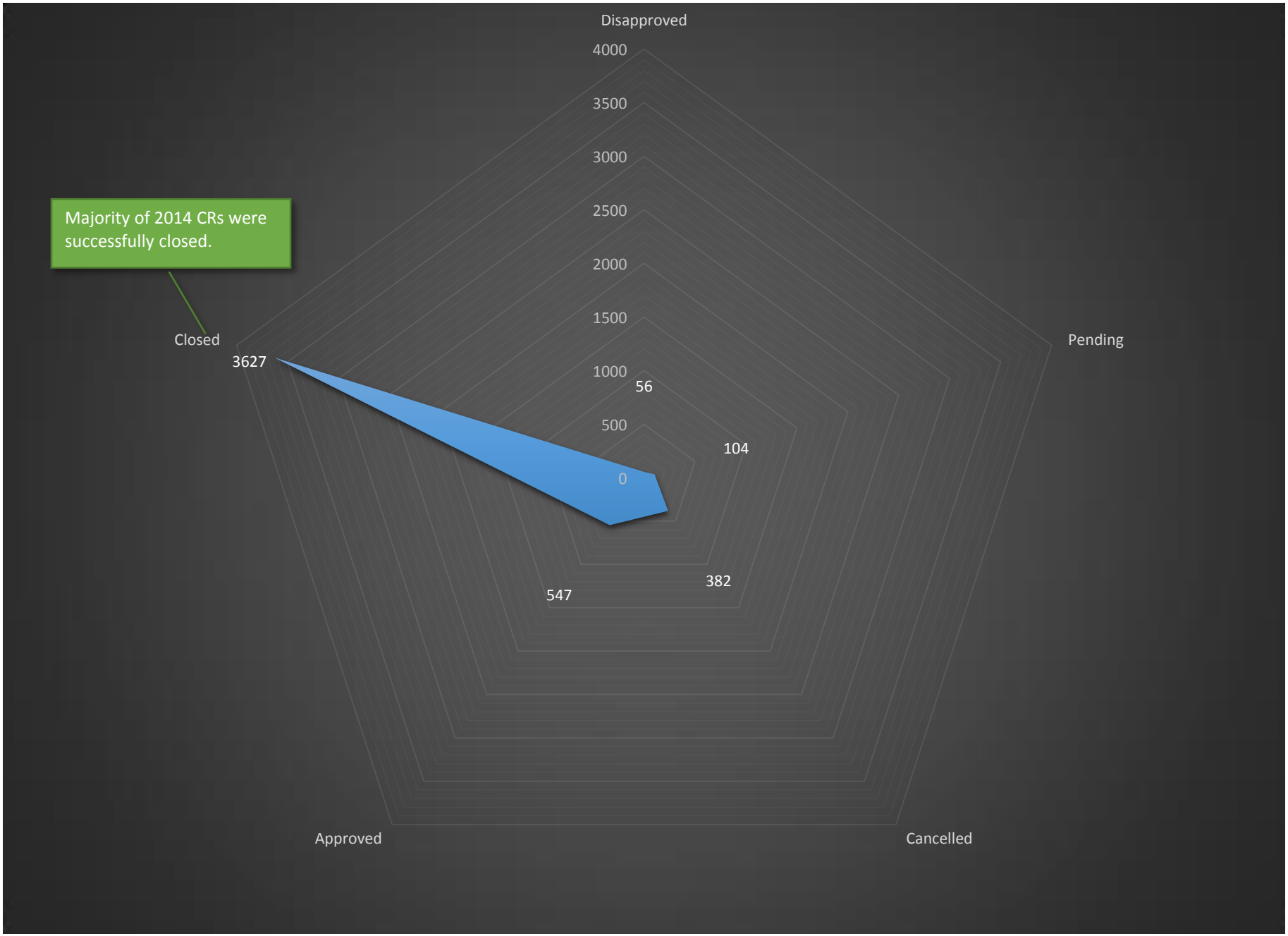

Missed NBD by Priority
VOLUME OF CRS
3000
2500
2000
1500
1000
500
0
Critical
Urgent
Routine
Volume
Missed NBD

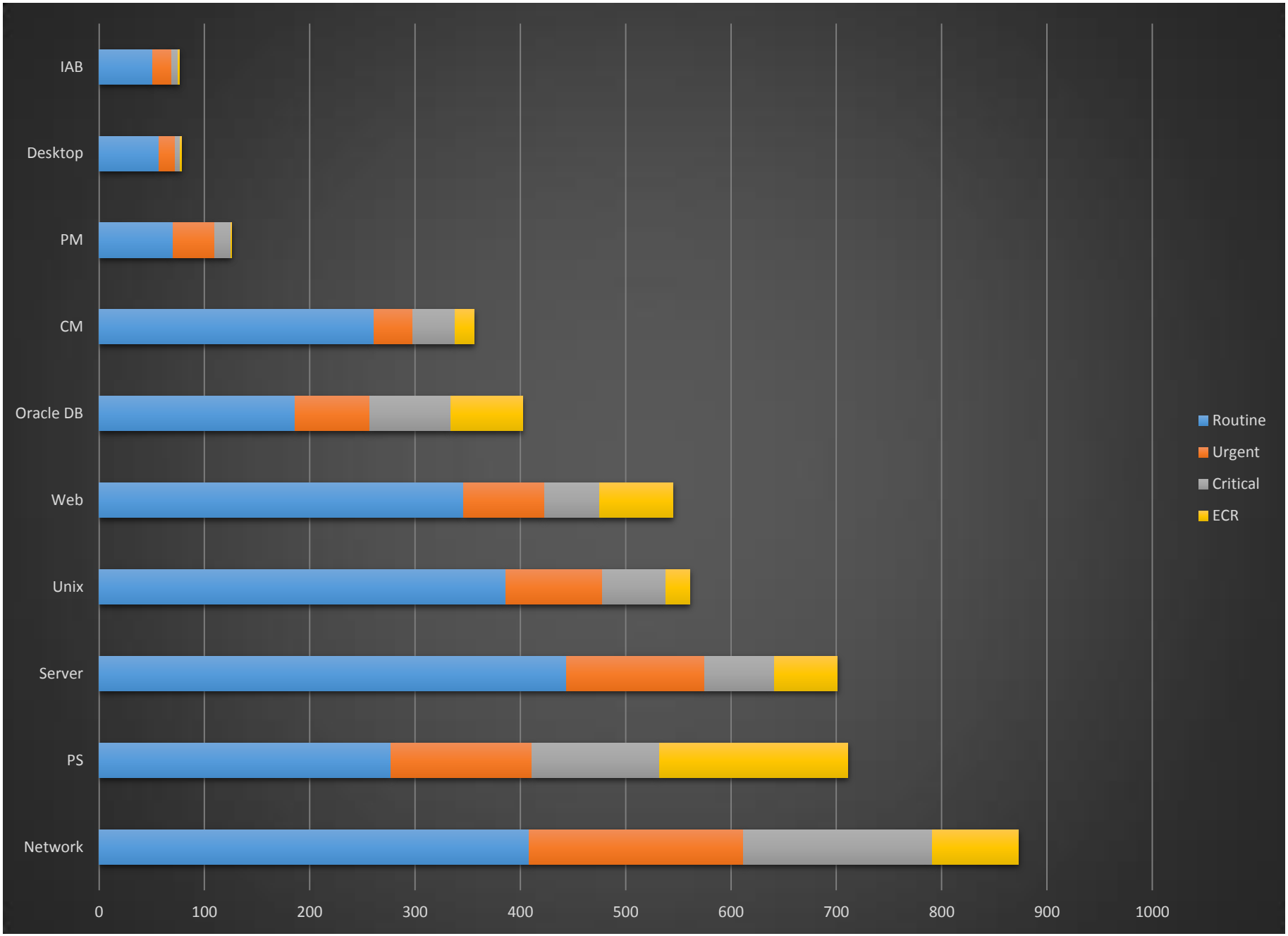

ITO's volume of includes a % of CRs initiated on behalf of the customer (e.g. child CRs to a project or parent CR).
PERSEREC 0%
PTD 1%
DAP 5%
CIO 5%
PSA 5%
ES 8%
IS 13%
DEERS 14%
ITO 49%
PERSEREC PTD DAP CIO PSA ES IS DEERS ITO

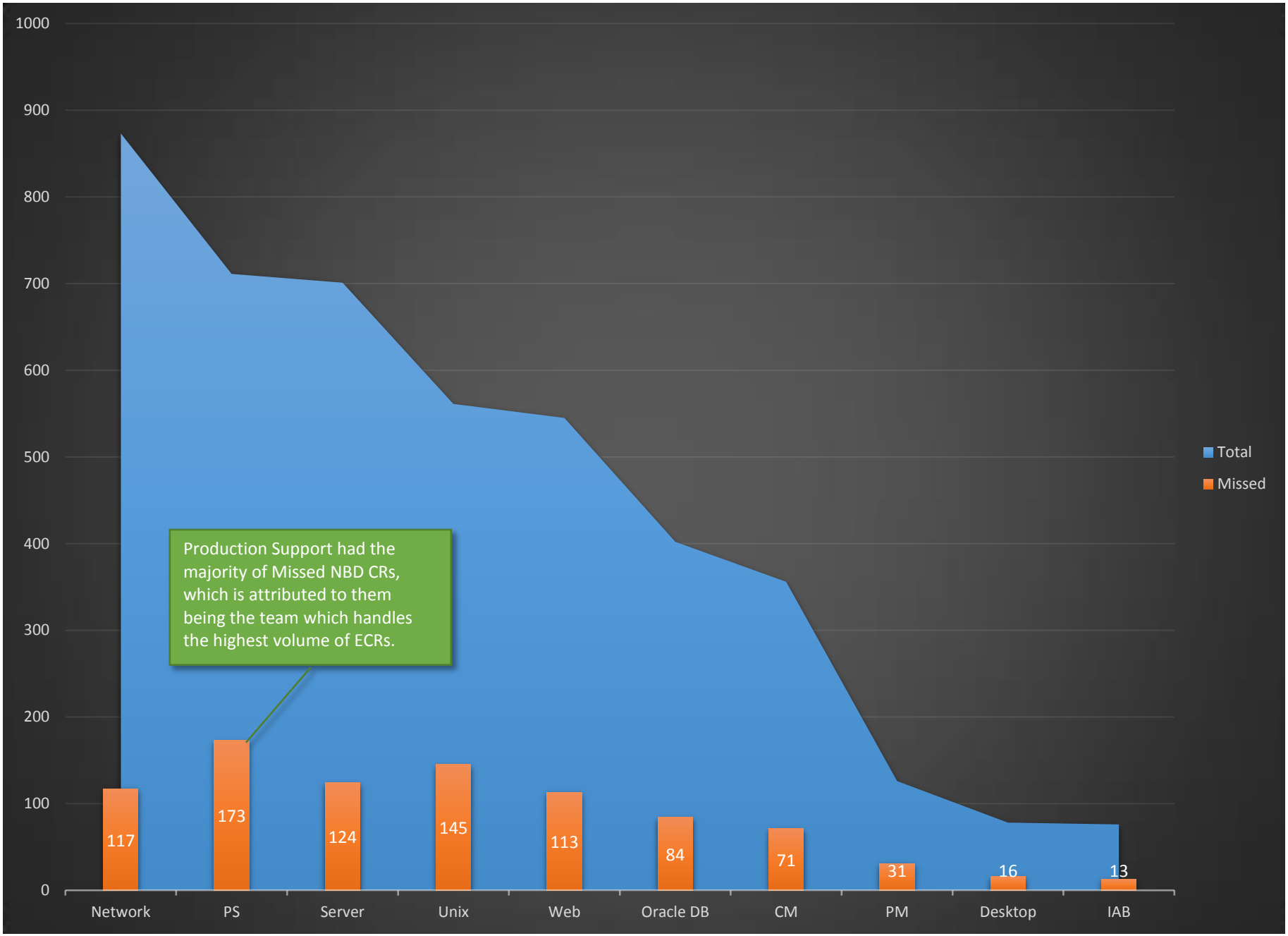
The year broken by QRTs to reflect the distribution of elevated priority changes throughout the year.

Q2 has seen the highest volume of ECRs compared to Q1, while Q1 had the highest volume of Urgent CRs.




Majority of 2014 CRs were successfully closed.
Disapproved
4000
3500
3000
2500
2000
1500
1000
500
0
Closed
3627
Pending
56
104
382
547
Approved
Cancelled


IAB
Desktop
PM
CM
Oracle DB
Web
Unix
Server
PS
Network
0
100
200
300
400
500
600
700
800
900
1000
Routine
Urgent
Critical
ECR


1000
900
800
700
600
500
400
300
200
100
0
Total
Missed
Production Support had the majority of Missed NBD CRs, which is attributed to them being the team which handles the highest volume of ECRs.
117
173
124
145
113
84
71
31
16
13
Network
PS
Server
Unix
Web
Oracle DB
CM
PM
Desktop
IAB

Configuration Management

CM Historical Workload - 2014

MONTH	DEPLOYED TO	NUMBER OF DEPLOYMENTS
APRIL	CL Model Office 1	4
APRIL	CL Model Office 1 Oracle 11g	7
APRIL	CL Model Office 2	3
APRIL	CL Model Office 2 Oracle 11g	4
APRIL	CL Production	15
APRIL	CL Production Oracle 11g	1
APRIL	CL Test	3
APRIL	Contractor Test Demo 1	22
APRIL	Contractor Test Demo 1 11g	14
APRIL	Contractor Test Demo 1 Cognos	1
APRIL	Contractor Test Demo 2	26
APRIL	Contractor Test Demo 2 11g	53
APRIL	Contractor Test Staging	3
APRIL	Contractor Test VLER DEMOS	11
APRIL	Contractor Test VLER GOLD 11g	28
APRIL	Disaster Recovery	6
APRIL	Disaster Recovery Oracle 11g	68
APRIL	Maven Repository	45
APRIL	Model Office 1	52
APRIL	Model Office 1 Cognos	1
APRIL	Model Office 1 Oracle 11g	181
APRIL	Model Office 2	29
APRIL	Model Office 2 Cognos	9
APRIL	Model Office 2 Oracle 11g	37
APRIL	Production	74
APRIL	Production Cognos	4
APRIL	Production Oracle 11g	107

Configuration Management

APRIL	Production Staging (CTRLTABS)	2
APRIL	Test 1	69
APRIL	Test 1 Cognos	1
APRIL	Test 1 Oracle 11g	284
APRIL	Test 2	31
APRIL	Test 2 Cognos	25
APRIL	Test 2 Oracle 11g	70
APRIL	On Production Download Site	1
APRIL	Staged for CL Model Office 1	3
APRIL	Staged for CL Model Office 2	3
APRIL	Staged for Contractor Test Demo 1	18
APRIL	Staged for Contractor Test Demo 2	26
APRIL	Staged for Contractor Test VLER DEMOS	16
APRIL	Staged for Movement to Model Office 1	34
APRIL	Staged for Movement to Model Office 1 Oracle 11g	4
APRIL	Staged for Movement to Model Office 2	18
APRIL	Staged for Movement to Model Office 2 Oracle 11g	3
APRIL	Staged for Movement to Production	24
APRIL	Staged for Test 1	64
APRIL	Staged for Test 1 EUEE 11g	2
APRIL	Staged for Test 1 Oracle 11g	292
APRIL	Staged for Test 2	27
APRIL	Staged for Test 2 Oracle 11g	48
AUGUST	CL Model Office 1	2
AUGUST	CL Model Office 1 Oracle 11g	1
AUGUST	CL Production	5
AUGUST	CL Production Oracle 11g	1
AUGUST	Contractor Test Demo 1	18
AUGUST	Contractor Test Demo 1 11g	17
AUGUST	Contractor Test Demo 2	18

Configuration Management

AUGUST	Contractor Test Demo 2 11g	41
AUGUST	Contractor Test VLER DEMOG	55
AUGUST	Contractor Test VLER DEMOS	7
AUGUST	Contractor Test VLER GOLD 11g	6
AUGUST	Disaster Recovery	6
AUGUST	Disaster Recovery Oracle 11g	31
AUGUST	Maven Repository	32
AUGUST	Model Office 1	55
AUGUST	Model Office 1 Cognos	2
AUGUST	Model Office 1 Oracle 11g	219
AUGUST	Model Office 2	36
AUGUST	Model Office 2 Cognos	5
AUGUST	Model Office 2 Oracle 11g	63
AUGUST	Production	46
AUGUST	Production Cognos	3
AUGUST	Production Oracle 11g	33
AUGUST	Production Staging (CTRLTABS)	4
AUGUST	Stress Test	1
AUGUST	Stress Test Oracle 11g	6
AUGUST	Test 1	44
AUGUST	Test 1 Cognos	1
AUGUST	Test 1 Oracle 11g	459
AUGUST	Test 2	23
AUGUST	Test 2 Cognos	15
AUGUST	Test 2 Oracle 11g	93
AUGUST	Staged for CL Model Office 1	2
AUGUST	Staged for CL Production	5
AUGUST	Staged for Contractor Test Demo 1	32
AUGUST	Staged for Contractor Test Demo 2	34
AUGUST	Staged for Contractor Test VLER DEMOG	2

Configuration Management

AUGUST	Staged for Contractor Test VLER DEMOS	14
AUGUST	Staged for Movement to Model Office 1	43
AUGUST	Staged for Movement to Model Office 1 Oracle 11g	15
AUGUST	Staged for Movement to Model Office 2	21
AUGUST	Staged for Movement to Model Office 2 Oracle 11g	3
AUGUST	Staged for Movement to Production	25
AUGUST	Staged for Test 1	49
AUGUST	Staged for Test 1 Oracle 11g	377
AUGUST	Staged for Test 2	19
AUGUST	Staged for Test 2 Oracle 11g	47
DECEMBER	CL Model Office 1	1
DECEMBER	CL Model Office 1 Oracle 11g	4
DECEMBER	CL Production Oracle 11g	4
DECEMBER	Contractor Test Demo 1	10
DECEMBER	Contractor Test Demo 1	72
DECEMBER	Contractor Test Demo 1 11g	11
DECEMBER	Contractor Test Demo 1 11g	31
DECEMBER	Contractor Test Demo 2	11
DECEMBER	Contractor Test Demo 2	78
DECEMBER	Contractor Test Demo 2 11g	26
DECEMBER	Contractor Test Staging	1
DECEMBER	Contractor Test VLER DEMOG	1
DECEMBER	Contractor Test VLER DEMOG	9
DECEMBER	Contractor Test VLER DEMOS	4
DECEMBER	Contractor Test VLER DEMOS	9
DECEMBER	Contractor Test VLER GOLD 11g	12
DECEMBER	Contractor Test VLER GOLD 11g	18
DECEMBER	Contractor Test VLER SILVER 11g	21
DECEMBER	Disaster Recovery	1
DECEMBER	Disaster Recovery	3

Configuration Management

DECEMBER	Disaster Recovery Oracle 11g	4
DECEMBER	Disaster Recovery Oracle 11g	15
DECEMBER	Maven Repository	41
DECEMBER	Maven Repository	42
DECEMBER	Model Office 1	26
DECEMBER	Model Office 1	48
DECEMBER	Model Office 1 Cognos	1
DECEMBER	Model Office 1 Oracle 11g	128
DECEMBER	Model Office 1 Oracle 11g	161
DECEMBER	Model Office 1 Sun App Server	1
DECEMBER	Model Office 2	12
DECEMBER	Model Office 2	24
DECEMBER	Model Office 2 Cognos	3
DECEMBER	Model Office 2 Cognos	5
DECEMBER	Model Office 2 Oracle 11g	9
DECEMBER	Model Office 2 Oracle 11g	44
DECEMBER	Production	49
DECEMBER	Production	115
DECEMBER	Production Cognos	2
DECEMBER	Production Cognos	3
DECEMBER	Production Oracle 11g	54
DECEMBER	Production Oracle 11g	66
DECEMBER	Production Staging (CTRLTABS)	2
DECEMBER	Production Staging (CTRLTABS)	3
DECEMBER	Stress Test	28
DECEMBER	Stress Test Oracle 11g	1
DECEMBER	Stress Test Oracle 11g	10
DECEMBER	Test 1	28
DECEMBER	Test 1	52
DECEMBER	Test 1 Cognos	1

Configuration Management

DECEMBER	Test 1 Oracle 11g	244
DECEMBER	Test 1 Oracle 11g	271
DECEMBER	Test 2	4
DECEMBER	Test 2	16
DECEMBER	Test 2 Cognos	5
DECEMBER	Test 2 Cognos	16
DECEMBER	Test 2 Oracle 11g	33
DECEMBER	Test 2 Oracle 11g	57
DECEMBER	Staged for CL Model Office 1	3
DECEMBER	Staged for CL Model Office 2	3
DECEMBER	Staged for CL Production	63
DECEMBER	Staged for CL Test	1
DECEMBER	Staged for Contractor Test Demo 1	18
DECEMBER	Staged for Contractor Test Demo 1	124
DECEMBER	Staged for Contractor Test Demo 2	20
DECEMBER	Staged for Contractor Test Demo 2	134
DECEMBER	Staged for Contractor Test VLER DEMOG	18
DECEMBER	Staged for Contractor Test VLER DEMOS	2
DECEMBER	Staged for Contractor Test VLER DEMOS	18
DECEMBER	Staged for Movement to Contractor Test	2
DECEMBER	Staged for Movement to Model Office 1	17
DECEMBER	Staged for Movement to Model Office 1	40
DECEMBER	Staged for Movement to Model Office 1 Oracle 11g	1
DECEMBER	Staged for Movement to Model Office 2	5
DECEMBER	Staged for Movement to Model Office 2	12
DECEMBER	Staged for Movement to Model Office 2 Oracle 11g	1
DECEMBER	Staged for Movement to Model Office 2 Oracle 11g	2
DECEMBER	Staged for Movement to Production	39
DECEMBER	Staged for Movement to Production	79
DECEMBER	Staged for Test 1	34

Configuration Management

DECEMBER	Staged for Test 1	52
DECEMBER	Staged for Test 1 EUEE 11g	1
DECEMBER	Staged for Test 1 EUEE 11g	8
DECEMBER	Staged for Test 1 Oracle 11g	241
DECEMBER	Staged for Test 1 Oracle 11g	293
DECEMBER	Staged for Test 2	4
DECEMBER	Staged for Test 2	14
DECEMBER	Staged for Test 2 Oracle 11g	27
DECEMBER	Staged for Test 2 Oracle 11g	60
FEBRUARY	CL Production	3
FEBRUARY	Contractor Test Demo 1	4
FEBRUARY	Contractor Test Demo 1 11g	35
FEBRUARY	Contractor Test Demo 1 Cognos	1
FEBRUARY	Contractor Test Demo 2	13
FEBRUARY	Contractor Test Demo 2 11g	37
FEBRUARY	Contractor Test Staging	1
FEBRUARY	Contractor Test Staging Demo 2	2
FEBRUARY	Contractor Test VLER DEMOS	2
FEBRUARY	Contractor Test VLER GOLD 11g	3
FEBRUARY	Disaster Recovery	1
FEBRUARY	Disaster Recovery Oracle 11g	5
FEBRUARY	Maven Repository	60
FEBRUARY	Model Office 1	55
FEBRUARY	Model Office 1 Oracle 11g	165
FEBRUARY	Model Office 2	13
FEBRUARY	Model Office 2 Cognos	5
FEBRUARY	Model Office 2 Oracle 11g	26
FEBRUARY	Production	33
FEBRUARY	Production Oracle 11g	45
FEBRUARY	Production Staging (CTRLTABS)	2

Configuration Management

FEBRUARY	Test 1	72
FEBRUARY	Test 1 Oracle 11g	241
FEBRUARY	Test 2	5
FEBRUARY	Test 2 Cognos	10
FEBRUARY	Test 2 Oracle 11g	81
FEBRUARY	Staged for CL Model Office 1	3
FEBRUARY	Staged for Contractor Test Demo 1	6
FEBRUARY	Staged for Contractor Test Demo 2	20
FEBRUARY	Staged for Contractor Test VLER DEMOS	6
FEBRUARY	Staged for Movement to Model Office 1	31
FEBRUARY	Staged for Movement to Model Office 2 Oracle 11g	2
FEBRUARY	Staged for Movement to Production	22
FEBRUARY	Staged for Test 1	64
FEBRUARY	Staged for Test 1 Oracle 11g	279
FEBRUARY	Staged for Test 2	1
FEBRUARY	Staged for Test 2 Oracle 11g	64
JANUARY	CL Model Office 1	1
JANUARY	CL Production Oracle 11g	4
JANUARY	Contractor Test Demo 1	72
JANUARY	Contractor Test Demo 1 11g	11
JANUARY	Contractor Test Demo 2	78
JANUARY	Contractor Test Demo 2 11g	26
JANUARY	Contractor Test VLER DEMOG	1
JANUARY	Contractor Test VLER DEMOS	4
JANUARY	Contractor Test VLER GOLD 11g	12
JANUARY	Disaster Recovery	3
JANUARY	Disaster Recovery Oracle 11g	15
JANUARY	Maven Repository	42
JANUARY	Model Office 1	48
JANUARY	Model Office 1 Cognos	1

Configuration Management

JANUARY	Model Office 1 Oracle 11g	128
JANUARY	Model Office 2	24
JANUARY	Model Office 2 Cognos	5
JANUARY	Model Office 2 Oracle 11g	44
JANUARY	Production	115
JANUARY	Production Cognos	3
JANUARY	Production Oracle 11g	54
JANUARY	Production Staging (CTRLTABS)	2
JANUARY	Stress Test	28
JANUARY	Stress Test Oracle 11g	10
JANUARY	Test 1	52
JANUARY	Test 1 Cognos	1
JANUARY	Test 1 Oracle 11g	244
JANUARY	Test 2	16
JANUARY	Test 2 Cognos	16
JANUARY	Test 2 Oracle 11g	57
JANUARY	Staged for CL Model Office 1	3
JANUARY	Staged for CL Model Office 2	3
JANUARY	Staged for CL Production	63
JANUARY	Staged for CL Test	1
JANUARY	Staged for Contractor Test Demo 1	124
JANUARY	Staged for Contractor Test Demo 2	134
JANUARY	Staged for Contractor Test VLER DEMOS	2
JANUARY	Staged for Movement to Model Office 1	40
JANUARY	Staged for Movement to Model Office 1 Oracle 11g	1
JANUARY	Staged for Movement to Model Office 2	12
JANUARY	Staged for Movement to Model Office 2 Oracle 11g	2
JANUARY	Staged for Movement to Production	79
JANUARY	Staged for Test 1	52
JANUARY	Staged for Test 1 EUEE 11g	8

Configuration Management

JANUARY	Staged for Test 1 Oracle 11g	293
JANUARY	Staged for Test 2	14
JANUARY	Staged for Test 2 Oracle 11g	60
JULY	Contractor Test Demo 1	7
JULY	Contractor Test Demo 1 11g	16
JULY	Contractor Test Demo 2	38
JULY	Contractor Test Demo 2 11g	53
JULY	Contractor Test VLER DEMOG	1
JULY	Contractor Test VLER DEMOS	40
JULY	Contractor Test VLER GOLD 11g	28
JULY	Disaster Recovery	2
JULY	Disaster Recovery Oracle 11g	39
JULY	Maven Repository	40
JULY	Model Office 1	38
JULY	Model Office 1 EUEE Oracle 11g	28
JULY	Model Office 1 Oracle 11g	136
JULY	Model Office 2	7
JULY	Model Office 2 Oracle 11g	26
JULY	Production	43
JULY	Production Oracle 11g	43
JULY	Production Staging (CTRLTABS)	3
JULY	Stress Test	7
JULY	Stress Test Oracle 11g	2
JULY	Test 1	36
JULY	Test 1 Cognos	3
JULY	Test 1 EUEE 11g	21
JULY	Test 1 Oracle 11g	368
JULY	Test 2	3
JULY	Test 2 Cognos	7
JULY	Test 2 Oracle 11g	50

Configuration Management

JULY	Staged for Contractor Test Demo 1	10
JULY	Staged for Contractor Test Demo 2	60
JULY	Staged for Contractor Test VLER DEMOG	102
JULY	Staged for Contractor Test VLER DEMOS	74
JULY	Staged for Movement to Model Office 1	34
JULY	Staged for Movement to Model Office 1 Oracle 11g	2
JULY	Staged for Movement to Model Office 2	5
JULY	Staged for Movement to Production	17
JULY	Staged for Movement to Stress Test	7
JULY	Staged for Test 1	32
JULY	Staged for Test 1 EUEE 11g	6
JULY	Staged for Test 1 Oracle 11g	306
JULY	Staged for Test 2	5
JULY	Staged for Test 2 Oracle 11g	35
JUNE	CL Model Office 1 Oracle 11g	1
JUNE	Contractor Test Demo 1	9
JUNE	Contractor Test Demo 1 11g	17
JUNE	Contractor Test Demo 2	20
JUNE	Contractor Test Demo 2 11g	18
JUNE	Contractor Test Staging	1
JUNE	Contractor Test VLER GOLD 11g	6
JUNE	Disaster Recovery	5
JUNE	Disaster Recovery Oracle 11g	21
JUNE	Maven Repository	67
JUNE	Model Office 1	44
JUNE	Model Office 1 EUEE Oracle 11g	60
JUNE	Model Office 1 Oracle 11g	135
JUNE	Model Office 2	34
JUNE	Model Office 2 Cognos	1
JUNE	Model Office 2 Oracle 11g	23

Configuration Management

JUNE	Production	88
JUNE	Production Cognos	1
JUNE	Production Oracle 11g	42
JUNE	Production Staging (CTRLTABS)	8
JUNE	Stress Test	40
JUNE	Test 1	46
JUNE	Test 1 EUEE 11g	1
JUNE	Test 1 Oracle 11g	311
JUNE	Test 2	32
JUNE	Test 2 Cognos	9
JUNE	Test 2 Oracle 11g	50
JUNE	Staged for Contractor Test Demo 1	10
JUNE	Staged for Contractor Test Demo 2	30
JUNE	Staged for Movement to Model Office 1	23
JUNE	Staged for Movement to Model Office 2	23
JUNE	Staged for Movement to Production	31
JUNE	Staged for Movement to Stress Test	16
JUNE	Staged for Test 1	37
JUNE	Staged for Test 1 EUEE 11g	6
JUNE	Staged for Test 1 Oracle 11g	252
JUNE	Staged for Test 2	30
JUNE	Staged for Test 2 Oracle 11g	35
MARCH	24x7 Production Oracle 11g	3
MARCH	CL Production Oracle 11g	3
MARCH	CL Test	2
MARCH	Contractor Test Demo 1	60
MARCH	Contractor Test Demo 1 11g	26
MARCH	Contractor Test Demo 1 Cognos	1
MARCH	Contractor Test Demo 2	42
MARCH	Contractor Test Demo 2 11g	29

Configuration Management

MARCH	Contractor Test VLER DEMOS	83
MARCH	Contractor Test VLER GOLD 11g	28
MARCH	Contractor Test VLER SILVER 11g	1
MARCH	Disaster Recovery	41
MARCH	Disaster Recovery Oracle 11g	109
MARCH	Maven Repository	69
MARCH	Model Office 1	79
MARCH	Model Office 1 Cognos	1
MARCH	Model Office 1 Oracle 11g	194
MARCH	Model Office 2	97
MARCH	Model Office 2 Cognos	3
MARCH	Model Office 2 Oracle 11g	54
MARCH	Production	169
MARCH	Production Cognos	1
MARCH	Production Oracle 11g	92
MARCH	Production Staging (CTRLTABS)	2
MARCH	Stress Test	15
MARCH	Stress Test Oracle 11g	3
MARCH	Test 1	53
MARCH	Test 1 Cognos	1
MARCH	Test 1 Oracle 11g	308
MARCH	Test 2	103
MARCH	Test 2 Cognos	5
MARCH	Test 2 Oracle 11g	80
MARCH	Staged for CL Production	24
MARCH	Staged for Contractor Test Demo 1	44
MARCH	Staged for Contractor Test Demo 2	58
MARCH	Staged for Contractor Test VLER DEMOS	2
MARCH	Staged for Movement to Benchmark Region	1
MARCH	Staged for Movement to Model Office 1	35

Configuration Management

MARCH	Staged for Movement to Model Office 1 Oracle 11g	7
MARCH	Staged for Movement to Model Office 2	4
MARCH	Staged for Movement to Model Office 2 Oracle 11g	1
MARCH	Staged for Movement to Production	43
MARCH	Staged for Movement to Stress Test	15
MARCH	Staged for Test	2
MARCH	Staged for Test 1	52
MARCH	Staged for Test 1 EUEE 11g	27
MARCH	Staged for Test 1 Oracle 10gR2	1
MARCH	Staged for Test 1 Oracle 11g	374
MARCH	Staged for Test 2	9
MARCH	Staged for Test 2 Oracle 11g	43
MAY	CL Production Oracle 11g	2
MAY	Contractor Test Demo 1	6
MAY	Contractor Test Demo 1 11g	10
MAY	Contractor Test Demo 2	15
MAY	Contractor Test Demo 2 11g	30
MAY	Contractor Test VLER DEMOG	3
MAY	Contractor Test VLER DEMOS	3
MAY	Contractor Test VLER GOLD 11g	2
MAY	Disaster Recovery	2
MAY	Disaster Recovery Oracle 11g	9
MAY	Maven Repository	47
MAY	Model Office 1	64
MAY	Model Office 1 EUEE Oracle 11g	26
MAY	Model Office 1 Oracle 11g	118
MAY	Model Office 2	43
MAY	Model Office 2 Cognos	2
MAY	Model Office 2 Oracle 11g	55
MAY	Production	8

Configuration Management

MAY	Production Oracle 11g	4
MAY	Stress Test Oracle 11g	8
MAY	Test 1	60
MAY	Test 1 EUEE 11g	41
MAY	Test 1 Oracle 11g	196
MAY	Test 2	14
MAY	Test 2 Cognos	20
MAY	Test 2 Oracle 11g	71
MAY	Staged for Contractor Test Demo 1	4
MAY	Staged for Contractor Test Demo 2	20
MAY	Staged for Contractor Test VLER DEMOG	6
MAY	Staged for Contractor Test VLER DEMOS	6
MAY	Staged for Movement to Model Office 1	44
MAY	Staged for Movement to Model Office 1 Oracle 11g	3
MAY	Staged for Movement to Model Office 2	33
MAY	Staged for Movement to Model Office 2 Oracle 11g	3
MAY	Staged for Movement to Production	1
MAY	Staged for Test 1	61
MAY	Staged for Test 1 EUEE 11g	5
MAY	Staged for Test 1 Oracle 11g	173
MAY	Staged for Test 2	22
MAY	Staged for Test 2 Oracle 11g	32
NOVEMBER	CL Model Office 1 Oracle 11g	2
NOVEMBER	CL Production	2
NOVEMBER	CL Production Oracle 11g	1
NOVEMBER	Contractor Test Demo 1	9
NOVEMBER	Contractor Test Demo 1 11g	65
NOVEMBER	Contractor Test Demo 2	14
NOVEMBER	Contractor Test Demo 2 11g	25
NOVEMBER	Contractor Test VLER DEMOG	14

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NOVEMBER	Contractor Test VLER DEMOS	14
NOVEMBER	Contractor Test VLER GOLD 11g	30
NOVEMBER	Contractor Test VLER SILVER 11g	28
NOVEMBER	Disaster Recovery	2
NOVEMBER	Maven Repository	24
NOVEMBER	Model Office 1	37
NOVEMBER	Model Office 1 Oracle 10gR3	1
NOVEMBER	Model Office 1 Oracle 11g	162
NOVEMBER	Model Office 2	11
NOVEMBER	Model Office 2 Cognos	9
NOVEMBER	Model Office 2 Oracle 11g	32
NOVEMBER	Production	41
NOVEMBER	Production Cognos	4
NOVEMBER	Production Oracle 11g	56
NOVEMBER	Stress Test	1
NOVEMBER	Stress Test Oracle 11g	1
NOVEMBER	Test 1	33
NOVEMBER	Test 1 Oracle 11g	195
NOVEMBER	Test 2	6
NOVEMBER	Test 2 Cognos	7
NOVEMBER	Test 2 Oracle 11g	39
NOVEMBER	Staged for CL Production	3
NOVEMBER	Staged for Contractor Test Demo 1	10
NOVEMBER	Staged for Contractor Test Demo 2	10
NOVEMBER	Staged for Contractor Test VLER DEMOG	16
NOVEMBER	Staged for Contractor Test VLER DEMOS	16
NOVEMBER	Staged for Movement to Model Office 1	27
NOVEMBER	Staged for Movement to Model Office 1 Oracle 11g	6
NOVEMBER	Staged for Movement to Model Office 2	4
NOVEMBER	Staged for Movement to Production	17

Configuration Management

NOVEMBER	Staged for Test 1	34
NOVEMBER	Staged for Test 1 Oracle 11g	196
NOVEMBER	Staged for Test 2	5
NOVEMBER	Staged for Test 2 Oracle 11g	17
OCTOBER	CL Model Office 1	2
OCTOBER	CL Model Office 1 Oracle 11g	1
OCTOBER	CL Production	1
OCTOBER	Contractor Test Demo 1	10
OCTOBER	Contractor Test Demo 1 11g	22
OCTOBER	Contractor Test Demo 2	9
OCTOBER	Contractor Test Demo 2 11g	28
OCTOBER	Contractor Test Staging Demo 2	2
OCTOBER	Contractor Test VLER DEMOG	8
OCTOBER	Contractor Test VLER DEMOS	7
OCTOBER	Contractor Test VLER GOLD 11g	68
OCTOBER	Contractor Test VLER SILVER 11g	67
OCTOBER	Disaster Recovery	2
OCTOBER	Disaster Recovery Oracle 11g	30
OCTOBER	Maven Repository	28
OCTOBER	Model Office 1	48
OCTOBER	Model Office 1 Cognos	1
OCTOBER	Model Office 1 Oracle 11g	216
OCTOBER	Model Office 2	7
OCTOBER	Model Office 2 Cognos	9
OCTOBER	Model Office 2 Oracle 11g	33
OCTOBER	Production	37
OCTOBER	Production Cognos	1
OCTOBER	Production Oracle 11g	59
OCTOBER	Production Staging (CTRLTABS)	2
OCTOBER	Stress Test	5

Configuration Management

OCTOBER	Test 1	57
OCTOBER	Test 1 Oracle 11g	357
OCTOBER	Test 2	3
OCTOBER	Test 2 Cognos	16
OCTOBER	Test 2 Oracle 11g	69
OCTOBER	Staged for CL Model Office 1	2
OCTOBER	Staged for CL Production	1
OCTOBER	Staged for Contractor Test Demo 1	14
OCTOBER	Staged for Contractor Test Demo 2	8
OCTOBER	Staged for Contractor Test VLER DEMOG	26
OCTOBER	Staged for Contractor Test VLER DEMOS	22
OCTOBER	Staged for Movement to Model Office 1	32
OCTOBER	Staged for Movement to Model Office 1 Oracle 11g	9
OCTOBER	Staged for Movement to Model Office 2 Oracle 11g	1
OCTOBER	Staged for Movement to Production	12
OCTOBER	Staged for Movement to Stress Test	3
OCTOBER	Staged for Test 1	54
OCTOBER	Staged for Test 1 Oracle 11g	313
OCTOBER	Staged for Test 2 Oracle 11g	66
SEPTEMBER	Benchmark Region	1
SEPTEMBER	CL Model Office 1 Oracle 11g	5
SEPTEMBER	CL Production Oracle 11g	1
SEPTEMBER	Contractor Test Demo 1	15
SEPTEMBER	Contractor Test Demo 1 11g	20
SEPTEMBER	Contractor Test Demo 2	67
SEPTEMBER	Contractor Test Demo 2 11g	51
SEPTEMBER	Contractor Test VLER DEMOG	16
SEPTEMBER	Contractor Test VLER DEMOS	17
SEPTEMBER	Contractor Test VLER GOLD 11g	62
SEPTEMBER	Contractor Test VLER SILVER 11g	37

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SEPTEMBER	Disaster Recovery	3
SEPTEMBER	Disaster Recovery Oracle 11g	49
SEPTEMBER	Maven Repository	41
SEPTEMBER	Model Office 1	62
SEPTEMBER	Model Office 1 Cognos	3
SEPTEMBER	Model Office 1 Oracle 11g	183
SEPTEMBER	Model Office 2	13
SEPTEMBER	Model Office 2 Cognos	9
SEPTEMBER	Model Office 2 Oracle 11g	40
SEPTEMBER	Production	76
SEPTEMBER	Production Cognos	4
SEPTEMBER	Production Oracle 11g	109
SEPTEMBER	Production Staging (CTRLTABS)	5
SEPTEMBER	Stress Test	5
SEPTEMBER	Test 1	67
SEPTEMBER	Test 1 Cognos	4
SEPTEMBER	Test 1 Oracle 11g	344
SEPTEMBER	Test 2	4
SEPTEMBER	Test 2 Cognos	16
SEPTEMBER	Test 2 Oracle 11g	108
SEPTEMBER	Staged for Contractor Test Demo 1	10
SEPTEMBER	Staged for Contractor Test Demo 2	26
SEPTEMBER	Staged for Contractor Test VLER DEMOG	28
SEPTEMBER	Staged for Contractor Test VLER DEMOS	28
SEPTEMBER	Staged for Movement to Model Office 1	47
SEPTEMBER	Staged for Movement to Model Office 1 Oracle 11g	14
SEPTEMBER	Staged for Movement to Model Office 2	3
SEPTEMBER	Staged for Movement to Model Office 2 Oracle 11g	3
SEPTEMBER	Staged for Movement to Production	44
SEPTEMBER	Staged for Movement to Stress Test	2

Configuration Management

SEPTEMBER	Staged for Test 1	65
SEPTEMBER	Staged for Test 1 Oracle 11g	289
SEPTEMBER	Staged for Test 2	3
SEPTEMBER	Staged for Test 2 Oracle 11g	76

ID	ITEM	FILENAME	TYPE	CATEGORY
245	ADR/ADW Application Monitor (ADWMON)	adw_monitor.zip	Software Program	ADW program
469	UPNL 6500 C Program	upnl6500	Software Program	ADW program
455	CTGCERRF C Program	ctgcerrf	Software Program	Back End Processing Program
113	DSCS program	dscs	Software Program	Back End Processing Program
121	Futures Program	futures.exe	Software Program	Back End Processing Program
271	GCHMOBLA	gchmobla	Software Program	Back End Processing Program
272	GCHPCC01	gchpcc01	Software Program	Back End Processing Program
273	GCHPCC02	gchpcc02	Software Program	Back End Processing Program
274	GCHPCC11	gchpcc11	Software Program	Back End Processing Program
276	GCHPCC12	gchpcc12	Software Program	Back End Processing Program
275	GCHPCC21	gchpcc21	Software Program	Back End Processing Program
277	GCHPCC22	gchpcc22	Software Program	Back End Processing Program
269	GCHPCC61	gchpcc61	Software Program	Back End Processing Program

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270	GCHPCC62	gchpcc62	Software Program	Back End Processing Program
278	LU 6.2 Communicator	lu 6.2 communicator	Software Program	Back End Processing Program
292	UIC Address Loader C Program	uicadrs	Software Program	Back End Processing Program
284	maXdelet	maxdelet	Software Program	Back End Processing Program
285	maXpull	maxpull	Software Program	Back End Processing Program
286	maXpush	maxpush	Software Program	Back End Processing Program
133	sock2kb	sock2kb	Software Program	Back End Processing Program
442	Contingency Extract Batch Application	contingxtr	Software Program	Batch Application
606	DB Extract Batch (J2EE)	dbxbat.ear	Software Program	Batch Application
674	Defense Central Index of Investigations (DCII) Batch	dcii-batch-client.jar	Software Program	Batch Application
676	Defense Central Index of Investigations (DCII) Batch LDAP	DCII Batch LDAP	Software Program	Batch Application
489	EMMA Automated Provisioning Batch Application	emma-autoprov.jar	Software Program	Batch Application
608	Health Care Coverage Special Batch Web Application	hccspecialbat.ear	Software Program	Batch Application
390	ImmBatch Application	immbat.jar	Software Program	Batch Application
675	Improved Investigative Records Repository (iIRR) Batch	iirr-batch.jar	Software Program	Batch Application
131	PCM Civilian File Batch Load	pcmload	Software Program	Batch Application
623	PCOLS Archive Reporting	pcols_trans_archive.jar	Software Program	Batch Application
626	PCOLS Batch Transaction Processing	pcols-batch.jar	Software Program	Batch Application

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539	Purchase Card - SRS At-risk Application	pcols-atrisk.jar	Software Program	Batch Application
538	Purchase Card SRS Hierarchy Application	pcols-hierarchy.jar	Software Program	Batch Application
619	RSL Batch Application	rslbc.jar	Software Program	Batch Application
511	SSAEVS Batch-Client Application (J2EE)	ssaevsbat.ear	Software Program	Batch Application
443	TRICARE Management Activity Extract Batch Application	tmadena	Software Program	Batch Application
444	TRICARE Reserve Select Extract Batch Application	trsaif1	Software Program	Batch Application
311	CIF Reset for Lost PINS and CACs C Program		Software Program	Batch Process
328	Central Issuance Facility (cif_crd_upd) C Program	cif_crd_upd	Software Program	Batch Process
329	Central Issuance Facility (cif_pkic_upd) C Program	cif_pkic_upd	Software Program	Batch Process
561	Cladr Sync	CladrSync.jar	Software Program	Batch Process
542	Claims Reprocessing for Lost Eligibility program	crle*	Software Program	Batch Process
178	Customer Update Service - Transaction Processor	deers-adw-common.jar, deers-adw-cus-batch.jar	Software Program	Batch Process
301	DBIDS Seed Batch Process	dbids_dnvs.jar	Software Program	Batch Process
452	Dental Premium Snap Shot C Program	DntPrem_Snapshot	Software Program	Batch Process
696	EID Preprocessor	eidprep	Software Program	Batch Process
560	Purchase Card - Batch Processing For Citibank	aim-citibankbatch.jar	Software Program	Batch Process
530	Purchase Card - Batch Processing For USBank	aim-usbankbatch.jar	Software Program	Batch Process
573	RADDP Eligible not Enrolled Report	raddpene	Software Program	Batch Process

Configuration Management

572	RADDP Enrolled not Remote Report	raddpenr	Software Program	Batch Process
698	RCIAD Preporcessor	rciadprep	Software Program	Batch Process
697	RCIAD Preprocessor	rciadprep	Software Program	Batch Process
148	SUBFETCH Program	subfetch	Software Program	Batch Process
432	Socket Adapter	socketadapter	Software Program	Batch Process
335	Panel_setuid program	panel_setuid	Software Program	Batch Production Maintenance Script
258	archive-files	archive-files	Software Program	Batch Production Maintenance Script
332	batchstart program	batchstart.ksh	Software Program	Batch Production Maintenance Script
239	ckit.ksh	ckit.ksh	Software Program	Batch Production Maintenance Script
259	xferrun.ksh	xferrun.ksh	Software Program	Batch Production Maintenance Script
336	Dadm script	dadm	Software Program	Batch daemon infrastructure script
754	FeeWaiverEntitlement Pega App	FeeWvrEntl.jar	Software Program	Batch daemon infrastructure script
579	HCBnfBenElig Pega App	HCBnf_BenElig.zip	Software Program	Batch daemon infrastructure script
578	HCBnfCoPayFactor Pega App	HCBnf_CoPayFactor.zip	Software Program	Batch daemon infrastructure script
577	HCBnfCommon Pega App	HCBnf.zip	Software Program	Batch daemon infrastructure script
1138	MaintainEnrollments Pega App	HCBnfMaintEnrl.jar	Software Program	Batch daemon infrastructure script
334	PANELADM Script	paneladm	Software Program	Batch daemon infrastructure script
55	ADSM000		Software Program	CICS Map

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54	ADSM100		Software Program	CICS Map
53	ADSM200		Software Program	CICS Map
52	ADSM300		Software Program	CICS Map
41	ADSC0200		Software Program	CICS Transaction
21	ADSC0400		Software Program	CICS Transaction
35	ADSC0403		Software Program	CICS Transaction
22	ADSC0700		Software Program	CICS Transaction
25	ADSC0701		Software Program	CICS Transaction
111	ADSESS01 Session File		Software Program	CICS Transaction
40	ADSP000		Software Program	CICS Transaction
39	ADSP100		Software Program	CICS Transaction
38	ADSP200		Software Program	CICS Transaction
37	ADSP300		Software Program	CICS Transaction
56	ADSP500		Software Program	CICS Transaction
36	ADSP600		Software Program	CICS Transaction
48	DSEC0300	dsec0300	Software Program	CICS Transaction
358	blessc.ksh	blessc.ksh	Software Program	CM Script
418	build-webapp.sh	build-webapp.sh	Software Program	CM Script

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417	cm_permission script	cm_permission.pl	Software Program	CM Script
450	deploy-static.ksh	deploy-static.ksh	Software Program	CM Script
490	deploy_10gR2.sh	deploy_10gr2.sh	Software Program	CM Script
493	deploy_datasources_10gR2.sh	deploy_datasources_10gr2.sh	Software Program	CM Script
492	deploy_projprops_10gR2.sh	deploy_projprops_10gr2	Software Program	CM Script
491	deploy_static_10gR2.sh	deploy_static_10gr2.sh	Software Program	CM Script
494	deploy_webapp_10gR2.sh	deploy_webapp_10gr2.sh	Software Program	CM Script
352	installCore.ksh	installcore.ksh	Software Program	CM Script
318	installJava	installjava.ksh	Software Program	CM Script
317	installKBC	installkbc.ksh	Software Program	CM Script
319	jinfo	jinfo.ksh	Software Program	CM Script
320	kbcinfo	kbcinfo.ksh	Software Program	CM Script
325	kbout	kbout.ksh	Software Program	CM Script
553	process_deploy.pl	process_deploy.pl	Software Program	CM Script
449	push-static.ksh	push-static.ksh	Software Program	CM Script
324	rendir	rendir.ksh	Software Program	CM Script
323	untarDoap	untardoap.ksh	Software Program	CM Script
321	untarJava	untarjava.ksh	Software Program	CM Script

Configuration Management

322	untarKB	untarkb.ksh	Software Program	CM Script
363	updateCMS script	updatecms.ksh	Software Program	CM Script
155	AIONDS-Mainframe		Software Program	COTS Product (Non Web)
156	AIONDS-Unix		Software Program	COTS Product (Non Web)
226	Code 1	code1	Software Program	COTS Product (Non Web)
190	Endevor	endevor	Software Program	COTS Product (Non Web)
338	SeeBeyond - X12 EDI Engine - Java	seebeyond	Software Program	COTS Product (Non Web)
339	SeeBeyond X12 EDI Engine-Monk	seebeyond-monk	Software Program	COTS Product (Non Web)
756	Cognos Software	cognos	Software Program	COTS Product (Web)
624	Initiate Algorithm	Initiate_Algorithm.tar	Software Program	COTS Product (Web)
632	Java Mail Distribution Jar File	mail.jar	Software Program	COTS Product (Web)
406	Maven	maven	Software Program	COTS Product (Web)
419	Policy Agent 2.1.1	policy agent 2.1.1	Software Program	COTS Product (Web)
413	Tumbleweed JDK	jvatk	Software Program	COTS Product (Web)
702	TurboTAP Web Application	tubotap.war	Software Program	COTS Product (Web)
434	jMock Tool	jmock.jar,jmock-cglib.ja	Software Program	COTS Product (Web)
738	CUF Audit Shared Library	sharedlib-cuf-audit-processors.ear	Software Program	CUF Shared Library
723	CUF Beneficiary Correspondence Shared Library	sharedlib-cuf-benefits-corr-processors	Software Program	CUF Shared Library

Configuration Management

725	CUF Benefits Eligibility Shared Library	sharedlib-cuf-benefits-elig-processors	Software Program	CUF Shared Library
741	CUF Candidate Shared Library	sharedlib-candidate-processors	Software Program	CUF Shared Library
726	CUF Care Referral Shared Library	sharedlib-cuf-care-referral-processors	Software Program	CUF Shared Library
727	CUF Claims Shared Library	sharedlib-cuf-claims-processors	Software Program	CUF Shared Library
728	CUF Clinical Shared Library	sharedlib-cuf-clinical-processors	Software Program	CUF Shared Library
742	CUF Credential Issuance Shared Library	sharedlib-cuf-cred-issuance-processors	Software Program	CUF Shared Library
729	CUF Deployment Shared Library	sharedlib-cuf-deployment-processors	Software Program	CUF Shared Library
724	CUF Education Benefits Shared Library	sharedlib-cuf-edu-benefits-processors	Software Program	CUF Shared Library
730	CUF Enrollment Shared Library	sharedlib-cuf-enrollment-processors	Software Program	CUF Shared Library
731	CUF Health Care Coverage Shared Library	sharedlib-cuf-healthcc-processors	Software Program	CUF Shared Library
744	CUF JVS Shared Library	sharedlib-jvs-processors	Software Program	CUF Shared Library
732	CUF Life Insurance Shared Library	sharedlib-cuf-life-insurance-processors	Software Program	CUF Shared Library
743	CUF Local Populations Shared Library	sharedlib-localpop-processors	Software Program	CUF Shared Library
733	CUF Other Health Care Coverage Shared Library	sharedlib-cuf-other-healthcare-processors	Software Program	CUF Shared Library
746	CUF Patient Registry Shared Library	sharedlib-cuf-patient-reg-processors.ear	Software Program	CUF Shared Library
734	CUF Pay Shared Library	sharedlib-cuf-pay-processors	Software Program	CUF Shared Library
735	CUF Person Association Shared Library	sharedlib-cuf-person-asc-processors	Software Program	CUF Shared Library
736	CUF Person Contact Shared Library	sharedlib-cuf-person-contact-processors	Software Program	CUF Shared Library

Configuration Management

737	CUF Person Shared Library	sharedlib-cuf-person-processors	Software Program	CUF Shared Library
740	CUF Personnel Contact Shared Library	sharedlib-cuf-personnel-contact-processors	Software Program	CUF Shared Library
739	CUF Personnel Shared Library	sharedlib-cuf-personnel-processors	Software Program	CUF Shared Library
294	DSO Benefits Call Flow Program	dso benefits call flow program	Software Program	Call Flow Program
295	DSO Contingency Call Flow Program	dso contingency call	Software Program	Call Flow Program
296	DSO Field Support Call Flow Program	dso field support call flow	Software Program	Call Flow Program
297	DSO Rec-Play-Prompts Call Flow Program	dso rec-play-prompts call flow	Software Program	Call Flow Program
118	AFIP VB Application	afip vb app	Application	Client Application
163	Active DD executable database	datadict.mde	Application	Client Application
612	CPR Application Client	cpr-app	Software Program	Client Application
240	Civilian PCM Assignment VB Application	prg0240.exe	Application	Client Application
561	Coast Guard Eligibility Batch Client	cgebat.ear	Application	Client Application
427	DBIDS 2.7 Client Application	bids.exe	Application	Client Application
372	DBIDS 3.0 Client Application	bids.exe	Application	Client Application
370	DBIDS-IACS Client Application	bids.exe	Application	Client Application
369	DBIDS-K Client Appliaction	bids.exe	Application	Client Application
368	DBIDS-MP Client Application	bids.exe	Application	Client Application
371	DBIDS-SWA Client Application	bids.exe	Application	Client Application
49	DEERS HL7 Interface	deers hl7 interface	Application	Client Application
233	DMDC Image Management System	prg0233.exe	Application	Client Application
91	DMDC Security Manager Program	dmdc sec mgr pgm	Application	Client Application
141	DMDCTOOL DSO Manager Suite	dsoet.fmb/dsoet.fmx	Application	Client Application
1114	DOES Application for TNEX	prg0115.exe	Application	Client Application
126	DSO Tracking VB Application	prg0128.exe	Application	Client Application

Configuration Management

86	Data Dictionary Server Application	ddsrvr20.exe	Application	Client Application
231	Data Dictionary Version VB Application	prgdd_ver.exe	Application	Client Application
548	Database Extract Batch Client (J2EE)	dbxbat.ear	Application	Client Application
114	Defense Online Enrollment System Application	prg0073.exe	Application	Client Application
68	Deployable Rapids	deploy rapids	Application	Client Application
481	DodPay Batch Client Application (J2EE)	dodpaybat	Application	Client Application
220	Error Analysis System Application	err analysis app	Application	Client Application
504	Health Care Coverage Medical Batch	hccmedicalbat.ear	Application	Client Application
621	JAMMS Application	jamms	Application	Client Application
211	JTDA Application	doap.jar	Application	Client Application
143	KB Tester Application	kbtester.exe	Application	Client Application
87	Launcher Application	prg0087.exe (dmdctool.exe)	Application	Client Application
331	Medical Control Table Validation Application	medctrl tbl valid app	Application	Client Application
195	Person ID VB Application	pnid vb app	Application	Client Application
35	Person Research Application	prg0026.exe	Application	Client Application
83	QA Tools Application	prg0025.exe	Application	Client Application
23	RAPIDS Application	RAPIDS	Application	Client Application
23	RAPIDS Application	rapids	Application	Client Application
23	RAPIDS Application	rapids.ear	Application	Client Application
549	RAPIDS Config Application	config.ear	Software Program	Client Application
548	RAPIDS Message of the Day Application	motd	Software Program	Client Application
550	RAPIDS Offline Application	offline	Software Program	Client Application
547	RAPIDS Reporting Application	reporting	Software Program	Client Application
94	REDD (Recruiter File App for DSO)	redd app	Application	Client Application
104	Run Audit VB Application	run audit vb app	Application	Client Application
165	SSN Transaction VB Application	SSNcg	Application	Client Application
616	Secure Web Fingerprint Transmission	UNKNOWN	Software	Client Application

Configuration Management

			Program	
99	Security VB Application	prg0142.exe	Application	Client Application
256	Smoosh Online VB Application	smoosh app	Application	Client Application
506	Survivor Pay PL/SQL Application	spa@dmdv	Software Program	Client Application
1	Tumor Registry Application	actur	Application	Client Application
0	Unknown	unknown	Application	Client Application
129	VB Bulletin Application	bulletin.exe	Application	Client Application
181	VTOOL VB Application	prg0186.exe	Application	Client Application
596	myDoDmobile	myDoDmobile	Software Program	Client Application
581	Dental Policy Reports Cognos App	dentalrpt	Application	Cognos Report Application
599	ILS Cognos Reports Web App		Application	Cognos Report Application
501	Medical Policy Reports Cognos App	PolicyReports.zip	Application	Cognos Report Application
19	Online Sockets Communication Program	online sockets comm	Application	Communication
260	ADW Cron	adwcron	Software Program	DEERS Batch Crons
722	CPR Cron	cpr.cron	Software Program	DEERS Batch Crons
186	acrpt	acrpt.cron	Software Program	DEERS Batch Crons
187	addr	addr.cron	Software Program	DEERS Batch Crons
546	Guard Reserve Initial Duty Batch Client	gridbat.ear	Application	DMDC Batch Framework
637	Medals and Awards Load Batch	mawlbat.ear	Application	DMDC Batch Framework
491	SSN Change Batch Application	ssnchgbat.ear	Application	DMDC Batch Framework
638	VDILBAT	vdilbat.ear	Application	DMDC Batch Framework
341	BCR_IDCD_PROC Daily Procedure	bcr_idcd_proc.sql	Application	Database Procedure (requires RUN_ID)
999	DBA Applications	dba applications	Application	Database Procedure (requires RUN_ID)
344	DSO PL\SQL Script	dso script	Application	Database Procedure (requires RUN_ID)

Configuration Management

335	EMC_STAT_PROC procedure	emc_stat_proc.sql	Application	Database Procedure (requires RUN_ID)
364	Final Policy Consolidation Process	unknown	Application	Database Procedure (requires RUN_ID)
192	PNL\PNLEC Monthly Termination Sweep Procedure	pnl\pnlec term sweep	Application	Database Procedure (requires RUN_ID)
440	RADDP Conversion Sweep Application	raddp conv	Application	Database Procedure (requires RUN_ID)
462	T3 Data Conversion	T3 Data Conversion	Application	Database Procedure (requires RUN_ID)
336	TPCM_STAT_PROC procedure	tpcm_stat_proc.sql	Application	Database Procedure (requires RUN_ID)
8	ALXBL1CM		Software Program	Extract Program
75	ALXDL1CM		Software Program	Extract Program
120	Beneficiary Letters Program	blxtrctp	Software Program	Extract Program
468	Deployment Extract Program	dplyextr.jar	Software Program	Extract Program
93	EXSWP1		Software Program	Extract Program
420	GET CL_EDI_CFN extract program	getcledicfn	Software Program	Extract Program
421	GET CL_PN_XR extract program	getclpnxr	Software Program	Extract Program
422	GET CL_UPN extract program	getclupn	Software Program	Extract Program
423	GET CL_UPNL extract program	getclupnl	Software Program	Extract Program
424	GET IDCD_TKN extract program	getidcd_tkn	Software Program	Extract Program
43	Initial VA Extract Program		Software Program	Extract Program
160	Interim Reserve Refund Process for Reserve/Guard	interimrefund	Software Program	Extract Program

Configuration Management

69	JEE771JK		Software Program	Extract Program
103	JEEJSOC2		Software Program	Extract Program
68	JXADR3JK		Software Program	Extract Program
750	Log Monitor	log-monitor.jar	Software Program	Extract Program
447	MGIB Ch30/Ch 1606 Extract Program	mgibextr.jar	Software Program	Extract Program
593	Multiple ID Finder for VA Persons (MIFV)	mifv	Software Program	Extract Program
505	NTFYM.LOG Benefit Record Extractor Utility	ntfym.log	Software Program	Extract Program
147	Newrbld C Program	newrbld	Software Program	Extract Program
44	Ongoing VA Extract Program		Software Program	Extract Program
252	PROGRAM 1 - GOLD FILE OUTPUT	pgm 1 - gold file	Software Program	Extract Program
483	REAP Extract Program	reapextr.jar	Software Program	Extract Program
313	Reserve Affairs Input C Program	rainp	Software Program	Extract Program
102	SYNCSORT		Software Program	Extract Program
101	UXFAM1CB		Software Program	Extract Program
498	VA-DD214 Extract Program	vadd214extr.jar	Software Program	Extract Program
466	VAPAY Extract Program	vapayextr.jar	Software Program	Extract Program
85	XRBOU5PM		Software Program	Extract Program
12	XRCRI1DC		Software Program	Extract Program

Configuration Management

84	XREX11PM		Software Program	Extract Program
81	XREX31PM		Software Program	Extract Program
74	XXDSW5PM		Software Program	Extract Program
1084	AFIP Server Application	afip.ear	Application	Java Server
216	Address Change Online Server Application	das-addresschange.jar	Application	Java Server
249	Batch Enrollment Fee Payment Server App	das-befp.jar	Application	Java Server
751	Batch Research & Analysis Sub-System Java Server App	brass.jar	Software Program	Java Server
569	Benefits Correspondence Email Processing Utility Srvr App	bcepu.jar	Application	Java Server
239	CCD Buffer Maintenance Server	das_ccdlegacy.jar	Application	Java Server
285	CCD Detail Batch Update TNEX Server App	das-ccdbdut.jar	Application	Java Server
238	CCD Details History Server Application	das-ccdhistory.jar	Application	Java Server
254	Certificate of Credible Coverage Letters Srvr	das-ltrcocc.jar	Application	Java Server
246	Civilian PCM Reassignment Batch Server App	das-cpcmrb.jar	Application	Java Server
259	Civilian Update Server Application	das-civupt.jar	Application	Java Server
591	Controller	controller-<versionNumber>.jar	Software Program	Java Server
128	DETS Server Application	das-dsot2.jar	Application	Java Server
599	DMDC JCE Provider	dmdcprov.jar	Software Program	Java Server
247	Direct Care PCM Assignment Batch Server App	das-dcpcmab.jar	Application	Java Server
248	Direct Care PCM Reassignment Batch Server App	das-dcpcmrb.jar	Application	Java Server
252	Dissenrollment Letters Server Application	das-ltrdenrl.jar	Application	Java Server
435	DoD Self Service Letter Server Application	das-ltrdodss.jar	Application	Java Server
1127	Enrollment Card Server Application	das-ltrecrd.jar	Application	Java Server
245	Fee History Server Application	das-feehistory.jar	Application	Java Server
1133	Health Care Coverage MTF Server App	das-hccmtf.jar	Application	Java Server
720	IEHR HL7 V3 Schema Jar File	hl7v3.jar	Software	Java Server

Configuration Management

			Program	
645	Initialize Premium Model Program	initprem.jar	Software Program	Java Server
258	Legacy Buffer Claims Server Application	das-legacyclaims.jar	Application	Java Server
431	MFDI Server Application	mfdi.jar	Software Program	Java Server
310	Mailed Letter Update Tables Server App	das-ltrmut.jar	Application	Java Server
1175	Medicare Server Application	mdc.jar	Application	Java Server
242	NMSDL Batch Server Application	nmsdl	Application	Java Server
634	Notifications Message Listener for QA (J2EE)	ntfy-msg-listener.jar	Software Program	Java Server
66	Other Health Insurance Server Application	das-ohi.jar	Application	Java Server
433	PCM Reassignment Server Application	pcmras.jar	Application	Java Server
253	PCM Transfer/Reassignment Letters Server App	ltrpcm.jar	Application	Java Server
244	Policy Research Server Application	das-policyresearch.jar	Application	Java Server
655	RAPIDS-CONFIG	rapids-config-app.ear	Application	Java Server
377	Record Generator	recordGenerator-<versionNumber>.jar	Software Program	Java Server
379	Service Member Report Engine	smre.jar	Software Program	Java Server
487	Survivor Pay Server Application	spa.jar	Software Program	Java Server
747	System ID Mapping Service Application	sims.jar	Software Program	Java Server
436	T3 Batch Enrollment Fee Payment Server App	das-t3befp.jar	Application	Java Server
287	TNEX Batch Claims Server Application	das-batclaims-tr/das-batclaims	Application	Java Server
302	TNEX Batch Totals Server Application	das-batclaims-tr/das-batclaims	Application	Java Server
303	TNEX Enrollment Card Reissuance Server App	das-ltrreis.jar	Application	Java Server
311	Token Batch Update Server Application	tkn_update.jar	Application	Java Server
610	Token Capture and Identification Component	tokencapture.jar	Software Program	Java Server
721	Verification Doc Processor (J2EE)	verdocproc.jar	Software Program	Java Server

Configuration Management

22	ACTUR KB	actur	Application	KB
84	AFIP KB	afip	Application	KB
166	Add Personnel Email Address KB	apema	Application	KB
142	Audit Registry KB	audit	Application	KB
39	Benefits Driver KB	bdm	Application	KB
349	Benefits Eligibility KB	bnelg	Application	KB
67	Benefits Person Update KB	bnft person update	Application	KB
176	CAC Maintenance Portal KB	cacmp	Application	KB
251	CCD Totals Inquiry KB	claims	Application	KB
41	CHAMPVA KB	champva	Application	KB
109	CVA Report KB	cva rpt	Application	KB
250	Claims Coverage KB	claims	Application	KB
155	Contingency KB	ctgc	Application	KB
229	Contractor Verification System KB	cvsiud	Application	KB
59	Conversion SMOOSH KB	conv smoosh	Application	KB
357	DMDC Educational Benefit Programs KB	deb	Application	KB
6	Database Extract KB	dbxtr	Application	KB
375	Defense Language Proficiency Test KB	dlpt	Application	KB
136	Dental Eligibility Determination Driver KB	dnbdm	Application	KB
137	Dental Health Care Determination Program KB	dhcdp	Application	KB
121	Dental Notification KB	ntfyDnt	Application	KB
203	Direct Care PCM KB	dcpcm	Application	KB
237	ECHO Online KB	echo	Application	KB
182	Employer Support Guard/Reserve KB	esgr	Application	KB
324	Family Roster KB	famros	Application	KB
13	Family Update KB	famupd	Application	KB
431	Fee Waiver Entitlement KB	feevr	Application	KB
450	Gold File KB	gold file	Application	KB
305	Guard/Reserve Early Id for Alert Period KB	grap	Application	KB
209	HCC Batch KB	hccb	Application	KB

Configuration Management

123	HCC Dental Maintenance KB	hccmd	Application	KB
243	Health Care Coverage Maintenance Special KB	hccms	Application	KB
204	Health Care Coverage Medical Maintenance KB	hccmm	Application	KB
73	Health Care Delivery Program KB	hcdpd	Application	KB
42	Immunization KB	immun	Application	KB
145	JPAS Batch Extract KB	jpasxtr	Application	KB
283	Joint Manpower Information System KB	jmis	Application	KB
3	Legacy Transfer KB	legacy transfer	Application	KB
112	Legacy Update KB	legup	Application	KB
174	Line of Duty KB	lod	Application	KB
419	MEPCOM Fingerprint Inquiry KB	mepfngr	Application	KB
232	MGIB Generic Pull KB	mgibg	Application	KB
60	MGIB New to Old KB	mgibn	Application	KB
98	MGIB PRC Chapter 1606 KB	mgib prc 1606	Application	KB
97	MGIB PRC Chapter 30 KB	mgib prc 30	Application	KB
164	MIDR Categorizer Person KB (MICP)	micp	Application	KB
147	MIDR Categorizer Sponsor KB (MICS)	mics	Application	KB
149	MIDR Common Data Update KB	miu	Application	KB
148	MIDR Reformatter KB	mir	Application	KB
138	Medical HCDP Maintenance KB	mhcdp	Application	KB
257	Medical Smoosh KB	msmoosh	Application	KB
27	Medical Test Access KB	medface	Application	KB
2	Medical Test Access KB (RDDB)	medface	Application	KB
21	Medical Test Update KB	medup	Application	KB
446	Multiple_Id Resolution Categorizer Different PN_IDs KB (MICD)	micd	Application	KB
444	Multiple_Id Resolution Different SSN KB (MICN)	micn	Application	KB
171	NMED Notification KB	ntfy	Application	KB
11	Name Change KB	namch	Application	KB

Configuration Management

7	Online KB	online	Application	KB
198	Patient Update KB	ptntupd	Application	KB
26	Person Research KB	perres	Application	KB
125	Personnel Maintenance KB	pmt	Application	KB
8	Personnel/Finance Update KB	pft	Application	KB
25	QA Tools KB	qatools	Application	KB
184	Reserve Affairs Extract Application KB	raxtr	Application	KB
276	Reserve Affairs Personnel KB	rapnl	Application	KB
398	Reserve Component Initial Active Duty KB	rciad	Application	KB
185	SGLI Extract KB	sglixtr	Application	KB
201	SGLI Web KB	sgli	Application	KB
235	SSAEVS KB	ssaevs	Application	KB
38	Security KB	security	Application	KB
51	Smart Card KB	smart card	Application	KB
40	Social Security Number Change KB	ssnch	Application	KB
45	Submission ID KB	submid	Application	KB
14	Suspense Sweep KB	susps	Application	KB
350	TRI-Care Reserve Select Agreement KB	trsa	Application	KB
186	Verify QA Tools KB	vtool	Application	KB
588	EMMARUN.KSH	EMMARUN.KSH	Software Program	Korn Shell Program
712	MIDR Automation Tool	midr_automation.tar	Software Program	Korn Shell Program
605	Make Audit Model Cron Job	mkauditmodel_cvs.ksh	Software Program	Korn Shell Program
708	dap2a	dap2a.ksh	Software Program	Korn Shell Program
496	launch-civupt	launch-civupt	Software Program	Korn Shell Program
482	loadcldata	loadcldata	Software Program	Korn Shell Program
441	runCIF.ksh	runcif.ksh	Software	Korn Shell Program

			Program	
480	runCIFPull.ksh	runcifpull.ksh	Software Program	Korn Shell Program
337	runCIFPush.ksh	runcifpush.ksh	Software Program	Korn Shell Program
633	runLTRSEPU.ksh	runLTRSEPU.ksh	Software Program	Korn Shell Program
391	ImmTCP Application	immtcp.jar	Software Program	Listener
459	Socket Adapter Server Application	socketadapter.jar	Software Program	Listener
137	MGIB Online Help		Software Program	Online Help File
488	Co-Payment Factor Server Application	CoPayFactor.zip	Application	Pega Server
193	IPC-Summary	ipc-summary	Software Program	Perl Script
211	medup_preproc	medup_preproc	Software Program	Perl Script
175	reap-ipc script	read-ipc	Software Program	Perl Script
249	runDOAP Perl Script	rundoap	Software Program	Perl Script
244	update_subfetch_HEADER Program	update_subfetch_header	Software Program	Perl Script
268	Civilian Care PCM Asg/Reasg Preprocessor	ccpcm asg/reasg preproc	Application	Preprocessor
92	Deers Enrollment Process (DEPC)	depc jcl	Application	Preprocessor
659	Deployment Preprocessor		Application	Preprocessor
267	Direct Care PCM Asg/Reasg Preprocessor	dpcmproc	Application	Preprocessor
660	Guard Reserve Initial Duty Preprocessor		Application	Preprocessor
29	Mailing Address Preprocessor	mailing addr prep	Application	Preprocessor
221	Medicare Preprocessor	mdc preproc	Application	Preprocessor
354	Military Pay Preprocessor	miltary pay preproc	Software Program	Preprocessor
12	Name and SSN Preprocessor	name/ssn prep	Application	Preprocessor

Configuration Management

43	Pay Preprocessor	pay prep	Application	Preprocessor
9	Personnel/Finance Preprocessor	pnl/finance prep	Application	Preprocessor
72	Public Health Service edit	pds web app	Application	Preprocessor
289	Application Upload/Download Utility Pgm	prg0289.exe	Application	Program
347	CIF Lost CAC and Pin Sweep Application	cifLostCard	Application	Program
261	Central Issuance Facility Application	CIF App	Application	Program
319	DAWF Load/Update Application	dawfu	Application	Program
320	DAWF Retrieval Application	dawf_retrieve	Application	Program
297	DEERS Security Tool	sec621.exe	Application	Program
101	Data Copy Application	data copy pgm	Application	Program
339	Delete Expired Identification Card Tokens	deltkn	Application	Program
338	Extract Expired Identification Card Tokens	exttkn	Application	Program
304	Family SGLI Transaction Process	sglifam	Application	Program
179	Grd/Rsv Process	grd/rsv process	Application	Program
356	Immunization - CENTCOM Batch Application	icrs_centcom	Application	Program
404	Immunization - NHRC Batch Application	icrs_nhrc	Application	Program
194	MGIB Extract Ch1606 Program	mgib1606	Application	Program
193	MGIB Extract Ch30 Program	mgib30	Application	Program
295	MIDR Finder PersonNot3 C Pgm (MIFN)	mifn	Application	Program
170	MIDR PostMove Person C Pgm (PMPP)	pmpp	Application	Program
294	MIDR PostMove PersonNot3 C Pgm (PMPN)	pmpn	Application	Program
180	MIDR PostMove Sponsor C Pgm (PMPS)	pmps	Application	Program
5	Mailing Address Update C Program	maupd	Application	Program
340	Pin Mailer Application	Pin Mailer App	Application	Program
448	Post MIDR Person with Different Current PN_IDs (PMPD)	pmpd	Application	Program
227	Prior Service Check Application	pschk	Application	Program
189	Report Table Input Java Program	rtinp	Application	Program
190	Report Table Modify Java Application	rtmodify	Application	Program
196	Reportable Disease Data Base Reports	rddbr	Application	Program

Configuration Management

200	SGLI Active Duty Extract Process	sgliactv	Application	Program
178	SGLI DFAS Update Process	sgli dfas upd proc	Application	Program
202	SGLI Reserve/Guard Extract	sgliresgrd	Application	Program
199	SGLI Reserve/Guard Refund Process	resgrdrefund	Application	Program
44	Statistical Extract Program	stat extract pgm	Application	Program
89	TDA Server Application	tda20.exe	Application	Program
337	UMED Extract Aggregate Creation Application	aggr	Application	Program
110	VA285 Output Ch1606 Program	va285	Application	Program
32	ACTUR NAACCR Program		Software Program	Report Program
11	AL0651CM		Software Program	Report Program
7	ALDTL1CM		Software Program	Report Program
9	ALN211CM		Software Program	Report Program
10	ALW211CM		Software Program	Report Program
45	Actur Audit Activity Report program	aaudrep	Software Program	Report Program
91	BDBPT1DA		Software Program	Report Program
3	BREDB3MB		Software Program	Report Program
79	DEMG EXEC		Software Program	Report Program
78	DEMZ EXEC		Software Program	Report Program
438	DOD to VA latest update status program	d2vlupd.exe	Software Program	Report Program
453	Dental Premium Comparison C Program	dntprem_comp	Software Program	Report Program
170	Dental Premium Report program	dntprem	Software Program	Report Program

Configuration Management

89	ERDURJSX		Software Program	Report Program
2	ERDUUICX		Software Program	Report Program
76	ERPCT2DR		Software Program	Report Program
70	JEFIN2JK		Software Program	Report Program
72	JEP231JK		Software Program	Report Program
71	JRPER1JK		Software Program	Report Program
15	JUCDP2JK		Software Program	Report Program
100	MEHCF2CB		Software Program	Report Program
50	MGSR Discrepancy Report Program		Software Program	Report Program
257	Notification Alert C Program	ntfyalert	Software Program	Report Program
129	Notification Creator Program	ntfycrtr	Software Program	Report Program
130	Notification Sender Program	ntfysend	Software Program	Report Program
60	PAO		Software Program	Report Program
460	PC Audit Application	pcaudit.exe	Software Program	Report Program
59	POS	posrptpgm	Software Program	Report Program
90	PRREJ2MB		Software Program	Report Program
61	PRV		Software Program	Report Program
132	Patient ID Change Notification Program	pcnnt	Software Program	Report Program

Configuration Management

98	RRHPT1BF		Software Program	Report Program
95	RRINC1BF		Software Program	Report Program
97	RRPAO1BF		Software Program	Report Program
96	RRPRV1BF		Software Program	Report Program
521	Reformat Mailing Address C Program	RefmtAddr	Software Program	Report Program
456	SGLI Reconciliation C Program	sgli_reconciliation	Software Program	Report Program
393	ScopeServer Reporting Engine	unknown	Software Program	Report Program
208	Security Roster Report Program	jeqp0170	Software Program	Report Program
346	Suspplus Report Program	suspplus	Software Program	Report Program
1	XRDEM1VS		Software Program	Report Program
77	XRENRIDC		Software Program	Report Program
88	XRSAC1DC		Software Program	Report Program
80	XXAFB1DC		Software Program	Report Program
14	XXERR3HW		Software Program	Report Program
748	CPR Cron	cpr.cron	Software Program	Script/Shell program
204	STETH	steth.ksh	Software Program	Script/Shell program
706	UIC Shell Script (uic.ksh)	uic.ksh	Software Program	Script/Shell program
386	build.xml	build.xml	Software Program	Script/Shell program

Configuration Management

207	jwhat script	jwhat	Software Program	Script/Shell program
177	movetoarchive	movetoarchive.ksh	Software Program	Script/Shell program
261	rtxnxml	rtxnxml	Software Program	Script/Shell program
205	runSTETH	runsteth.ksh	Software Program	Script/Shell program
643	sort_maXpull	sort_maXpull	Software Program	Script/Shell program
140	DSEC50x - DEERS Security Application	deers-dsec.jar	Software Program	Security Application
29	Application Management System	ams.mde	Software Program	Support Program
405	Audit to LDAP Migration	rapids-ldap-tools	Software Program	Support Program
16	CA7 (scheduler)		Software Program	Support Program
481	CCAP Alert Reports for T3	Ccap_Alert	Software Program	Support Program
28	Change Management System	cms.mde	Software Program	Support Program
625	Correspondence Insert Field Utility Jar	das-ltrcorr.jar	Software Program	Support Program
161	DEERS APP.SO		Software Program	Support Program
183	DMDC User Security Manager program		Software Program	Support Program
49	Encounter Tracking System		Software Program	Support Program
299	ILP Application	ilp	Software Program	Support Program
433	OEPP Server Application	javaemailpush.jar	Software Program	Support Program
711	Pega Rule Engine Application	pega.ear	Software Program	Support Program

Configuration Management

570	Region Properties	regionproperties.jar	Software Program	Support Program
27	Tracker System	tracker.mde	Software Program	Support Program
280	Tracker to Test Track Pro Program	t2tp	Software Program	Support Program
9997	Batch Template	batch.exp	Application	Template
9998	Minimal Online KB	minkb	Application	Template
173	KIXBEGIN	kixbegin.sh	Software Program	Unikix Monitoring Script
141	KIXKILL	kixkill.sh	Software Program	Unikix Monitoring Script
172	Kixstat	kixstat.ksh	Software Program	Unikix Monitoring Script
302	check_region	check_region.pl	Software Program	Unikix Monitoring Script
268	check_restarts	check_restarts.pl	Software Program	Unikix Monitoring Script
199	check_scripts		Software Program	Unikix Monitoring Script
303	check_txn_failure	check_txn_failure.pl	Software Program	Unikix Monitoring Script
202	clctimes	unknown	Software Program	Unikix Monitoring Script
304	client-test-tool	client-test-tool	Software Program	Unikix Monitoring Script
201	cnttxns	unknown	Software Program	Unikix Monitoring Script
227	cshrc.online	cshrc.online	Software Program	Unikix Monitoring Script
191	monitor_ipc	monitor_ipc.pl	Software Program	Unikix Monitoring Script
171	monitor_restarts	monitor_restarts.ksh	Software Program	Unikix Monitoring Script
217	npspsall	npspsall	Software	Unikix Monitoring Script

Configuration Management

			Program	
230	secstat	secstat.ksh	Software Program	Unikix Monitoring Script
203	set-up-sqlj	unknown	Software Program	Unikix Monitoring Script
195	set_tng	set_tng.ksh	Software Program	Unikix Monitoring Script
196	tst_tng	tst_tng.ksh	Software Program	Unikix Monitoring Script
200	txnstat	unknown	Software Program	Unikix Monitoring Script
281	ArchiveLogs	archivelogs.pl	Software Program	Unikix Production Maintenance script
182	add_man_page.pl	unknown	Software Program	Unikix Production Maintenance script
360	calc_date.pl	calc_date.pl	Software Program	Unikix Production Maintenance script
349	call_pkzip.pl	call_pkzip.pl	Software Program	Unikix Production Maintenance script
221	check_crons	check_crons.ksh	Software Program	Unikix Production Maintenance script
229	check_drun	check_drun.pl	Software Program	Unikix Production Maintenance script
375	check_region_status	check_region_status.ksh	Software Program	Unikix Production Maintenance script
282	clean_recv	clean_recv.csh	Software Program	Unikix Production Maintenance script
216	clean_unkixssl_log	clean_unkixssl_log.csh	Software Program	Unikix Production Maintenance script
344	cleanlogs	cleanlogs.sh	Software Program	Unikix Production Maintenance script
212	cnttxns_all	cnttxns_all.ksh	Software Program	Unikix Production Maintenance script
370	coreinfo.ksh	coreinfo.ksh	Software Program	Unikix Production Maintenance script

Configuration Management

592	create_deploy_lists.pl	create_deploy_lists.pl	Software Program	Unikix Production Maintenance script
145	drun Script	drun	Software Program	Unikix Production Maintenance script
348	env.csh	env.csh	Software Program	Unikix Production Maintenance script
169	find_unikix_core	find_unikix_core.ksh	Software Program	Unikix Production Maintenance script
376	fix_check_region	fix_check_region.ksh	Software Program	Unikix Production Maintenance script
146	frun Script	frun	Software Program	Unikix Production Maintenance script
369	jinfo.ksh	unknown	Software Program	Unikix Production Maintenance script
368	kbcinfo.ksh	unknown	Software Program	Unikix Production Maintenance script
343	kix_bak	kix_bak.csh	Software Program	Unikix Production Maintenance script
189	kixdown	kixdown	Software Program	Unikix Production Maintenance script
289	kixsnap	kixsnap	Software Program	Unikix Production Maintenance script
188	kixup	kixup	Software Program	Unikix Production Maintenance script
181	man pages	man pages	Software Program	Unikix Production Maintenance script
206	man_index.pl	man_index.pl	Software Program	Unikix Production Maintenance script
176	rolllogsm	rolllogsm.sh	Software Program	Unikix Production Maintenance script
222	sslstat	sslstat.ksh	Software Program	Unikix Production Maintenance script
314	start_all_check_region	start_all_check_region.ksh	Software Program	Unikix Production Maintenance script
373	start_check_region	start_check_region.ksh	Software Program	Unikix Production Maintenance script

Configuration Management

315	start_check_txn_failure	start_check_txn_failure.csh	Software Program	Unikix Production Maintenance script
362	stop_all_check_region.sh	stop_all_check_region.sh	Software Program	Unikix Production Maintenance script
374	stop_check_region	stop_check_region.pl	Software Program	Unikix Production Maintenance script
159	zombie_alert	zombie_alert	Software Program	Unikix Production Maintenance script
253	CM_restart	cm_restart.ksh	Software Program	Unikix Region Maintenance Script
254	CM_sum	cm_sum.ksh	Software Program	Unikix Region Maintenance Script
240	Unikix Security Software		Software Program	Unikix Region Maintenance Script
192	buildapp		Software Program	Unikix Region Maintenance Script
238	checkscripts	checkscripts.pl	Software Program	Unikix Region Maintenance Script
209	clip script	clip.ksh	Software Program	Unikix Region Maintenance Script
225	correct_snt	correct_snt.ksh	Software Program	Unikix Region Maintenance Script
234	cshrc.security	cshrc.security	Software Program	Unikix Region Maintenance Script
179	kixall_begin	kixall_begin.ksh	Software Program	Unikix Region Maintenance Script
180	kixall_kill	kixall_kill.ksh	Software Program	Unikix Region Maintenance Script
307	kixall_secu.ksh	unknown	Software Program	Unikix Region Maintenance Script
220	kixcrons_remove	kixcrons_remove.ksh	Software Program	Unikix Region Maintenance Script
219	kixcrons_start	kixcrons_start.ksh	Software Program	Unikix Region Maintenance Script
223	kixstat_all	kixstat_all.ksh	Software Program	Unikix Region Maintenance Script

Configuration Management

308	kixtran_secu.csh	unknown	Software Program	Unikix Region Maintenance Script
215	regionkb	regionkb.ksh	Software Program	Unikix Region Maintenance Script
255	restart_rgn	restart_rgn.ksh	Software Program	Unikix Region Maintenance Script
256	restart_ts	restart_ts.ksh	Software Program	Unikix Region Maintenance Script
210	rm_mail	rm_mail.ksh	Software Program	Unikix Region Maintenance Script
197	rm_orphans	rm_orphans.ksh	Software Program	Unikix Region Maintenance Script
214	rm_pids	rm_pids.ksh	Software Program	Unikix Region Maintenance Script
247	runAPP.ksh	runapp.ksh	Software Program	Unikix Region Maintenance Script
345	telnet.unix	telnet.unix.ksh	Software Program	Unikix Region Maintenance Script
248	tng.ksh	tng.ksh	Software Program	Unikix Region Maintenance Script
224	view_admin	view_admin.ksh	Software Program	Unikix Region Maintenance Script
342	ziplogs.csh	ziplogs.csh	Software Program	Unikix Region Maintenance Script
341	ziplogs.pl	ziplogs.pl	Software Program	Unikix Region Maintenance Script
167	DMIS Control Table Load program	loadctl	Software Program	Update Program
425	LOAD CL_EDI_CFN update program	loadedicfn.pc	Software Program	Update Program
426	LOAD CL_PN_XR update program	loadpnxr.pc	Software Program	Update Program
427	LOAD CL_UPN update program	loadupn.pc	Software Program	Update Program
428	LOAD CL_UPNL update program	loadupnl.pc	Software Program	Update Program

Configuration Management

429	LOAD IDCD_TKN update program	loadidcd_tkn.pc	Software Program	Update Program
143	maholdUpdateWeb	maholdupdateweb	Software Program	Update Program
1022	ACTUR Agent Web Application (J2EE)	acturagent.ear	Application	Web Application
642	ACTUR Manager Server Application	acturmanager.ear	Software Program	Web Application
445	ACTUR Web Application	acturweb.ear	Software Program	Web Application
622	ACTUR-EJB Server Application	actur-ejb.ear	Software Program	Web Application
328	ADR Web Service Administration Mgmt App	aam.ear	Application	Web Application
409	AFPCA (Automated Federal Post Card) Web Application	afpca.ear	Software Program	Web Application
644	AP3 PL\SQL Web Application	ap3	Software Program	Web Application
218	ASVAB Application	asvab	Application	Web Application
215	Address Update Web Application	address.ear	Application	Web Application
475	Address Verification Web Application	addveri.ear	Software Program	Web Application
333	Address Web Application (J2EE)	address.ear, address.tar	Application	Web Application
389	Agent SSO Web Application (SAM)	agentsso.ear	Software Program	Web Application
661	AppMonitor Aggregator	amagg.ear	Application	Web Application
269	Application Download Site	ads.ear	Application	Web Application
471	Application Logging for 10gR3 Web Application	applog.ear	Software Program	Web Application
401	Application Provisioning Admin Web Service	approvadmin.ear	Application	Web Application
400	Application Provisioning Runtime Web Service	emma-webservice.ear	Application	Web Application
386	Application Provisioning Web Application	emma-web.ear	Application	Web Application
353	Audit Model Web Service	amws.ear	Software Program	Web Application
677	Automated Continuing Evaluation System	aces.ear	Application	Web Application

Configuration Management

532	Automated Linguist Finder Web Application	alf.ear	Software Program	Web Application
373	BBS Web Application	bbs.ear	Application	Web Application
669	Batch PDF Military Lending Act	bpmla.ear	Application	Web Application
688	Batch PDF for SCRA Web App	bpscra.ear	Software Program	Web Application
657	Batch Research & Analysis Sub-System Web Application	brass.ear	Application	Web Application
558	Beneficiary ID Card/Commissary Benefits Portal App	bicportletapp.ear	Software Program	Web Application
570	Beneficiary Notification Web Application	ltrbene.ear	Application	Web Application
568	Beneficiary Support Tool Producer Web App	bstproducer.ear	Software Program	Web Application
486	Beneficiary Support Tool Web App	bst.ear	Application	Web Application
271	Beneficiary Web Enrollment Application	bwe.ear	Application	Web Application
464	Benefits Administration and Support Console Web Application	administratorsupport.ear	Application	Web Application
260	Bulk Certification Revocation Application	bcr.ear	Application	Web Application
668	Business Logic Military Lending Act	blmla.ear	Application	Web Application
703	Business Logic SCRA Web App	blscra.ear	Software Program	Web Application
684	CAC Activation Application	cacactivation.ear	Application	Web Application
713	CAC Pin Reset (CPR) Cognos Report Web Application	UNKNOWN	Software Program	Web Application
378	CAC Pin Reset Application Server	cprxxx.ear	Application	Web Application
1177	CAC User Portal Web App Beta	umpbeta.ear	Application	Web Application
177	CAC User Portal Web Application	ump.ear	Application	Web Application
290	CCD Fee Web Application	ccdfee	Application	Web Application
411	CCD History Web Service Application (J2EE)	ccdhistory.ear	Application	Web Application
543	CCD Portlet Application	ccdportletapp.ear	Software Program	Web Application
1251	CCD Totals Inquiry Agent Web Application (J2EE)	ccdtia.ear	Application	Web Application

Configuration Management

1274	CCD Update Agent Web Application (J2EE)	ccdduta.ear	Application	Web Application
403	CCD Update Web Service Application (J2EE)	ccdupdate.ear	Application	Web Application
392	CCDLock Web Service Application (J2EE)	ccdlock.ear	Application	Web Application
398	CEI Portlet Application	ceiportletapp.ear	Software Program	Web Application
652	CHAMPVA Bat	champvabat.ear	Application	Web Application
522	CHAMPVA Eligibility Web Application	cvaebat.ear	Software Program	Web Application
471	CHAMPVA Eligibility Web Application (J2EE)	cvaebat.ear	Application	Web Application
663	CLADR Sync Web	cladr-sync-web.ear	Application	Web Application
415	CL_AAM Web Application	claam.ear	Software Program	Web Application
753	CUF DEERS Processor Common	deers-processor-common-<version>.jar	Software Program	Web Application
752	CUF Rule Engine	ruleengine-<version>.jar	Software Program	Web Application
640	CUF USER INTERFACE	cuf-ui.ear	Application	Web Application
449	Card Request Tracking System (CRTS) Web Application	crts.ear	Application	Web Application
490	Casualty Data Update Batch Web Application	cdlbat.ear	Application	Web Application
715	Casualty and Wounded Information Maintenance Batch App	cwimbat.ear	Software Program	Web Application
299	Central Issuance Facility Pull Server App	cifpull.ear	Application	Web Application
300	Central Issuance Facility Push Server App	cifpush.ear	Application	Web Application
630	Certificate of Release Batch (CRIMSBAT) Application	crimsbat.ear	Application	Web Application
667	Certificate of Release and Discharge Information Reporting System	crdirs.ear	Application	Web Application
233	Civilian PCM Maintenance Web Service	cpcmm.ear	Software Program	Web Application
749	Civilian Update Web Application (CUF)	civupt.ear	Software Program	Web Application
597	Claims Coverage Eligibility Agent Web App	ccea.ear	Software Program	Web Application

Configuration Management

393	Claims Web Service Application (Everest)	claims.ear	Application	Web Application
442	Cognos Web Application	cognos	Application	Web Application
499	Combatant Command Reporting System Web Application	ccrs.ear	Application	Web Application
573	Contact Manager (Address Update) Portlet Application	cntctmportletapp.ear	Application	Web Application
384	Container Initialization Web Application (J2EE)	cinit.ear	Software Program	Web Application
400	Content Management Portlet Application	contentportletapp.ear	Software Program	Web Application
307	Content Manager Web Application	cntmgr.ear	Application	Web Application
556	Contingency Tracking System (CTS) Query Web Application	ctsqa.ear	Application	Web Application
164	Customer Update Service - Web Service	cus.ear	Software Program	Web Application
325	DAWF Web Application (Outreach)	outreach.ear	Application	Web Application
322	DCCIS Application	dccis	Application	Web Application
384	DCCIS Bridge Web Application	dccisbr.ear	Application	Web Application
312	DCCIS Operations Status Website (DOIS)	dois.tar	Software Program	Web Application
263	DEERS Authentication Server Web Application	rapids-das.ear	Application	Web Application
518	DEERS Batch Scheduler Web Application (J2EE)	dbs.ear	Software Program	Web Application
404	DEERS Documentation Web Application	deersdocs.tar	Software Program	Web Application
503	DEERS Eligibility and Enrollment Portal Web App	deep.ear	Application	Web Application
424	DEERS Fingerprint Update Web Application	dfu.ear	Application	Web Application
415	DEERS Website Application	deerswebsite.ear	Application	Web Application
270	DEIDS Web Application	deids	Application	Web Application
1126	DETS Client Web Application	dets	Application	Web Application
401	DETS Portlet Application	detsportletapp.war	Software Program	Web Application

Configuration Management

317	DGRAN Web Application	dgran.ear	Application	Web Application
676	DISA Directory Service Client	ddsc.ear	Application	Web Application
593	DISS JVS EAI Application	diss-jvs-eai.ear	Application	Web Application
625	DISS JVS Test Harness Web Application	testharness.ear	Application	Web Application
680	DISS Person Interface	dpi.ear	Application	Web Application
550	DISS Pilot Web App	disspilot.ear	Application	Web Application
485	DMDC Cognos Custom Servlet Gateway (DCGCSG) Web Application	dcgcsg.ear	Software Program	Web Application
392	DMDC Common Components Client Web Application	dc3.ear	Software Program	Web Application
367	DMDC Educational Benefit Programs Web App	deb.ear	Software Program	Web Application
300	DMDC Personal Surveys and Program Evaluation web page	dodSurvey	Software Program	Web Application
567	DMDC Public web site	dwp.ear	Software Program	Web Application
579	DMDC Reporting System Web Application	dmdcrs.ear	Application	Web Application
428	DMDC Signing Server Web Application	dss.ear	Application	Web Application
681	DMDC Support Center DIY Login Application	ddla.ear	Application	Web Application
646	DMDC Support Center DIY Login Application	ddla.ear	Software Program	Web Application
463	DMDC Support Office IVR Web Application	ivr.ear	Software Program	Web Application
454	DMDC Support Office Web Application	dso.ear	Software Program	Web Application
225	DMDC Support Office Web Request (DWR) Application	dwr.ear	Application	Web Application
71	DMDC Web Member Verification System	dmdc web member ver	Application	Web Application
287	DNVC External Website	dnvc_infoweb.tar	Software Program	Web Application
430	DOCS Web Application	docs.ear	Software Program	Web Application
420	DOES Web Application	webdoes.ear	Application	Web Application

Configuration Management

326	DOIS Web Application	dois.ear	Software Program	Web Application
594	DPAGS-FPDS Interface Web Application	FPDSInterface.ear	Software Program	Web Application
609	DTSA MIS Web Application	dts-mis	Software Program	Web Application
418	DWC (DoD Workforce Certifications) Web App	dwc.ear	Application	Web Application
470	Data Integrity Service Administration Web Application (DISAdmin)	disadmin.ear	Application	Web Application
323	Data Quality Analysis Application	dqaa	Application	Web Application
557	Data Request System Web Application	drs	Software Program	Web Application
438	Data Translation (DTA) Web Application	dta.ear	Application	Web Application
562	Death Batch Web application	deathbat.ear	Application	Web Application
589	Defense Assistance Awards Data System Web App	daads.ear	Application	Web Application
505	Defense Casualty Analysis System Web App	dcas.ear	Application	Web Application
629	Defense Central Index of Investigations (DCII) Web App	dcii.ear	Software Program	Web Application
380	Defense Language Proficiency Test (WDLPT) Web App	wdlpt.ear	Software Program	Web Application
377	Defense Language Proficiency Test - Authorization and Reporting Web App	dlpt.ear	Application	Web Application
306	Defense National Visitors Center Web App	dnvc.ear	Application	Web Application
485	Defense Procurement and Grants System Web App	dpags.ear	Application	Web Application
620	Defense Travel System Archive Management Information System	dts-mis.ear	Application	Web Application
305	Demographic Registration System Web application	dreg.ear	Software Program	Web Application
497	Dental Notifications System Web App (J2EE)	ntfyd.ear	Application	Web Application
658	Deployment CUF Client	dplybat.ear	Application	Web Application
615	Diagnostic Domains Web Application	diag-domains.ear	Software Program	Web Application

Configuration Management

614	Diagnostic Web Application	diag.ear	Software Program	Web Application
231	Direct Care PCM Assignment/Reassignment Web Application	dpcmar.ear	Software Program	Web Application
232	Direct Care PCM Maintenance Web Service	dcpcmm.ear	Software Program	Web Application
588	DoD EDI Change Ntfy System Web App	decns.ear	Application	Web Application
551	DoD Person Search Web App	dps.ear	Application	Web Application
432	DoD Self-Service Access Center Web Application	dsaccess.ear	Application	Web Application
682	DoD Testing Admin Tool	dtat.ear	Application	Web Application
650	DoD Transition Assistance Program (TAP)	dodtap.ear	Application	Web Application
489	DoD/VA ID Reconciliation Service	dvirs.ear	Application	Web Application
412	Domains EJB Application (J2EE)	domains-ejb.ear	Application	Web Application
437	Domains EJB Web Application (Everest)	domains-ejb.ear	Software Program	Web Application
399	EB Portal Templates and LDIF	unknown	Software Program	Web Application
574	EMMA Admin Tool Web App	emma-admin.ear	Application	Web Application
334	ESGR Web Application (J2EE)	esgr.ear	Application	Web Application
604	ESRI Spatial Testing Harness Web App	esrispatialtest.ear	Software Program	Web Application
459	EWS-R Web App (J2EE)	ewsr.ear	Application	Web Application
388	Enterprise-Wide Scheduling and Registration (EWS-R) Web App	ewsr.ear	Software Program	Web Application
699	Event Scheduler Service	event-scheduler.ear	Software Program	Web Application
224	FBI Search System	fbiss	Application	Web Application
213	FORMIS		Software Program	Web Application
362	FORMIS (Unclassified) Web Application	formis.ear	Application	Web Application
331	Family Account Manager Web Application	famacctmgr.ear	Software Program	Web Application
674	Family Advocacy Program Incident Severity	fapss.ear	Application	Web Application

Configuration Management

	Rating Scale (FAPSS)			
397	Family Healthcare Portlet Application	famhealthportletapp.ear	Software Program	Web Application
443	Family Member Request System Web App	fmrs.ear	Application	Web Application
290	Family Roster Web Application	frweb.ear	Software Program	Web Application
1183	Family SGLI Web Application	familysgli.ear	Application	Web Application
496	Family Subsistence Supplemental Allowance Web App	fssa.ear	Application	Web Application
559	GIQD Operator Portlet Web App	giqdportletapp.ear	Application	Web Application
106	GIQD Web Application	giqd.ear	Application	Web Application
426	GOFO Decision Support System Web Application	gofo.ear	Application	Web Application
506	Global Force Management Data Integration Batch Web App	gfmdi.ear	Application	Web Application
379	HCCI Web Service Application (J2EE)	hcci.ear	Application	Web Application
517	HL7 Immunization Web App (J2EE)	hl7eve.ear	Software Program	Web Application
666	HL7 Notifications Sender Application	hnsa.ear	Application	Web Application
385	HL7Imm Web Application	hl7imm.ear	Software Program	Web Application
745	HOP Other Health Insurance Operator Shared Lib	sharedlib-hop-ohi.war	Software Program	Web Application
346	HRSAP Web Application	hrsap.ear	Application	Web Application
493	Health Care Coverage Dental Batch	hccdentalbat.ear	Application	Web Application
649	Healthcare Operator Portal Web App	hop.ear	Application	Web Application
566	IBUC Web Application	ibuc.ear	Application	Web Application
456	ICRS Cognos Web Application	icrs.ear	Application	Web Application
77	ICRS PL/SQL Web Application (Legacy)	icrs	Application	Web Application
714	IMESA Information Delivery Web Application	IID.ear	Software Program	Web Application
624	IMESA Query Web App	iqwa.ear	Application	Web Application
622	IMESA Visualization Web Application	iviz.ear	Application	Web Application

Configuration Management

457	IVR Health Care Coverage Web Application	ivrhcc.ear	Application	Web Application
643	Identity Research and Resolution Utility Web App	irru.ear	Application	Web Application
395	Imaging Web Service Application (J2EE)	imaging.ear	Application	Web Application
582	Immunization Portlet Application	immportletapp.ear	Software Program	Web Application
519	Immunization TR Converter Web App	immtrc.ear	Software Program	Web Application
1630	Improved Investigative Records Repository (iIRR) Web App	iirr.ear	Application	Web Application
630	Improved Investigative Records Repository (iIRR) Web App	iirr.ear	Software Program	Web Application
310	Information Delivery System (IDS) Web Application	ids.ear	Software Program	Web Application
482	Information Delivery System Web Application	IDS	Application	Web Application
642	Initiate Interface Component (IIC)	iic.ear	Application	Web Application
470	Insurance Portlet Application	insportletapp.ear	Software Program	Web Application
639	Interface Service Manager	ism.ear	Application	Web Application
230	Issuance Portal (IP) Authentication Proxy	ipauthapp.ear	Application	Web Application
351	J2EE Container Specific API	containerspecfic.jar	Software Program	Web Application
282	JMIS Web Application	jmis.ear	Application	Web Application
479	JPARR - Enterprise Web Application	jparr_e.ear	Application	Web Application
478	JPARR Unrestricted Web Application	jparr.ear	Application	Web Application
577	JPARR-F Web Application	jparr-f.ear	Application	Web Application
407	JPAS Bridge Web Application	jpasbr.ear	Software Program	Web Application
613	JPAS Load to ADW Web App	jla.ear	Application	Web Application
408	JPAS Simulation Web Application	jpassim.ear	Software Program	Web Application
250	JTDA Utility Web Application	jtdautil.ear	Software Program	Web Application
565	JVS Next Gen Web Application	jvsng.ear	Application	Web Application

Configuration Management

619	JVS Security Data Services Web App	jvssds.ear	Application	Web Application
631	Joint Personnel Adjudication System (JPAS) Web App	JPAS	Software Program	Web Application
498	Joint Qualification System (JQS) Self-Nomination Web App	jqs.ear	Application	Web Application
628	Joint Verification System Batch Web Application	jvs-batch.ear	Application	Web Application
692	Joint Verification System View Web App	jvs-view.ear	Software Program	Web Application
693	Joint Verification System Web Application	jvs-web.ear	Software Program	Web Application
318	LTDR Web Application	ltdr	Application	Web Application
222	Line of Duty Web Application	lod.ear	Application	Web Application
656	Log Monitor Web	log-monitor-web.ear	Application	Web Application
332	Log Viewer Web Tool	logview.ear	Application	Web Application
332	Log Viewer Web Tool	logview_10g.ear	Application	Web Application
332	Log Viewer Web Tool (.war file)	logview_10g.war	Application	Web Application
405	Logview Web Application	logview_10g.ear	Application	Web Application
425	MLA (Military Lending Act) Web Application	mla.ear	Application	Web Application
355	MTF SIT Web Application	mtfsit web app	Application	Web Application
494	MUT Table Update Web App	muttu.ear	Application	Web Application
454	MUT Web Application	mut_web.ear	Application	Web Application
461	Mailed Letter Update Web Application	mutweb.ear	Software Program	Web Application
383	Matchbox Server Web Application	matchbox.ear	Application	Web Application
662	Medical Merge Batch Component	mmbc.ear	Application	Web Application
416	Medical Report Web Application	medrpt.ear	Application	Web Application
525	Medical Test Batch Web Application	medtstbat.ear	Software Program	Web Application
359	Midr MovDisplay Program	movdisplay.exe	Software Program	Web Application
483	MilPay Batch Processor Client App (J2EE)	milpaybat	Application	Web Application
687	Military Funeral Honors Web Application	mfh.ear	Software	Web Application

Configuration Management

			Program	
646	Military Mortality Database (MMDB) Web Application	mmdb.ear	Application	Web Application
391	Military Performance Metrics (MPM) Website	mpm.ear	Application	Web Application
587	My Profile Portlet Application	myprofileportletapp.ear	Application	Web Application
439	NEO Tracking System Web Application	nets.ear	Application	Web Application
350	Notification Manager Web Application	ntfy mgr web app	Software Program	Web Application
544	Notifications System Web Application	ntfym.ear	Application	Web Application
533	OHI Portlet Application	ohiportletapp.ear	Software Program	Web Application
342	OHI/SIT Reports Web Application	ohireports.ear	Application	Web Application
281	OHI/SIT Web Application	ohiweb.ear	Application	Web Application
410	Operator Account Manager Web Application	oam.ear	Application	Web Application
758	Operatorless CAC Pin Reset (O-CPR)	ocpr.ear	Software Program	Web Application
314	Oracle(PL/SQL)Web Apps - Public Key Enabling	owapke.ear	Application	Web Application
616	PCM Geocode Batch Web Application	geocodebatch.ear	Application	Web Application
351	PCM Maintenance Error View Web Application	pcmmerv.ear	Application	Web Application
354	PCM Reassignment Web Application	pcmra.ear	Application	Web Application
255	PCM Research Web Application	pcmrs.ear	Application	Web Application
255	PCM Research Web Application	pcmrsch.ear	Application	Web Application
651	PCOLS Risk Assessment Dashboard (RAD)	pcols-rad.ear	Application	Web Application
47	PDS Web Application	pds	Software Program	Web Application
162	PIDS Update Service	pidsup.ear	Software Program	Web Application
166	PIDS Web Service	pids.ear	Software Program	Web Application
283	PIDSOLD web service for backward compatibility	pidsold.ear	Software Program	Web Application
165	POS Web Service	pos.ear	Software Program	Web Application

Configuration Management

293	POSOLD Web Service for backward compatibility	posold.ear	Software Program	Web Application
321	PRTT Web Application	prtt.ear	Application	Web Application
560	PSA Document Viewer Web Application	psawebdocs.ear	Application	Web Application
421	PSCCWS Data Entry & Reporting App Batch Prc	psccws.ear	Application	Web Application
487	Patient Registry Batch-Client Application (J2EE)	prlbat.ear	Application	Web Application
399	Patient Update Web Service Application (J2EE)	patientupdate	Application	Web Application
163	Person Demographic Service - Web Service	pds.ear	Software Program	Web Application
453	Person Enrollment EJB Service Application (J2EE)	person-enrollment.ear	Application	Web Application
552	Person Finder Graphical User Interface Web App	pfgui.jar	Software Program	Web Application
423	Personnel Accountability Reporting System Web Application	pars.ear	Application	Web Application
564	Personnel Portlet Application	personnelportletapp.ear	Application	Web Application
633	Personnel Testing Portal Web App	ptp.ear	Application	Web Application
330	Personnel Web Application (PERSAPP)	persapp.ear, persapp.tar	Application	Web Application
578	Personnel/Finance Transfer Batch Driver Application	pftbat.ear	Application	Web Application
447	Policy Administration Point Web Application	pap.ear	Application	Web Application
586	Premium Billing Service Web Application	pbs.ear	Application	Web Application
571	Premium Maintenance Web Application	premmnt.ear	Application	Web Application
316	President's Management Agenda System (PMAS) Web App	pmas.ear	Software Program	Web Application
219	Prior Service Military Search System	psmss	Application	Web Application
480	Production Performance Monitor Web App (J2EE)	ppm.ear	Application	Web Application
389	Purchase Card AIM Web Application	aim.ear	Application	Web Application
411	Purchase Card AIM Web Services Application	aimws.ear	Software Program	Web Application
452	Purchase Card SRS Web Application	pcols-web.ear	Application	Web Application
472	RAISE	raise.ear	Application	Web Application

Configuration Management

23	RAPIDS Application	rapids.ear	Application	Web Application
691	RAPIDS Appointment Scheduler (RAS) Web Application	ras.ear	Software Program	Web Application
554	RAPIDS Self Service Web Application	rapids_rss_webapp.ear	Application	Web Application
563	RAPIDS Self Service for CUF PILOT	rss-cuf-pilot.ear	Application	Web Application
701	RAPIDS Server Application	rapids.ear	Software Program	Web Application
553	RAPIDS Site Locator Web Application	rapids_rsl.ear	Application	Web Application
585	RAPIDS Site Locator Web Application	rsl.ear	Software Program	Web Application
574	REDD ASVAB Tool	REDD ASVAB Tool	Software Program	Web Application
140	REDD Web Application	redd.ear	Application	Web Application
326	RMIS Web Application	rmis.ear	Application	Web Application
670	RPAT Operator Web App	rpato.ear	Application	Web Application
632	RSS Portlet Web Application	sharedlib-rssportletapp.ear	Application	Web Application
387	Real Time Broker Service (RBS) Web Application	rbs.ear	Software Program	Web Application
402	Redeem Token Web Service Application	redeem.ear	Application	Web Application
648	Regional Proficiency Assessment Tool Web App	rpat.ear	Application	Web Application
352	Report Download Site (RDS) Web Application	rds.ear	Application	Web Application
333	Report Download Site Web Application	rds.ear	Software Program	Web Application
394	Report Web Application 1	rptapp1	Application	Web Application
396	Report Web Application 2	rptapp2	Application	Web Application
397	Report Web Application 3	rptapp3	Application	Web Application
210	Reserve Affairs Web Application	esgr.ear	Application	Web Application
217	Reserve Affairs Web Reporting Application	esgrpt.tar and esgrpt.ear	Application	Web Application
473	Reserve Retirement Repository Web Application	rrr.ear	Application	Web Application
502	Retired Address Finder Web App	raf.ear	Application	Web Application
566	RunAudit Web Application	runaudit.ear	Software Program	Web Application

Configuration Management

623	SCOWT Web Application	scowt.ear	Application	Web Application
580	SGLI OES Portlet Web App	soesportletapp.ear	Application	Web Application
184	SGLI Users Manual	fsgli_users_manual.exe, web.xml	Software Program	Web Application
183	SGLI Web Application (PL\SQL)	fsgli.ear and fsgli.tar	Application	Web Application
664	SIMS Configuration Interface	sci.ear	Application	Web Application
458	SIPR Enrollment Web Application	senrollment.ear	Application	Web Application
298	SITES Web Application	sites	Application	Web Application
636	SMCARD Web Application	not provided	Software Program	Web Application
584	SOES Operator Web Application	soesadmin.ear	Application	Web Application
367	Security API Web Application	web-security.jar	Application	Web Application
205	Security Web Application	audit.ear	Application	Web Application
602	Self Service Access Manager Web App	opensso.ear	Software Program	Web Application
492	Self Service Access Station Web Application	dsaccessstation.ear	Application	Web Application
603	Self Service Identity Management Web App	identitymanagement.ear	Software Program	Web Application
414	Self Service Web Application	selfservice.ear	Software Program	Web Application
523	Separation Data Correction Via DD215 Web App	DD215.ear	Software Program	Web Application
641	Separation Pay Batch Application	seppaybat.ear	Application	Web Application
374	Service Member Reports Web Application	smreport.ear	Application	Web Application
340	Service Members Civil Relief Act Web Site	scra	Software Program	Web Application
463	Servicemembers Civil Relief Act (SCRA) Web App	scra.ear	Application	Web Application
262	Single Sign On Web Application	sso.ear	Software Program	Web Application
707	Single Sign On for ID Card Reporting	ssoicr.ear	Software Program	Web Application
407	Speed Web Application	speed.ear	Application	Web Application

Configuration Management

262	Standard Insurance Table Web Server App	sit.ear	Application	Web Application
78	Statistical Immunization Reporting System	sirs	Application	Web Application
760	System ID Matching Service (SIMS)	sims.jar	Software Program	Web Application
592	System for Training Analysis and Readiness Tracking Web App	strt.ear	Application	Web Application
434	T3 Report Web Application	t3rpt	Application	Web Application
236	TASS Web Application	tass.ear	Application	Web Application
629	TGPS Beneficiary Site Web Application	tgps.ear	Application	Web Application
329	TNEX Enrollment Reports Web Application	tnexrpt.war	Application	Web Application
288	TNEX Fee Reports Web Application	tnexfrpt.ear	Application	Web Application
327	TNEX Report Web Application	tnexrpt.ear	Software Program	Web Application
345	TRICARE Select Contract Web Application	tsc.ear	Application	Web Application
330	TRICARE Select Web Application	tsa.ear	Software Program	Web Application
446	TRS Web Application	trs.ear	Software Program	Web Application
267	TRService Web Application	trservice.ear	Software Program	Web Application
363	Tape Tracking System (TTS) Web Application	tts.ear	Application	Web Application
495	Temporary DMDC Single Sign On Client Jar	tdssoc.jar	Software Program	Web Application
488	Temporary DMDC Single Sign On Web Application	tdsso.ear	Software Program	Web Application
628	Test Driver Web Application	UNKNOWN	Software Program	Web Application
627	Test Harness Web Application	UNKNOWN	Software Program	Web Application
695	Test webapp	twa.js	Software Program	Web Application
306	Token Identification Service Web Application	tidws.ear	Software Program	Web Application
591	Tokenizer Web Application	tokenizer.ear	Application	Web Application

Configuration Management

458	TransactionRecorder Web Application (J2EE)	txnrecmdb.ear	Software Program	Web Application
709	Transfer of Education Benefits BBS Utility	teb_bu.ear	Software Program	Web Application
461	Transferability of Education Benefits Service Representative Web Application	teb_sr.ear	Application	Web Application
406	Transition Assistance Program Web Application	tap.ear	Application	Web Application
618	Transition Assistance to Civilian Life Web Application	tacl.ear	Application	Web Application
382	Trusted Gateway Broker (TGB) Web Application	tgb.ear	Application	Web Application
479	UDS File Service Servlet Web App	uds_svc.ear	Software Program	Web Application
353	Unified Legislation and Budgeting Web App	unifielb.ear	Application	Web Application
422	Unit Identification Code Search System Web Application	uicss	Application	Web Application
79	Unit Roster Immunization System	uris	Application	Web Application
430	Upload Download System Web Application	uds	Application	Web Application
243	VOIS Web Application	vois.ear, vois-projprops.tar	Software Program	Web Application
278	VPOC SIT Web Application	vpwebapp.ear	Application	Web Application
455	Verifying Officials Information System Web App	vois.ear	Application	Web Application
468	WDLPTCRS Web Application	wdlptcrs.ear	Application	Web Application
675	WII LOD Reports Web App	wiilod_report.ear	Application	Web Application
611	WII-EJB Server Application	wii-ejb.ear	Software Program	Web Application
638	WSRP Portlet Consumer	wsrpportletapp.ear	Software Program	Web Application
361	Web Guard	deersvs	Software Program	Web Application
395	X12 Everest Web Application	x12eve.ear	Software Program	Web Application
402	X12 Standards Validator Web Application	x12val.ear	Software Program	Web Application
357	X12 Web Application	x12web.ear	Software	Web Application

Configuration Management

			Program	
237	X12 Web Servlets	x12web.ear, x12web.tar, log4j.properties	Software Program	Web Application
445	iCAT Web Application	icat.ear	Application	Web Application
516	iCAT-AR Web Application	icat-ar.ear	Software Program	Web Application
451	milConnect Portal Web Application	milconnect.ear	Application	Web Application
484	myDODbenefits Portal Application	mydodbenefits.ear	Software Program	Web Application
545	pavrsTokenizer	pavrsTokenizer.ear	Application	Web Application
583	**Moved to APP ** IOLS Web Service	iols.ear	Software Program	Web Service
620	AFIP Web Service (JEE)	afip.ear	Software Program	Web Service
537	Authorizer Web Service Application	authorizer-ws.ear	Software Program	Web Service
529	Backend Attribute Exchange (BAE) Web Service	bae.ear	Software Program	Web Service
499	CCD Manager Service (J2EE)	ccdm.ear	Software Program	Web Service
635	Certificate of Release Exchange Service	crxs.ear	Application	Web Service
571	Common Update Framework EJB (J2EE)	cuf-ejb.ear	Software Program	Web Service
528	Common VA Manager Web Service	cvam.ear	Software Program	Web Service
503	Contact Manager Web Service (J2EE)	cntctm.ear	Software Program	Web Service
495	DBIDS Next Generation		Application	Web Service
683	DCII CATS Web Service	dciiws.ear	Application	Web Service
437	DEERS Claims Web Service Application (J2EE)	dcs.ear	Application	Web Service
534	DEERS Control Table Access Web Service	dcta.ear	Software Program	Web Service
477	DEERS Registry Web Service (J2EE)	drgs.ear	Application	Web Service
457	DFAS PIN Authentication Web Service	dfasws.ear	Software	Web Service

Configuration Management

	Application		Program	
436	DGS Web Service Application	dbidsglobalservice.ear	Software Program	Web Service
654	DISS Subject Interface Web Service	dsi.ear	Application	Web Service
572	DLPT Reporting Web Service	drws.ear	Application	Web Service
484	DLPT Web Service	dlptws.ear	Application	Web Service
464	DS Logon Account Web Service	fmaws.ear	Software Program	Web Service
524	Data Integrity System Web Service App	dis.ear	Software Program	Web Service
679	Defense Travel System Archive Handler	dtsah.ear	Application	Web Service
678	Defense Travel System Archive Listener	dtsal.ear	Application	Web Service
598	Document Satellite Access Web Service	dsas.ear	Software Program	Web Service
536	EMMA Data Web Service Application	emma-data-ws.ear	Software Program	Web Service
618	EMMA Provisioning Web Service	epws.ear	Software Program	Web Service
508	Email Address Request Proxy Web Service	earps.ear	Software Program	Web Service
581	Enterprise Identity Attribute Web Service	eias.ear	Software Program	Web Service
500	Family View Manager Web Service (J2EE)	famvm.ear	Software Program	Web Service
555	Fee Manager Web service	feem.ear	Software Program	Web Service
576	Guard Reserve Active Service Batch App	grasbat.ear	Application	Web Service
665	HL7 Notifications Receiver Service	hnrs.ear	Application	Web Service
757	HL7 Person Add and Update Service	paus.ear	Software Program	Web Service
600	IDProTECT Intermediary Web Service	idprotect-intermediary-service.ear	Software Program	Web Service
460	Identity Enrollment Service	Enrollment-OrchestrationService.ear	Application	Web Service

Configuration Management

527	Immunization Manager Web Service (J2EE)	imnm.ear	Software Program	Web Service
653	Immunization Web Service	IMUNWS.ear	Application	Web Service
583	Interoperability Layer Services (IOLS) Web Service	iols.ear	Application	Web Service
637	Interoperability Layer Services (IoLS) Batch	iolsbatch.ear	Software Program	Web Service
595	JPARR Web Services	jparrws.ear	Software Program	Web Service
694	Joint Verification System Web Service	jvs-ws.ear	Software Program	Web Service
535	Maintenance Window Manager Web Service	mwm.ear	Software Program	Web Service
636	Medals and Awards Web Service	maws.ear	Application	Web Service
507	Medical Test Management Web Service (J2EE)	mtm.ear	Software Program	Web Service
627	Minimum Essential Coverage Web Service	mec.ear	Application	Web Service
558	Mobile Knowledgebase Web Service	knowledgebaseservice.ear	Application	Web Service
557	Mobile Site Web Service	siteservice.ear	Application	Web Service
280	OHI XML-TR Translation Web Server	ohiparsr.ear	Application	Web Service
559	Operator Authentication Service	oas.ear	Software Program	Web Service
486	P2PD Server Application	p2pd.ear	Software Program	Web Service
672	PAUS Directed Component	pausdirected.jar	Application	Web Service
673	PAUS Undirected Component	pausundirected.jar	Application	Web Service
567	Patient Discovery Web Service	pdws.ear	Application	Web Service
502	Patient Manager Web Service (J2EE)	pnm.ear	Software Program	Web Service
563	Patient Registry Manager Service Web Service	prm.ear, prm.jar, prm.war	Software Program	Web Service
639	Pega Rules Process Commander Web Service	prpc.ear	Software Program	Web Service
551	Person Finder Web Service	pfws.ear	Software	Web Service

			Program	
601	Person Service - CTIS PDR Data Access Web Service	domains-das.ear	Software Program	Web Service
520	Personnel View Manager Web Service (J2EE)	pnlvm.ear	Software Program	Web Service
465	Pharmacy Demographics Data Web Service	pdds.ear	Application	Web Service
504	Phobian Proxy Web Service Application	pps.ear	Software Program	Web Service
472	Policy Decision Point Web Service Application	pdp.ear	Software Program	Web Service
509	Purchase Card SRS Web Service Application	pcolsws.ear	Software Program	Web Service
467	Registry & Authorization Attribute Web Service App (RAAWS)	raaws.ear	Application	Web Service
465	Reverse Domain Name System Web Application	rdns.ear	Software Program	Web Service
501	SGLI Manager Web Service (J2EE)	sglim.ear	Software Program	Web Service
634	SGLI Notification Service	sglins.ear	Application	Web Service
617	SOES Spouse Notification Letter Server App	ltrsoesbat.ear	Application	Web Service
510	SSN Manager Web Service Application (J2EE)	ssnm.ear	Software Program	Web Service
473	Self Defined Population - Web Service	sdp.ear	Software Program	Web Service
617	Self Service Identity Management Web Service	identitymanagement-webservice.ear	Software Program	Web Service
644	TAP Data Retrieval Web Service	tdrws.ear	Application	Web Service
526	Token Verification Web Service	tvs.ear	Software Program	Web Service
564	Transaction Audit Web Service	taws.ear	Software Program	Web Service
469	VA Person Web Service	vapns.ear	Application	Web Service
704	VMET External XML Web Service	vmetextws.ear	Software Program	Web Service

Configuration Management

705	VMET Internal PDF Web Service	vmetintws.ear	Software Program	Web Service
555	WII Domains Web Service	wii-domains.jar	Application	Web Service
552	WII LOD Web Service	wiilod.ear	Application	Web Service
641	Web Data Dictionary Client	wddc.jar	Software Program	Web Service
640	Web Data Dictionary Web Service	wddws.ear	Software Program	Web Service
671	WinCAT Data Interface (WDI)	wdi.ear	Application	Web Service
376	IAO-Website	iao.tar	Application	Web Static Content
106	ADSSESSW	UNKNOWN	Software Program	
107	ADSTSQWS	UNKNOWN	Software Program	
142	AHMTBF C Program		Software Program	
474	Address Verification Common Component	addvericc.jar	Software Program	
118	Automated Letter Function Program		Software Program	
157	CA7 (scheduler)		Software Program	
109	Chapter 1606 VA Output Program	UNKNOWN	Software Program	
24	DATABASE EXTRACT MAKER		Software Program	
23	DEPCU1BF		Software Program	
435	DMDCBASE	dmdcbase.exe	Software Program	
298	DSO CTI Contact Server Applet	dso cti contact server applet	Software Program	
126	DSS Interface	crdss	Software Program	
168	Dependent Enrollment Card Processing System	unknown	Software	

Configuration Management

			Program
228	EAMAKE	mkpass2.fmx, acval.fmx	Software Program
568	Electronic Correspondence Portlet Application	ecorrportletapp.ear	Application
154	Enrollment E-Card Research Application	unknown	Software Program
123	HCC Batch Feeder	prochcc.exe	Software Program
514	Language Table Extract for CLADR	getlang	Software Program
512	Language Table Load for CLADR	loadlang	Software Program
151	MIDR Research Submission Getter Application	mifr	Software Program
136	Master file update program for MGIB and VA Extracts	unknown	Software Program
371	PC Audit Application	pcaudit.exe	Software Program
144	PCM Switch Program	pcmswitch	Software Program
372	PFT Audit Application	pftaudit.exe	Software Program
134	PFT Maker	unknown	Software Program
125	PFT Maker - MGIB Active Duty Pay	unknown	Software Program
403	PIX Operating System	pix os	Software Program
149	PLANG Application		Software Program
163	Person Demographic Service - Web Service	UNKNOWN	Software Program
356	Personnel Maintenance Transfer Maker Application	pmtmaker.exe	Software Program
531	Real-Time Broker Service Client Application	rbsclient.jar	Software

Configuration Management

			Program
150	Reserve Affairs Unix scripts	unknown	Software Program
152	SGLI Load Files	unknown	Software Program
153	SGLI Load and Maintenance Files	unknown	Software Program
382	SSA Post Process	ssa post process	Software Program
381	SSA Preprocessor	ssa preprocessor	Software Program
110	Service Table Builder Program	UNKNOWN	Software Program
513	UIC Mailing Address Table Extract for CLADR	getuic_ma	Software Program
515	UIC Mailing Address Table Load for CLADR	loaduic_ma	Software Program
158	UNIKIX-Security		Software Program
135	crDSS	unknown	Software Program
755	eAdministration Site	UNKNOWN	Software Program

Knowledge Management

Maintain 351 documents within CA Service Desk.

Maintain 267 documents in the IT Operations Document Library on SharePoint:

- Procedures: 83
- Policies: 21
- SLAs: 5
- Guides/references: 33
- Plans: 2
- Archive: 73

Maintain 50 IT Operations Forms.

On average, there are 5 new requirements per month.

Duties:

- Weekly review of existing documentation.
- Weekly creation of new documentation of procedures/policy, “Did You Know” (DYK) articles, announcements, etc.
- Weekly posting of “Did You Know” (DYK) articles on DMDC SharePoint homepage.
- Monthly archive update of past Did You Know postings.
- Creation of references, policies, agreements, plans, and procedures, as requested by divisions and teams or as required by changes or updates within DMDC.
- Monthly review of documents within CA Service Desk.

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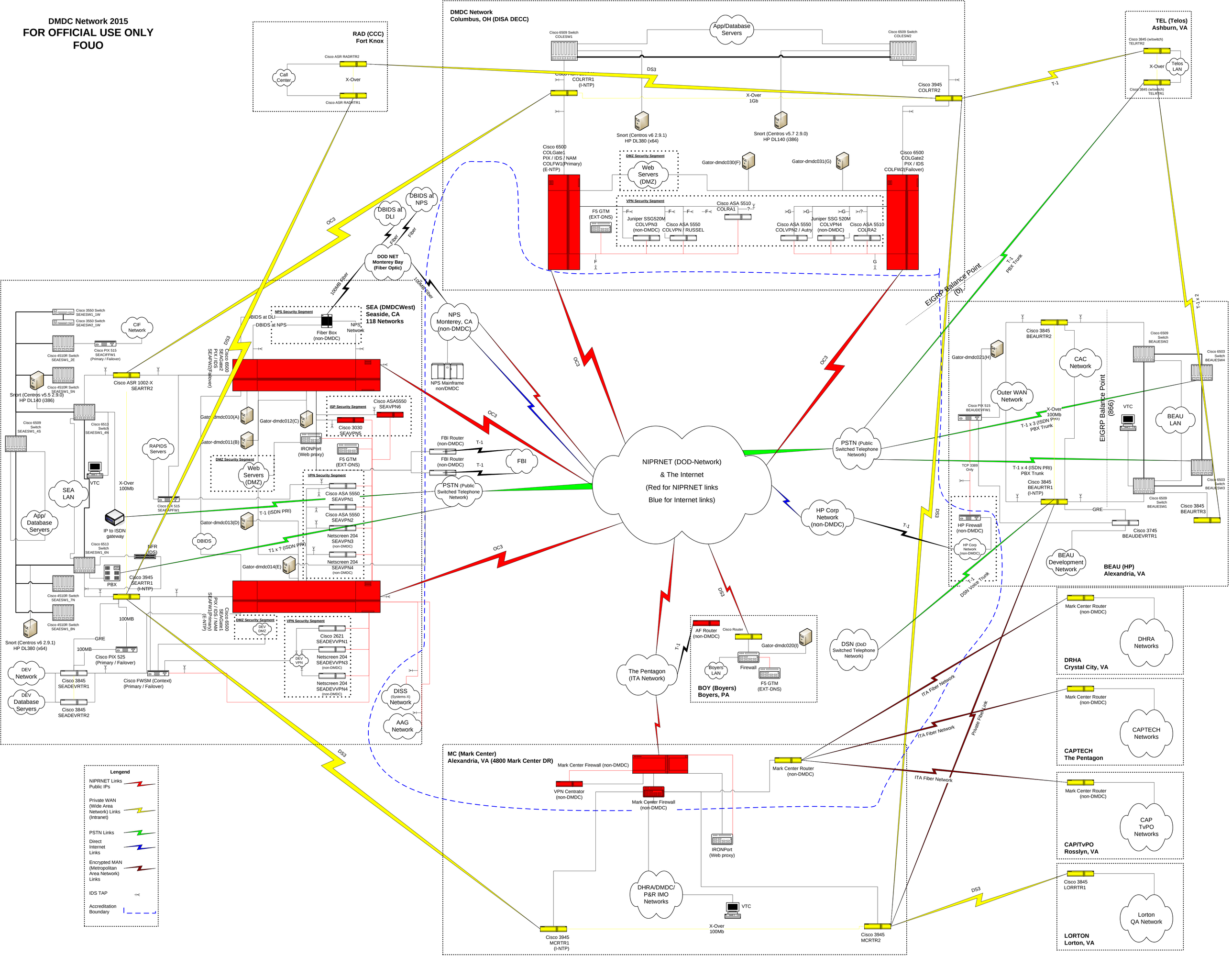

Helpdesk Services

This document outlines the following Helpdesk in-scope services and metrics:

- Helpdesk Call Volume and Statistics
- Helpdesk Walk Ups and In Person Contacts
- Helpdesk First Call Resolution Service Categories

Helpdesk Call Volume and Statistics (2014)

	Avg speed to answer	ACD Calls	Abandon Calls	Call Abandon Rate	Ave Time per Call
Jan	10	1126	17	1.50%	6:04
Feb	10	1141	37	3.20%	6:09
Mar	15	1038	38	3.70%	6:53
Apr	18	1087	31	2.90%	5:55
May	21	1202	46	3.80%	6:15
Jun	32	1116	70	6.30%	6:10
Jul	23	1082	55	5.10%	5:46
Aug	21	1248	41	3.30%	4:38
Sep	19	1264	44	3.50%	4:21
Oct	27	1385	62	4.50%	4:23
Nov	28	1301	77	5.90%	4:23
Dec	33	1048	70	6.70%	4:10
Totals	**21**	**14038**	**588**	**4.20%**	**5:25**

Helpdesk Walk-up and In-Person Contacts

Requests/Incidents Reporting Method (2013)	Email	Phone	Walkup
Request	7357	1539	549
Incident	5323	5259	154

Requests/Incidents Reporting Method (2014)	Email	Phone	Walkup
Request	4946	1351	1142
Incident	5526	4885	565

Appendix N

Service Categories for First Call/First Contact Resolution by Helpdesk personnel

This list is based on last 12 months of Service Request and Change/Work Order data within USD.

1. Helpdesk Change Request (CR) workflow tasks and activities for EAF (Employee Action Form) Tickets:
    a. Windows domain account creation
    b. Windows domain account deletion
    c. New CAC activation
    d. DEE (DISA Enterprise Email) account creation
    e. DEE (DISA Enterprise Email) account deletion
    f. USD User account verification
    g. General EAF tracking and reporting

2. COTS Software for Desktop Environment
    a. Deployment requests for any DTL (Deployable Technology List) software items
    b. General RFI or usage assistance
    c. Knowledge Document generation
    d. SharePoint FAQ assistance
    e. Remote Desktop Troubleshooting Assistance

3. Active Directory / Email Services (for existing users)
    a. Addition, deletion or updates to AD accounts
    b. General PKI assistance for CAC users
    c. Addition, deletion or update to a distribution list/mailgroups

4. File, Print and Desktop Services
    a. Network Printer connectivity assistance
    b. Account access assistance for Windows and Mainframe accounts
    c. Other Misc. Account and Authentication Services

5. Remote Access User Services
    a. General assistance with VPN connectivity
    b. General assistance with VDI and Terminal Server connectivity
    c. General assistance with Laptop and Handheld device operations

Appendix Q

ITO Historical Workload

This report documents the following ITO historical workload trends:

- 2013 Incident and Request Workload – by Priority
- 2014 Incident and Request Workload – by Priority
- Enterprise Ticket Metrics – DMDC
- Top Fifteen Request Areas – 2014

2013 Incident and Request Workload – by Priority

Ticket Type	Priority	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Grand Total
Incident Tickets	1-Emergency	1	1	0	0	0	1	0	0	0	4	0	1	**8**
	2-Critical	4	6	1	2	5	3	4	9	1	4	6	1	**46**
	3-Urgent	396	303	475	534	781	721	360	391	285	725	390	408	**54**
	4-Routine	726	640	776	903	1043	977	1020	1068	819	890	966	831	**10659**
Incident Total		**1127**	**950**	**1252**	**1439**	**1829**	**1702**	**1384**	**1468**	**1105**	**1623**	**1362**	**1241**	**16482**
Ticket Type	Priority	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Grand Total
Request Tickets	1-Emergency	1	0	0	1	3	1	2	5	3	1	1	4	**22**
	2-Critical	9	5	22	4	2	11	2	11	14	18	7	4	**109**
	3-Urgent	91	84	91	116	80	101	69	82	123	67	86	87	**1077**
	4-Routine	1655	1664	1462	1379	1481	1077	1259	1192	1029	1371	1148	965	**15682**
Request Total		**1756**	**1753**	**1575**	**1500**	**1566**	**1190**	**1332**	**1290**	**1169**	**1457**	**1242**	**1060**	**16890**
Grand Total		**2883**	**2703**	**2827**	**2939**	**3395**	**2892**	**2716**	**2758**	**2274**	**28467**	**2604**	**2301**	**58759**

Appendix Q

2014 Incident and Request Workload – by Priority

Ticket Type	Priority	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	**Grand Total**
Incident Tickets	1-Emergency	1	0	0	0	1	0	0	1	1	2	0	3	**9**
	2-Critical	0	9	7	3	2	6	3	6	14	17	7	3	**77**
	3-Urgent	389	654	360	628	472	358	408	931	1752	937	669	699	**8257**
	4-Routine	915	991	882	859	905	877	961	1152	1375	1067	446	674	**11104**
Incident Total		**1305**	**1654**	**1249**	**1490**	**1380**	**1241**	**1372**	**2090**	**3142**	**2023**	**1122**	**1379**	**19447**
Ticket Type	Priority	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	**Grand Total**
Request Tickets	1-Emergency	2	1	2	1	3	3	3	2	3	4	2	1	**27**
	2-Critical	10	5	14	6	19	13	17	8	50	26	9	16	**193**
	3-Urgent	62	80	86	95	60	63	81	85	126	161	51	101	**220**
	4-Routine	992	1081	1298	1423	1331	1394	1536	1339	1649	1767	679	1225	**15714**
Request Total		**1066**	**1167**	**1400**	**1525**	**1413**	**1473**	**1637**	**1434**	**1828**	**1958**	**741**	**1343**	**16985**
Grand Total		**2371**	**2821**	**2649**	**3015**	**2793**	**2714**	**3009**	**3524**	**4970**	**3981**	**1863**	**2722**	**33139**

Enterprise Ticket Metrics - DMDC

12 Month Workload Volumes & Distribution (01/2014 – 01/2015)

- Total Ticket Volume for 2014: 44,722
  - *Overall growth rate average:* 16% *Increase* from 2013-2014
    - Incident/Problem: 20,364 *(includes auto-event tickets)*
    - Service Requests: 17,676
    - Change Orders: 6,682 *(includes EAF tickets)*
  - *Projected growth for CY-2015: 18%*

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- Tier-1 Tickets (Help Desk/Service Desk): 12% of total *(FCR for this volume is approx. 85-90%)*

- Tier-2 Tickets (Desktop / User Support): 28% of total
- Tier-3 Tickets: 60% of total
    - Level-3 Teams Include: Production Support, Software Configuration Management, Oracle (Web/DB), Network/Telecom, Unix, Virtualization. Does *not* reflect Project resource workload.
    - Tier 3 level tickets require a higher degree of complexity, resources requirements and longer lifecycle time.

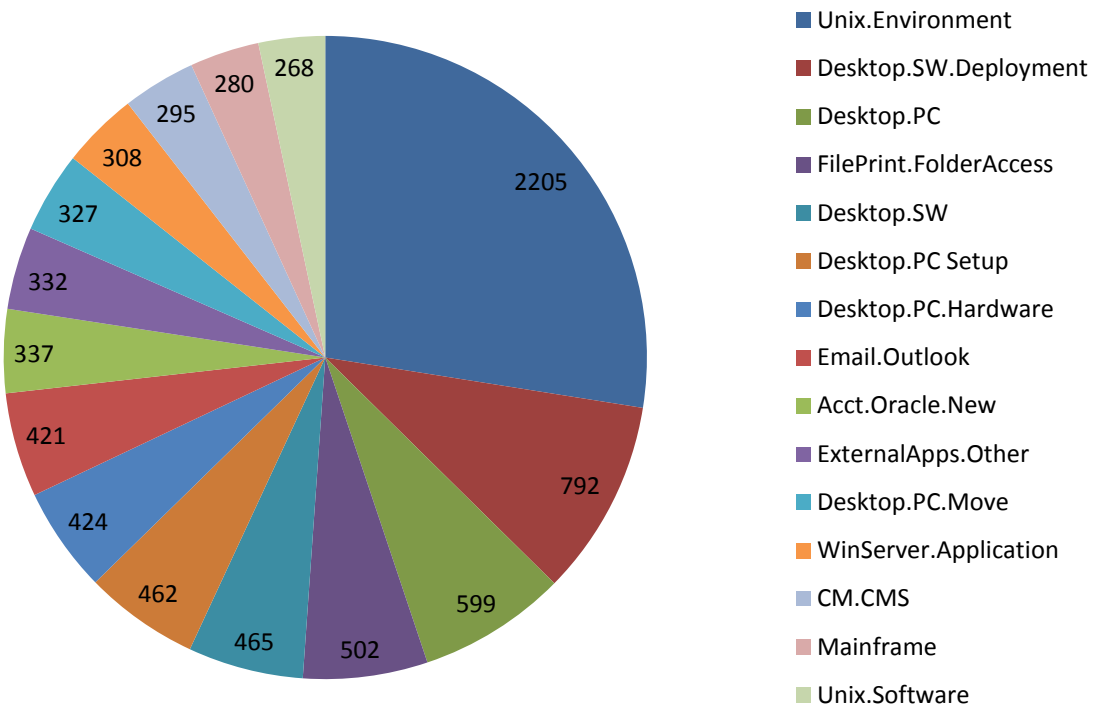
Appendix Q

Top Fifteen Request Areas - 2014

Summary:

This report contains the top fifteen Request and Incident areas reported in CA Service Desk during 2014. Each category was queried, documented, and noted with a brief analysis.

The Top 15 Year to Date Request Areas



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Analysis:

The top fifteen request areas made up 26% of the total reported tickets within CA Service Desk. Individual percentages for each request area are documented below. Percentages within the posted chart indicate percentages within the top fifteen request areas only.

Request Area	Analysis
Unix.Environment – 7.2%	The majority of these requests were for space additions; server restarts due to unreachable servers, accessibility/login issues, or software installs needed for backup; and requests to apply OS patches. Patch related prep-work requests also made up a fair amount of the Unix.Environment requests.
Desktop.SW.Deployment – 2.6%	The majority of these requests were for users that did not have necessary software available in their software catalogs and reinstalling software that was lost following PC re-images.
Desktop.PC – 2%	There were various PC related issues logged under this request. These requests consisted of and were not limited to PC and PC peripheral device replacements, PC re-images, picking up and securing Systems FedEx packages, PC inventory and part recovery, access to virtual machines, installing second hard drives.
FilePrint.FolderAccess – 1.6%	The majority of these requests were for server, directory, and folder access. Organization email mailboxes also require approved File Access Action Forms and made up some of these requests.
Desktop.SW – 1.5%	The majority of these requests were individual user software deployment requests and were accompanied with the proper approved Software Request Form when approval was required. This request area also served as a catch all for several issues ranging from vulnerability scans to PC re-imaging requests and software updates.
Desktop.PC.Setup – 1.5%	The majority of these requests were for PC upgrades, PC images and deployments for desk sharing/hot-desking at the Mark Center, PC images for Ft. Knox, and visitor offices setups.
Email.Outlook – 1.4%	The majority of these requests were distribution list modifications (adding/removing list members), recovering certificates following CAC card replacements, adding mailboxes to user profiles, setting up new user profiles, and creating new organization mailboxes and distribution lists as a result of the DMDC Re-organization.
Desktop.PC.Hardware – 1.4%	This request area was a catch all for various PC hardware requests.

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	Requests consisted of second hard drives (most of these users are developers), PC re-imaging, additional memory, keyboard and monitor replacements, and second monitors. Several requests were also logged to track DRMO preparations and the replacement of defective APC power strips.
Acct.Oracle.New – 1%	The majority of these requests stemmed from the DSC migration from Beauregard to Ft. Knox. DSC Ft. Knox personnel require Oracle AUSR accounts in order to perform their job functions.
Desktop.PC.Move – 1%	The majority of these requests were due to the Mark Center desk sharing/hot-desking project, Lorton PC migration onto the DMDC network, asset moves for DRMO, and tracking the movement of equipment from the loading dock and other storage areas.
ExternalApps.Other – 1%	The majority of these tickets were requests for manual web application deployments, bouncing/restarting web applications due to errors or accessibility issues, and log level modifications. These requests were made across all environments.
WinServer.Application – 1%	The majority of these requests were WinServer patches, software install requests on various servers, assists with remediating vulnerabilities on WinServers, capturing shares and share permissions, and removal of backup agents.
CM.CMS – 0.9%	The majority of these requests were CMS access requests, CMS release modification forms, and prototype requests.
Mainframe – 0.9%	The majority of these tickets are RACF permissions requests. The majority of the permissions requests were for read only or update/alert permissions within various groups and files.
Unix.Software - 0.8%	The majority of these requests were for updating Linux and Solaris servers with current recommended OS patches and TeamQuest startups and upgrade/installations. Several requests were also submitted requesting SCC scans and executing SCC tool on JPAS servers.

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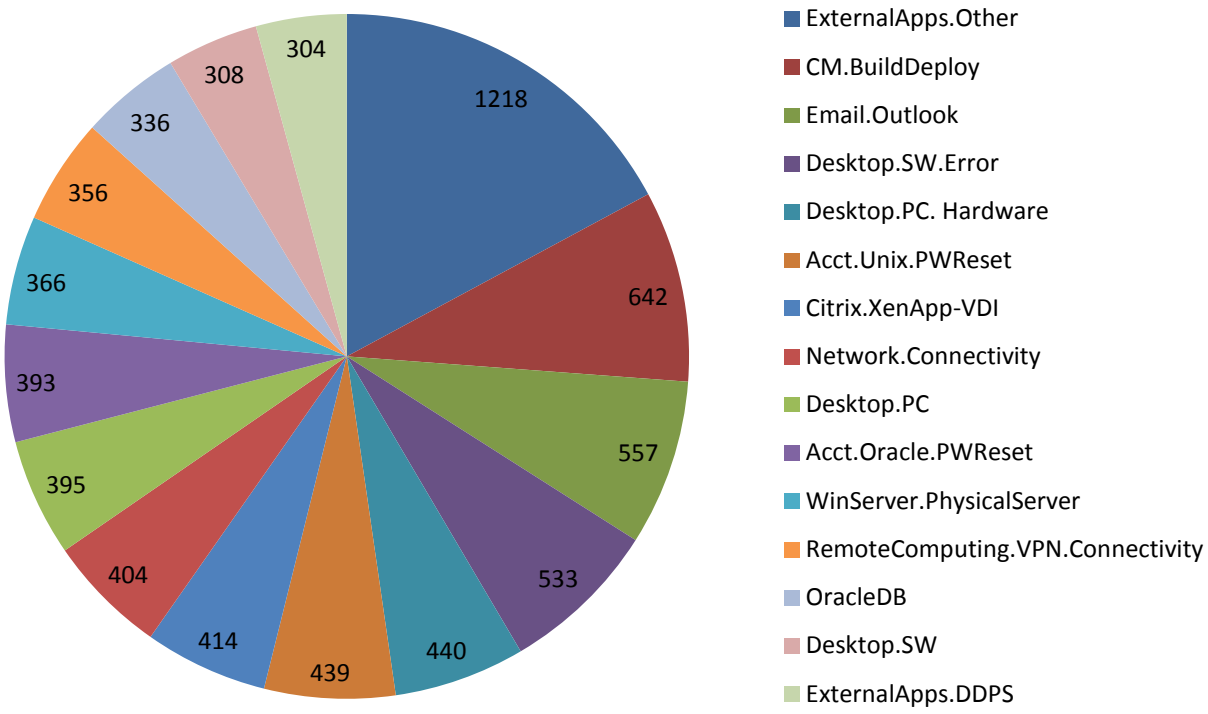
The Top 15 Year to Date Incident Areas



Appendix Q

Analysis:

The top fifteen incident areas made up 23% of the total reported tickets within CA Service Desk. Individual percentages for each request area are documented below. Percentages within the posted chart indicate percentages within the top fifteen incident areas only.

Incident Area	Analysis
ExternalApps.Other – 3.8%	This incident area served as a catch all for various errors, outages, and application issues reported within the Model Office, Test, Demo, and Production environments. The majority of these issues are assigned to and resolved by the Production Support team.
CM.BuildDeploy – 2.1%	The majority of these incidents were CM notifications of web application build and deployment failures. These issues were reported to and resolved by the DMDC CM Team.
Email.Outlook – 1.8%	The majority of these incidents were issues with sending and opening encrypted email, profile configuration issues, and DISA related outages. In 2014, there was a huge decrease in overall latency and "Not responding" issues in comparison to 2013.
Desktop.SW.Error – 1.7%	This incident area served as a catch-all for a broad range of issues, and there is not a specific incident that stands out as a majority. Issues range from but are not limited to users unable to sign or open PDF documents, Corestreet Validation errors, and application login errors.
Desktop.PC.Hardware – 1.4%	The majority of these incidents reported PCs that would not boot, PC latency, hibernation/sleep mode issues, issues with peripheral devices (CAC reader, mouse, keyboard, monitor), and toner replacements.
Acct.Unix.PWReset – 1.4%	All tickets submitted under this incident area were for Unix account password resets within various Unix servers. Resets were due to password expirations, forgotten passwords, and failed password attempts. Resetting the passwords restored user access.
Citrix.XenApp-VDI – 1.4%	The majority of these incidents were for hung sessions and users that were unable to access or launch the VDI portal. There was an influx of VDI users stemming from the DSC migration from Beauregard to Ft. Knox. Ft. Knox was not on the DMDC domain, and remote access was required in order for DSO, DSC, and PSA users at Ft. Knox to access the DMDC network. There were repeat reports of Ft. Knox users' inability to access VDI (connecting via terminal servers was a successful workaround). The root cause was found to be a policy change or update at the Ft. Knox site

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	for McAfee. Ports were opened, and the number of VDI access issues decreased significantly.
Network.Connectivity – 1.3%	The majority of these incidents were caused by tripped port security, VLAN moves, a west coast proxy device issue, and route table issue at Beauregard.
Desktop.PC – 1.3%	This incident area served as a catch-all for a broad range of issues, and there is not a specific incident that stands out as a majority. Issues range from but are not limited to Corestreet Validation errors, application login errors, PC login errors, scanner and printer issues, and hibernation/sleep mode issues.
Acct.Oracle.PWReset – 1.3%	All tickets submitted under this incident were for Oracle account password resets within various Oracle databases. Resets were due to password expirations, forgotten passwords, and failed password attempts. Resetting the passwords restored user access.
WinServer.PhysicalServer – 1.2%	The majority of these incidents were unreachable servers that required restarts, hung user session terminations, reports of low space on network drives in which additional space was released to resolve, and repeat issues with Hobbes.
RemoteComputing.VPN.Connectivity – 1.2%	The majority of these incidents were due to VPN outages and reports of latency. A Remote Computing Questionnaire was established to capture user feedback. The Questionnaire is available on SharePoint.
OracleDB – 1.1%	The majority of these incidents were to report databases that were down, database access issues, and Oracle account password resets.
Desktop.SW – 1%	This incident area served as a catch-all for a broad range of issues, and there is not a specific incident that stands out as a majority. Issues range from but are not limited to users unable to sign or open PDF documents, run time errors, application login errors, and missing network drives
ExternalApps.Other – 0.9%	This incident area served as a catch all for various errors, outages, and application issues reported within the Model Office, Test, Demo, and Production environments. The majority of these issues are assigned to and resolved by the Production Support team.

Appendix R

DMDC Information Management System (IMS)

The following sections outline the minimum requirements of the current the IT Operations Division - Information Management System (IMS). All fields are subject to change in the future as needed; this is representative of the current system requirements and should be used as a reference for proposal purposes.

The IT Operations Division currently uses CA Unicenter Service Desk to tracking incidents, requests, problems and change orders. CA Unicenter Service Desk also integrates Asset Management, with the CMDB, and Knowledge Management within this work tracking tool.

Information Management Systems Requirements

1. **Ticket Information Requirements**
   - a. Ticket types available: Incident, Request
   - b. Incident/Request Areas: Acct, CAC, Conferencing, Desktop, Email, etc. (Must be flexible so new areas can be added or areas can be removed by the administrator).
   - c. Each application will require its own template with various fields listed below. Other fields may be added as needed.
   - d. The agent will have one or more of the following fields to search on:
     - (1) Logon ID
     - (2) Affected End User's Location
     - (3) Affected End User's Name
     - (4) Affected CI
     - (5) Ticket Number
     - (6) Ticket Type
   - e. Whenever possible data fields in the template should be prefilled from existing data via interface with DMDC databases. These template fields are:
     - (1) Affected End User's Name
     - (2) Affected End User's Location
     - (3) Affected End User's Phone Number
     - (4) Affected End User's Email
     - (5) Affected End User's Location
     - (6) Agent's Name
   - f. As tickets are opened, the ticket number must be generated from the system in sequential order.
   - g. All required fields are depicted below, but varies by ticket type. Not all fields will be required on each ticket template.
     - (1) Affected End User
     - (2) Incident/Request Area
     - (3) Status
     - (4) Priority
     - (5) Reported by
     - (6) Assignee
     - (7) Assignee's Group
     - (8) Configuration Item

(9) Reporting Method
(10) Severity
(11) Urgency
(12) Impact
(13) Active/Inactive
(14) Customer Phone
(15) Customer Division
(16) Call back Date/Time
(17) Root Cause
(18) Problem
(19) Change
(20) Caused by Change Order
(21) Outage Start Time
(22) Outage End Time
(23) Summary
(24) Description
(25) Ticket number
(26) Date/time opened
(27) Days/time elapsed
(28) Date/time closed

h. Ability to attach files to the ticket.
i. Ability to add a parent/child relationship to other tickets.
j. Ability for workflow.
k. Ability to view ticket activity
l. Ability to attach a Service Type
m. Knowledge repository. Ability to associate with incidents, requests, etc.
n. Asset repository. Ability to associate with incidents, requests, etc.
o. Out of box reporting functionality
p. Self service capability for customers
q. Customization

2. Reporting Requirements

a. Service Desk Trends: Individual Scorecard Performance- The fields that are required in this report are:

(1) Service Desk Analyst
(2) Metrics
    a. Typos/Grammar
    b. Copy/Paste Usage
    c. Procedural
(3) Strengths Assessment
(4) Areas for Improvement Assessment

b. Monthly IVR Operational Metrics- The fields that are required in this report are:
(1) Inbound – Number of:
    a. Total Number of Calls

b. Email Contacts
c. Walk ups
d. Alerts
e. Total Number of Contacts

(2) Outbound – Number of:
a. Total Number of Outbound Calls

(3) Call Metrics
a. Average Answer Speed
b. Average Handled Time
c. Average Hold Time
d. Average Calls per Hour

(4) FCR Metrics

c. SMR Reporting

d. Request Open Ticket with High Priority- The fields that are required in this report are:
(1) Assignee
(2) Assignee's Team
(3) Ticket Type – Request
(4) Priority – Urgent, Critical or Emergency
(5) Number of Days Open
(6) Ticket Number

e. Incident Open Ticket with High Priority:-The fields that are required in this report are:
(1) Assignee
(2) Assignee's Team
(3) Ticket Type – Incident
(4) Priority – Urgent, Critical or Emergency
(5) Number of Days Open
(6) Ticket Number

f. Open EAF Actions Report- The fields that are required in this report are:
(1) Ticket Number
(2) Effected End User
(3) Action Type – In, Out, Move, Change
(4) Action Date
(5) Flag
a. In processing
i. PC Setup - Open tickets with an action date of 3 days or less
ii. Account Setup - Open tickets with an past action date of 14 days or more

iii. Telecom Setup - Open tickets with an past action date of 3 days or more

b. Out processing

i. PC Pickup - Open tickets with an past action date of 7 days or more

ii. Account Deactivation - Open tickets with a past action date

iii. Telecom Setup - Open tickets with an past action date of 3 days or more

c. Move - Open tickets with a past action date

d. Change - Open tickets with a past action date

g. Incident/Request Category Distribution-The fields that are required in this report are:

(1) Ticket Type – Request

a. Request Area

b. Number of Tickets

(2) Ticket Type – Incident

a. Incident Area

b. Number of Tickets

h. Top Five Incident and Request Areas- This report needs to be separated in two parts – Incident Areas and Request Areas. The fields that are required in this report are:

(1) Incident/Request Area

(2) Ticket Numbers

i. Consolidated Ticket Metrics- The fields that are required in this report are: *(six month snapshot, updated per month)*

(1) Incidents Open

(2) Incidents Closed

(3) Requests Open

(4) Requests Closed

(5) Trend Lines

j. Top Twenty-Five Affected End Users- This report needs to be separated in two parts – Top 25 Affected End Users for Incidents and Top 25 Affected End Users for Requests. The fields that are required in this report are:

(1) Affected End User

(2) Number of Tickets

k. Ad Hoc Reporting: As requested.

DMDC Registration Authority Program

Trending for DMDC RA Program -2014

NIPRNET Environment

NPE Certificate Type by Year Row Labels	2012	2013	2014	Grand Total
Domain Controller	2	12	15	29
MultiSAN	5	38	33	76
MultiSAN w/ Email Signing	17	5	6	28
MultiSAN w/ Extended Key Usage	5		1	6
SSL	732	845	1470	3047
SSL-JITC			2	2
Grand Total	**761**	**900**	**1527**	**3188**

Highlights:

- The issuance of RAPIDS and DBIDS certificate by the DMDC RA Program significantly increased the program certificate issuance numbers from 2013 to 2014.
- For 2014, 1390 certificate RAPIDS/DBIDS certificates. 91% of the NPE certificate requests were submitted by RAPIDS/DBIDS.
- DMDC RA program began issuing MultiSAN certificates with email signing and extended key usage.

NPE Certificate Type by Month	1	2	3	4	5	6	7	8	9	10	11	12	Grand Total
Domain Controller	1		2		1	1		3	2	1	2	2	15
MultiSAN	4	1	3	3		1	3	5	5	5	1	2	33
MultiSAN w/ Email Signing				2						4			6
MultiSAN w/ Extended Key Usage											1		1
SSL	91	68	80	67	89	52	314	197	60	159	155	133	1465
SSL-JITC						1	1						2

Grand Total	**96**	**69**	**85**	**72**	**95**	**55**	**318**	**205**	**67**	**169**	**159**	**137**	**1522**

Highlights:

- July and August were the busy months for issuing RAPIDS and DBIDS certificates by the DMDC RA Program. During this time we were down to two RAs at DMDC-Seaside.
- Monthly, the RA Program issues an average of 100 certificates monthly.

Code Signing, Group Certificates and Alternate Tokens	DMDC	WHS
Code Signing Tokens	1	2
Alternate Tokens	3	0
Group Certificate	3	0
Grand Total	**7**	**2**

Highlights:

- DMDC RA Program began issuing Code Signing, Alternate Tokens and Group Certificates. New requirements and responsibilities resulted from issuing these types of certificates. Continuous forms management, tracking of related personnel, token management, etc.

SIPRNET Environment

Total SIPR Tokens based on Site	
DMDC-Seaside	88
DMDC-MC	11
DHRA-MC	7
PRIM-MC	1
Grand Total	**107**

Highlights:

- 66 of these tokens were issued by WHS. These numbers include SIPR tokens that were reissued.

- The PRIM Pentagon tokens were not issued by the DMDC RA Program. We were asked to incorporate these users into our tracking spreadsheet. These numbers are not included in this count.

Total SIPR Tokens Revoked	
Users Departed	4
Bad Tokens- Returned to Reissue	15
Lost Token	1
Grand Total	**20**

Highlights:

- Majority of SIPR token revoked are due to bad tokens. This is a known issue.
- Tokens that were request through the WHS are returned. If reissuance is required, a new SIPR token is issue using DMDC RA Program card stock.

POTENTIAL NEW REQUIREMENTS AFFECTING DMDC
As of 25 February 2015

I. **Fourth estate Manpower Tracking System (FMTS)** – FMTS is the manpower system of record for Office of the Secretary of Defense (OSD), the non-intelligence Defense Agencies and Department of Defense (DoD) Field Activities, and the Joint Community. FMTS currently resides on both the NIPRNET and the SIPRNET. The SIPRNET version currently resides in the Pentagon on the J-6 servers (production and development environments), and the NIPRNET development version is hosted at the Mark Center and the production version is hosted at DISA DECC Mechanicsburg. DMDC must relocate the SIPRNET version to a new location, and also relocate (at a minimum) the NIPRNET development version. Both are slated to be moved to DMDC Seaside.

II. **Office of the Secretary of Defense Organization Server (OSDOS)/Joint Organization Server (JOS)** – OSDOS/JOS are used by the Joint Staff to support the Chairman and Joint Chiefs of Staff (JCS) to assist the President and Secretary of Defense in providing for the strategic direction, strategic planning, contingency planning and preparedness of the Armed Forces.

III. **Defense Information System for Security (DISS) Family of Systems (FoS) --** The Defense Information System for Security (DISS) is a family of systems solution that specifically addresses the security clearance and suitability determinations requirements of Section 3001 of Public Law 108-458. DISS will be the authoritative source for the management, storage, and timely dissemination of and access to personnel security information and will accelerate the clearance process, reduce security clearance vulnerabilities, decrease back-end processing timelines, and support simultaneous information sharing within various DOD entities as well as among a number of authorized federal agencies. The DISS family of systems is comprised of two components: the Case Adjudication Tracking System (CATS) and the Joint Verification System (JVS). Once fully deployed, the DISS family of systems will replace the Joint Personnel Adjudication System (JPAS), which contains approximately six million active security clearance records and supports over 80,000 users. The CATS application (development, test, and production) currently resides at DLA, Fort Meade, MD. The JVS application has a test development and test environment at DMDC is Seaside, CA. JVS is not yet in production. The CATS and DISS applications will need to be collocated (at either Seaside or another production location), and the data in the JPAS application will need to be migrated to JVS and the JPAS application will be decommissioned.

IV. **Defense Travel System (DTS) --** The Defense Travel System (DTS) is a fully integrated, automated, end-to-end travel management system that enables DoD travelers to create authorizations (TDY travel orders), prepare reservations, receive approvals, generate travel vouchers, and receive a split reimbursement between their bank accounts and the Government Travel Charge Card (GTCC) vendor. DTS operates at over 9,500 total sites worldwide. The development and test environments of DTS currently reside at a contractor facility (Northrop Grumman), production and the COOP sites reside at locations maintained by Carpathia (production at the IBX Vault in Dulles, VA, and COOP in the Blue Ridge Data Center in Harrisonburg, VA). The DMDC is scheduled to take over management of DTS in 2015, and the

existing DoD mandate to centralize data centers will require DMDC to consider the relocation of the current development, test, production and COOP sites to other existing facilities. If it's feasible and cost effective, this very complex application, with connectivity to the airline reservation system, car rental reservations, DoD's financial institutions, etc., will need to be relocated to a new location with no interruption of service to the customers.

V. **Defense Civilian Personnel Advisory Service (DCPAS) Network Support** – DCPAS currently has ### employees that reside on the Local Area Network (LAN) operated by the Army's ITA in the Mark Center, Alexandria, VA, and supported by a DCPAS Helpdesk. Over ##% of those employees access the network as full-time teleworking employees from locations such as San Antonio, TX and Denver, CO. DMDC has been asked to migrate all of the DCPAS employees off from the ITA's LAN and onto DMDC's LAN going forward. DMDC will also need to staff their Helpdesk with qualified personnel to provide the required support.

VI. **Enterprise Human Resources Information Systems (EHRIS) FoS** – EHRIS provides enterprise civilian human resource management information technology solutions to the Department, and includes 9 Civilian HR IT enterprise solutions. For most of these applications (except DCPDS) the test and production environments reside at Army ITA, Mark Center, and are in the process of moving to Lockheed Martin's Denver Data Center (DDC), Denver, CO. DCPDS production already resides at the DDC. The COOP site for these applications is at Lockheed Martin's Business Continuity Data Center, Alpharetta, GA The nine solutions are as follows:

A. **Defense Civilian Personnel Data System (DCPDS)** -- The Defense Civilian Personnel Data System (DCPDS) is a computer supported system designed to improve the accuracy, responsiveness, and usefulness of data required for civilian personnel management within the Department of Defense. In DCPDS, each civilian employee has a master record reflecting over 15,000 characters of data. The data base contains current, projected, and historical position and employee personnel management data, such as education level, work experience, current grade and step, awards history, projected training requirements and completed training,

B. **Electronic Official Personnel File (eOPF)** -- The eOPF is an electronic version of the paper OPF and a system for accessing the electronic folder online. The eOPF system combines document management with workflow capabilities. The eOPF allows each employee to have an electronic personnel folder instead of a paper folder, and contains all Notification of Personnel Action (SF-50) Forms and various papers submitted by or provided to employees.

C. **Defense Enterprise Hiring Solution (DEHS)** -- DEHS (a.k.a., USA Staffing) was procured from OPM and is associated with recruiting, identifying, evaluating, and selecting a candidate to fill a position. USA Staffing provides hiring lifecycle capability enterprise-wide across DOD that allows HR professionals to collaborate with Hiring Managers and create vacancies, develop competency-based assessments to evaluate applicants, craft streamlined job announcements and advertise them on USAJOBS, review applicants for qualifications, and certify and select the best qualified candidates.

D. **Defense Injury and Unemployment Compensation System (DIUCS)** – DIUCS provides case management and reporting capabilities to individuals assigned the responsibility of managing the Worker's Compensation program for the Department of Defense.

E. **Defense Civilian Assessment Tool (DCAT)** – DCAT is an assessment tool which can provide for individual employee and supervisory assessment of competencies against the target level proficiency, and provide gap analysis reports which will be used to direct the corrective strategy. This tool will perform human resources functions, and will provide data needed to administer organizational management, determine staffing needs and assignments, develop employees, inform workforce planning and programming, workforce analysis, personnel readiness and assignment.

F. **Defense Talent Management System (DTMS)** – DTMS is a comprehensive tool used to identify current and future talent requirements based on near-term and long-term talent needs and organizational goals. The system will ultimately be used to determine current talent needs, future talent needs, talent pool identification, assessment and assignments, and feedback and development of Senior Executives.

G. **Case Management Tracking System (CMTS)** -- CMTS is an enterprise-level, web-based data tracking application that provides an effective mechanism for Components and Defense agencies to manage and track labor and employee relations cases; a consistent and comprehensive repository for case information; and a full-featured report generation module to meet a wide variety of reporting requirements.

H. **Investigations and Resolutions Case Management System (IRCMS)** – IRCMS is being used to request and track investigations and mediations of EEO complaints for Defense Department civilians and applicants, and to capture data and determine trends related to DOD's Human Capital Assessment and Accountability Framework.

I. **Executive Performance & Appraisal Tool (EPAT)** – EPAT is a comprehensive tool used to facilitate the feedback, appraisal, and compensation process for Senior Executives. It provides the structured framework executives and their raters use at each of three critical stages – creation of performance plan, semi-annual feedback, and annual appraisal – and will ultimately be used to determine appropriate monetary compensation for the executives.

VII. **Defense Readiness Reporting System (DRRS)** – The DRRS is a classified application (SECRET) which is currently managed by OUSD/P&R/Readiness. DRRS is a mission-focused application that improves assessment of the U.S. Armed Forces ability to support the National Military Strategy. DRRS allows the commander to manage rather than monitor readiness, which places the command in a proactive position. The DRRS validates the probability of success and identifies operational capability gaps and associated risks while it portrays readiness issues in a visual template to facilitate rapid situational awareness and improves the efficiency of readiness reporting by merging previously unrelated stovepipe data into a single integrated, authoritative

source simultaneously providing quantitative and qualitative links to near real-time readiness with standing contingency and operational plans. The DRRS development and test environments currently reside at a contractor's (Innova) facility in San Diego, CA. The production environment resides at Fleet Forces Command, Norfolk, VA, and the COOP environment resides at the Business Continuity Data Center in Fairfax, VA.

VIII. **Seaside Data Center Migration** – This would be part of the DoD CIO mandated Data Center Consolidation (DCC) initiative in which all of DMDC's applications (and possibly it's supporting infrastructure) would be relocated to a location that is deemed acceptable to the DoD CIO. This would require a full fail-over capability during the migration, as almost all of DMDC's applications would need to be in full operational status 24 x 7 x 365 during the migration. The work would start with scoping, then planning and coordinating, then executing the actual migration of DMDC's 400+ applications and databases.

IX. **The Synchronized Predeployment and Operational Tracker Enterprise Suite (SPOT-ES) -** allows federal agencies and Combatant Commanders the ability to plan, manage, track, account for, monitor and report on contracts, companies and contractor employees during planning, operation and drawdown of any contingency, humanitarian assistance, peacekeeping, or disaster-recovery operation both within and outside of the United States. SPOT-ES consists of a web application (SPOT), a data collection tool (JAMMS), and a common operational picture / reporting application (TOPSS). It is used across all Services, DoD, DoS, DOE, Treasury, and USAID.

X. **Continuous Evaluation (CE)** – CE is the next step in a program that was designed to perform continuous evaluation on all personnel who currently have security clearance eligibility within the Department of Defense. The Automated Continuous Evaluation Concept Demonstration (CECD) kicked-off in October 2014, was the first phase of the enhanced Department of Defense (DoD) Continuous Evaluation (CE) program implementation. The CE process uses technology to continuously conduct automated records checks using data from DoD, Government, and commercial sources to identify potential derogatory information that indicates a personnel security concern. The CECD has proven successful, so now the application and its supporting IT infrastructure must be expanded to full production capability.

XI. Joint Advertising and Market Research Service (JAMRS) – JAMRS has a propriety database which contains information on potential military recruits. This database is currently maintained by a contractor, and at some point soon will need to migrate into DMDC's existing IT infrastructure. The database must be highly protected, yet made accessible to the contractor hired to support the JAMRS recruiting function.

XII. Personnel and Readiness Information Management (P&RIM) – The remaining employees of the P&RIM component of DHRA are migrating to DMDC effective March 31, 2015. These employees will require network support, as well as access to some Commercial-Off-The-Shelf (COTS) products to continue to complete their mission. This includes such items as maintaining a business architecture for DoD, conforming to NARA's records management requirements, and doing requirements development.

XIII. **electronic Contractor Manpower Reporting Application (eCMRA**) – eCMRA is an application developed by OUSD/P&R in response to the requirement for the Secretary of Defense to submit to Congress an annual inventory of contracts for services performed during the prior fiscal year for or on behalf of the Department of Defense (DoD). eCMRA is designed to collect information on funding source, contracting vehicle, organization supported, mission and function performed, and labor hours and costs for contracted efforts and includes an inventory of the number of contractor employees using direct labor hours and the associated cost data collected from contractors. DMDC is in the process of taking over management of the eCMRA application from OUSD/P&R.

XIV. **Central Adjudication Security Personnel Repository (CASPR)** – CASPR contains records documenting the personnel security adjudicative and management process. It is used as a management tool and to compile statistical data to measure the effectiveness of the adjudicative program and procedures. DMDC is in the process of taking over management of the CASPR application from the Air Force.

XV. **Secure Web Fingerprint Transmission (SWFT) (a.k.a., eFingerprint) –** The SWFT program enables cleared Defense industry users to submit electronic fingerprints (e-fingerprints) and demographic information for applicants who require an investigation by the Office of Personnel Management (OPM) for a personnel security clearance. Cleared contractors collect and securely transmit e-fingerprints to SWFT for subsequent release to OPM based on a JPAS/e-QIP submission approved by the Personnel Security Management Office (PSMO-I). Paper-based capture, submission and processing of fingerprints was time consuming and prone to errors. The SWFT eliminates the manual paper process, expedites the clearance process, and provides end-to-end accountability for PII data. SWFT was prototyped in 2014, expanded to all of the Army in 2015, and is currently in the process of being expanded to include all of DoD and it's contractors as the mechanism to use to transmit fingerprints for pre-employment verification with the Federal Bureau of Investigation (FBI).

XVI. **Secret Internet Protocol Router Network (SIPRNet) Token** – DMDC is currently working with the National Security Administration (NSA) and the Defense Information Systems Agency (DISA) to move to placing the SIPRNet Token on an employee's Common Access Card (CAC), vice the current process of employees requiring SIPR access to carry two cards with tokens – the NIPRNet token and the SIPRNet token. This is currently in the planning stage, and will required a full development, test, and production environment build out before it can go to implementation.

XVII. **Paperless DD214** – The Interagency Paperless DD Form 214 Project was developed to mitigate the time-consuming, resource-intensive, and costly paper-based distribution and receipt processes for the Defense Department (DD) Form 214/215. An electronic distribution process replaces mailing practices to avoid the significant costs and delays associated with DD Form 214/215 distribution and receipt. This better enables the Services to get the right DD Form 214/215 information to the right person at the right time for more efficient and timely benefits administration. Electronic Certified Separation Information (CSI) allows DoD to control the flow of separation information while reducing costs and maximizing efficiencies across stakeholder agencies. EBenefits, a web portal managed jointly by the United States Department of Veterans Affairs (VA) and the United States Department of Defense (DoD) provides Service members

with free electronic copies of their Official Military Personnel File, including their DD Form 214. Currently personnel affiliated with the Army, Air Force and Marine Corp can utilize this service. DMDC still has a significant level of effort to complete in regards to the DD Form 214. This includes setting up a web service with the Department of Veterans Affairs, acquiring the ability to receive data from the Department of Navy, developing the capability to provide data to the Department of Labor and the 54 states and territories and creating a reconciliation process with the Department of Veterans Affairs.

XVIII. **Defense Personnel Records Information Retrieval System (DPRIS)** -- DPRIS provides a conduit for the secure electronic retrieval of document images from the Military Services' Official Military Personnel File (OMPF) systems, and narrative data from the Joint Services Records Research Center (JSRRC), in response to request initiated by authorized and approved government agency users, authorized subordinate agencies, and veterans. The DPRIS development and test environments currently reside in a contractor facility (Booz Allen Hamilton), production resides at the DISA DECC Montgomery, AL, and the COOP resides at the DISA DECC in St. Louis, MO. DMDC will need to migrate at least the development and test environments out of a contractor facility so the development support contract can be competed openly. At some point the production and COOP sites may be co-located with the rest of DMDC's applications.

XIX. **Affordable Care Act (ACA)/Minimum Essential Coverage (MEC)** – ACA/MEC is an online, real time system capable of verifying an applicant's eligibility for minimum essential coverage through the Health Insurance Exchange. Verification of MEC involves determining if the applicant is a DoD beneficiary through trait analysis, and if a positive identification is made, determine whether or not said beneficiary is currently eligible for TRICARE medical coverage for the time period submitted.

XX. **Database Virtualization** - DMDC will be migrating a portion of our database instances from Solaris Unix on dedicated physical hardware to Redhat Linux virtual machines in a VMWare infrastructure. This will require a shift in the approach to performance management. DMDC expects to maintain or improve upon current availability metrics and transaction response times as workloads transition into the virtual machine environment, requiring detailed capacity planning as well as operating system and database tuning.

XXI. **Active to Active**-- DMDC currently maintains disaster recovery capabilities in geographically separate datacenters with a "warm" failover site. DMDC plans to explore new technologies and methodologies to support operations at multiple locations in an "active/active" manner to distribute workloads between the locations and hardware. This includes reviewing each layer of the infrastructure for new capabilities and approaches facilitating active/active processing: network, web, application, and database.

TeamQuest

Oracle Database Server

The Oracle Data Agent (**tqorap**) collects information on Oracle instances. The agent obtains instance summary data pertaining to memory, disk I/O, system global area (SGA), network, rollback segments, block contention, and latches. Detailed metrics about sessions, datafiles, rollback segments, library cache, row cache, block contention, latches, system wait events, session wait events, top SQL cursors, and instance configuration information are also stored in the performance database.

The Oracle Alarm Agent (**tqoraalm**) monitors conditions for Oracle instances and Oracle listeners, and generates alarms when appropriate. The agent observes alarm conditions for the Oracle instance status, Oracle listener status, errors detected in the alert.log file, locks held, and database object capacity.

- Alert Log Alarm Statistics
- Block Contention Wait Statistics
- Datafile Capacity Statistics
- Datafile I/O Statistics
- Instance Alarm Statistics
- Instance Data Statistics
- Latch Statistics
- Library Cache Statistics
- Listener Alarm Statistics
- Lock Alarm Statistics
- Rollback Segment Statistics
- Row Cache Statistics
- Segment Alarm Statistics
- Session Statistics
- Session Wait Statistics
- System Parameters Statistics
- System Statistics
- System Wait Event Statistics
- Top SQL Cursors Statistics

Oracle Solaris Systems

Statistics for Oracle Solaris systems are collected by the TeamQuest collection agents.

- System Activity Statistics
- Disk Space Statistics
- Network Statistics
- Workload Statistics
- Process Statistics
- Project Statistics
- Hardware Inventory Statistics
- System Log Statistics
- General Log Statistics
- TeamQuest Log Statistics
- Derived Statistics
- Zone Statistics
- Processor Set Statistics
- Resource Pool Statistics

Microsoft Windows Systems

Statistics for Microsoft Windows systems are collected by the TeamQuest collection agents.

- System Activity Statistics
- Workload Statistics
- Process Statistics
- Hardware Inventory Statistics
- General Log Statistics
- TeamQuest Log Statistics
- Windows Event Log Statistics
- Windows Services Statistics
- Derived Statistics

Linux Systems

Statistics for Linux systems are collected by the TeamQuest collection agents.

- System Activity Statistics
- Disk Space Statistics
- Network Statistics
- LPAR Configuration Statistics
- Workload Statistics
- Process Statistics
- Hardware Inventory Statistics
- System Log Statistics
- General Log Statistics
- TeamQuest Log Statistics

Sybase ASE Server

The Sybase ASE Agent (**tqsybase**) collects performance data from Sybase servers. The agent obtains parameter data pertaining to CPU, disk capacity, disk I/O, locks, memory, networks, procedure cache, SQL cache, system, and transaction summaries. It also gathers table data pertaining to active SQL, configuration, database detail and summary, device detail, engine detail, lock detail, process, process waits, and system waits statistics.

- Performance Statistics
- Active SQL Statistics
- Configuration Statistics
- Database Detail Statistics
- Database Summary Statistics
- Device Detail Statistics
- Engine Detail Statistics
- Lock Detail Statistics
- Process Statistics
- Process Waits Statistics
- System Waits Statistics