IBM Tivoli Monitoring for Virtual Environments Agent for NetApp Storage 7.3 Fix Pack 3

Reference

Note

Before using this information and the product it supports, read the information in “Notices” on page 89.

This edition applies to version 7.3.0.2 of IBM Tivoli Monitoring for Virtual Environments Agent for NetApp Storage (product number 5724-L92) and to all subsequent releases and modifications until otherwise indicated in new editions.

Contents

Chapter 1. Workspaces

A workspace is the working area of the Tivoli® Enterprise Portal application window. The Navigator contains a list of the workspaces provided by the agent.

About workspaces

Use the Navigator to select the workspace you want to see. As part of the application window, the status bar shows the Tivoli Enterprise Portal Server name and port number to which the displayed information applies and the ID of the current user.

When you select an item in the Navigator, a default workspace is displayed. When you right-click a navigator item, a menu that includes a Workspace item is displayed. The Workspace item contains a list of workspaces for that navigator item. Each workspace has at least one view. Some views have links to other workspaces. You can also use the Workspace Gallery tool as described in the *Tivoli Enterprise Portal User's Guide* to open workspaces.

The workspaces in the Navigator are displayed in a Physical view that shows your enterprise as a physical mapping or a dynamically populated logical view that is agent-specific. You can also create a Logical view. The Physical view is the default view.

To select the dynamically populated logical view, select **Hyper-V** from the **View** list in the Navigator. To view the dynamically populated Hyper-V logical view, you must log in to the Tivoli Enterprise Portal as a system administrator.

To select the dynamically populated logical view, select **ADO** from the **View** list in the Navigator. To view the dynamically populated ADO logical view, you must log in to the Tivoli Enterprise Portal as a system administrator.

This monitoring agent provides predefined workspaces. You cannot modify or delete the predefined workspaces, but you can create new workspaces by editing them and saving the changes with a different name.

The IBM Tivoli Monitoring for Virtual Environments Agent for NetApp Storage provides various default workspaces. These workspaces are displayed in the Navigator under the following nodes and subnodes for this monitoring agent:

NetApp Storage
Corresponds to a NetApp Storage instance and contains agent instance-level workspaces.

When a single instance of the monitoring agent is defined on a system, the top-level node is NetApp Storage - *Instance*:*Hostname*:NU. The NetApp Storage workspace is defined at this node. When multiple instances of the monitoring agent are defined on a system, the top-level node becomes NetApp Storage. The NetApp Storage workspace is undefined at this node. A node for each instance is created called *Instance*:*Hostname*:NU. A workspace that is called *Instance*:*Hostname*:NU is associated with the instance node. This workspace is comparable to the NetApp Storage workspace.

Workspace views can be any combination of query-based views, event views, and special purpose views.

Additional information about workspaces

For more information about creating, customizing, and working with workspaces, see "Using workspaces" in the *Tivoli Enterprise Portal User's Guide*.

For a list of the predefined workspaces for this monitoring agent and a description of each workspace, see Predefined workspaces and the information about each individual workspace.

Some attribute groups for this monitoring agent might not be represented in the predefined workspaces or views for this agent. For a full list of the attribute groups, see “Attribute groups for the monitoring agent” on page 9.

If you are using remote management to navigate to your systems in the Tivoli Enterprise Portal, navigate from the host name of the computer where you installed the agent.

Predefined workspaces

The provides predefined workspaces, which are organized by navigator item.

Agent-level navigator items

- NetApp Storage navigator item
  - NetApp Storage workspace
- Aggregates navigator item
  - Aggregate Detail workspace
  - Aggregates workspace
- Disks navigator item
  - Disk Detail workspace
  - Disks workspace
- Events navigator item
  - Events workspace
- LUNs navigator item
  - LUNs workspace
- Monitored DataSource navigator item
  - Cluster Details workspace
  - Monitored DataSource workspace
- Qtrees navigator item
  - Qtree Detail workspace
  - Qtrees workspace
- Volumes navigator item
  - Volume Detail workspace
  - Volumes workspace
- Vserver navigator item
  - Vserver workspace
  - VServer Details workspace

Workspace descriptions

Each workspace description provides information about the workspace such as the purpose and a list of views in the workspace.

Workspaces are listed under navigator items. When the agent has subnodes, the navigator items are listed under the subnode.

NetApp Storage navigator item

The workspace descriptions are organized by the navigator item to which the workspaces are relevant.

NetApp Storage workspace

This workspace shows the status of hosts, aggregates, volumes, and LUNs (logical unit numbers). Each type of object is shown in its own view, and the view is sorted with the worst status at the top of the list. Each row has a link to a detailed workspace for the object.

This workspace contains the following views:

This workspace contains the following view:

Hosts Status
This view shows all the hosts in the monitored storage system. The rows are sorted so that the host with the worst status sorts to the top of the list. Each host row has a link to the detailed workspace for that host.

Aggregates Status
This view shows all the aggregates in the monitored storage system. The rows are sorted so that the aggregate with the worst status sorts to the top of the list. Each aggregate row has a link to the detailed workspace for that aggregate.

Volumes Status
This view shows all the volumes in the monitored storage system. The rows are sorted so that the volume with the worst status sorts to the top of the list. Each volume row has a link to the detailed workspace for that volume.

LUNs Status
This view shows all the LUNs in the monitored storage system. The rows are sorted so that the LUN with the worst status sorts to the top of the list. Each LUN row has a link to the detailed workspace for that LUN.

placeholder

Aggregates navigator item

The workspace descriptions are organized by the navigator item to which the workspaces are relevant.

Aggregate Detail workspace
This workspace shows the performance metrics for a particular Aggregate, and the Volumes on which the Aggregate relies. Each type of performance metric is shown in its own bar graph.

This workspace contains the following views:

This workspace contains the following view:

I/O operations (per second)
This view shows a bar chart of the operations per second for the Aggregate in the following categories -- total transfers, user reads, user writes, consistency point reads, user block reads, user block writes, and consistency point block reads.

Latency (micro seconds)
This view shows a bar chart of the Latency in microsecond for the Aggregate in the following categories : User Write Latency, User Read Latency, Latency, CP Read Latency.

Events
This view shows all the events occurred on the selected Aggregate.

Storage(GB)
This view shows a pie chart of the current storage sizes/consumption for the Aggregate in the following categories: size used, size available, total size, and total space committed.

Aggregate Navigator
This view shows the list of all Aggregates available in monitored storage system. Each row in a Navigator view has a link, clicking on it allows to refresh same work-space to show the details of selected Aggregate. This helps quick browsing of work-space to check individual Aggregate details without navigating back to parent workspace.

Aggregate Details
This view shows table of performance metric specific to navigated Aggregate.

Volumes
This view shows the Volumes on which this Aggregate relies. Each volume row has a link to the detailed workspace for that volume. You can use the link to drill down to the performance metrics for the volume and the LUNs on which this volume relies.

Aggregates workspace
This workspace shows the performance metrics for the Aggregates. Each performance metric is grouped and shown in its own view.

This workspace contains the following views:

This workspace contains the following view:

Top 5 by Committed Space (GB)
This view shows bar chart for the top 5 Aggregates those have committed maximum space.

Bottom 5 by Throughput (bytes per second)
This view shows a bar chart for 5 Aggregates those have lowest throughput.

Events
This view lists events those are occurred on all the Aggregates available in monitored storage system.

Aggregate's Summary
This view shows configuration data of all the Aggregates available in monitored storage system. Each row in this table has a link to the detailed workspace for that Aggregate.

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Disks navigator item

The workspace descriptions are organized by the navigator item to which the workspaces are relevant.

Disk Detail workspace
This workspace shows the performance metrics for a particular disk. The historical trend of each performance metric type for the last 60 minutes is displayed in graphs.

This workspace contains the following views:

This workspace contains the following view:

Events
This view shows all the events occurred on the selected Disk.

Disk Navigator
This view shows the list of all Disks available in the monitored storage system. Each row in a Navigator view has a link. When you click that link, the same workspace is refreshed to show the details of a selected Disk. Doing so helps quick browsing of workspace to check individual Disk details without navigating back to parent workspace.

Size(in GB)
This view shows a pie chart to know the storage view of selected disk.

Latency (in milliSeconds)
This view shows a bar chart to indicate a response time of selected disk.

Disk Details
This view shows a table that lists static as well as performance metrics of selected Disk.

Data Rate
This view shows area chart to indicate operational rate of selected Disk.

Disks workspace
This workspace shows Top five disks by its Total Throughput, Events, and Summary of all the Disks available in the environment.

This workspace contains the following views:

This workspace contains the following view:

Disk Summary
This view shows a table of static attributes to have a quick overview of important metrics of Disk.

Events
This view shows a table of all Events occurred on all Disks.

Top 5 disks by Total Throughput (bytes per second)
This view shows a bar chart that plots top 5 disks that has Maximum throughput across the disks available in the storage environment.

placeholder

Events navigator item

The workspace descriptions are organized by the navigator item to which the workspaces are relevant.

Events workspace
This workspace shows Events that are occurred on all the storage objects, which are managed by OnCommand or Active IQ unified manager.

This workspace contains the following views:

This workspace contains the following view:

Events
This view lists Events in a tabular format that are occurred across the monitored environment.

placeholder

LUNs navigator item

The workspace descriptions are organized by the navigator item to which the workspaces are relevant.

LUNs workspace
This workspace shows the performance/configuration metrics and Events of the LUNs.

This workspace contains the following views:

This workspace contains the following view:

Lun Summary
This view shows all LUNs in the monitored storage system.Each row provides brief information about the listed LUN.

Events
This view lists events those are occurred on all the LUNs available in monitored storage system.

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Monitored DataSource navigator item

The workspace descriptions are organized by the navigator item to which the workspaces are relevant.

Cluster Details workspace
This workspace shows the performance metrics for a particular Cluster.

This workspace contains the following views:

This workspace contains the following view:

Cluster Node Details
This view shows a table that lists static or configuration metrics of selected Cluster.

Performance Details
This view shows a table that lists performance metrics of cluster node.

Throughput (kbps)
This view shows a bar chart that depicts total throughput of underlying Cluster Node.

Load (percentage)
This view shows a bar chart to know the CPU busy percentage of Cluster Node.

Events
This view shows all the events occurred on the particular Cluster Node.

Cluster Navigator
This view shows a list of all the Cluster Nodes available in monitored storage system. Each row in a Navigator view has a link. When you click that link, the same workspace is refreshed to show the details of selected Cluster. Doing so helps quick browsing of workspace to check individual Cluster details without navigating back to the parent workspace.

Monitored DataSource workspace
This workspace shows the performance metrics for the Aggregates. Each performance metric is grouped and shown in its own view.

This workspace contains the following views:

This workspace contains the following view:

Data-Source Details
This view shows bar chart for the top 5 Aggregates those have committed maximum space.

Cluster
This view shows a bar chart for 5 Aggregates those have lowest throughput.

Events
This view lists events those are occurred on all the Aggregates available in monitored storage system.

placeholder

Qtrees navigator item

The workspace descriptions are organized by the navigator item to which the workspaces are relevant.

Qtree Detail workspace
This workspace is deprecated since OCUM 6.x.This workspace shows the performance metrics for a particular qtree.Each type of performance metric is shown in its trend graph over the last 60 minutes.

This workspace contains the following views:

This workspace contains the following view:

Operations Per Second - History
This view is deprecated since OCUM 6.x.This view shows a trend graph of the operations per second for the qtree over the last 60 minutes in the following categories: total ops, CIFS ops, and NFS ops.

Percent Used - History
This view is deprecated since OCUM 6.x.This view shows a trend graph of the percent of available disk space used for the qtree over the last 60 minutes.

Size
This view is deprecated since OCUM 6.x.This view shows a bar graph of the current disk space and file sizes for the qtree in the following categories: space used, disk space limit, files used, and files limit.

Qtree
This view is deprecated since OCUM 6.x.This view shows the most recent detailed data collected for the qtree.

Qtrees workspace
This workspace shows the performance/configuration metrics and Events of the qtrees.

This workspace contains the following views:

This workspace contains the following view:

Qtree Summary
This view shows all the Qtrees in the monitored storage system.Each row provides brief information of listed qtree.

Events
This view lists events that are occurred on all the Qtrees available in monitored storage system.

placeholder

Volumes navigator item

The workspace descriptions are organized by the navigator item to which the workspaces are relevant.

Volume Detail workspace
This workspace shows the performance metrics for a particular Volume, and the LUNs on which the volume relies. Each type of performance metric is shown in its trend graph.

This workspace contains the following views:

This workspace contains the following view:

Latency (in milliseconds)
This view shows a bar chart of latency for a Volume in the following categories: read latency, write latency, other latency and average latency.

Events
This view shows all the events occurred on a selected Volume.

Performance Details
This view shows a table of performance attributes of selected Volume.

Volume Navigator
This view shows a list of all the Volumes available in monitored storage system. Each row in a Navigator view has a link, clicking on it allows to refresh same work-space to show the details of selected Volume. This helps quick browsing of work-space to check individual Volume details without navigating back to parent workspace.

Volume Details
This view shows a table of configuration metrics specific to navigated Volume.

LUNs
This view shows the LUNs on which this volume relies. Each LUN row has a link to the detailed workspace for that LUN. You can use the link to drill down and see the performance metrics for the LUN.

Qtrees
This view shows the most recent and detailed data that is collected for the qtree.

Volumes workspace
This workspace shows the performance metrics for the Volumes. Each performance metric is grouped and shown in its own view.

This workspace contains the following views:

This workspace contains the following view:

Volume Summary
This view shows configuration data of all the Volumes available in monitored storage system. Each row in this table has a link to the detailed workspace for that Volume.

Events
This view lists events those are occurred on all the Volumes available in monitored storage system.

Top 5 Volumes By Write Latency (in milliseconds)
This view shows bar chart for top 5 Volumes that has highest write latency in the monitored storage system.

placeholder

Vserver navigator item

The workspace descriptions are organized by the navigator item to which the workspaces are relevant.

Vserver workspace

This workspace shows the Events and Summary of all the VServers available in the environment.

This workspace contains the following views:

This workspace contains the following view:

VServer Summary

This view shows a table of static attributes to have a quick overview of important metrics of VServer.

Events

This view lists events those are occurred on all the VServers available in monitored storage system in tabular format.

VServer Details workspace

This workspace shows the attributes for a particular VServer.

This workspace contains the following views:

This workspace contains the following view:

VServer Summary

This view shows a table that lists static as well as performance metrics of the selected VServer.

VServer Navigator

This view shows the list of all VServers available in monitored storage system. Each row in a Navigator view has a link, clicking on it allows to refresh same work-space to show the details of selected VServer. This helps quick browsing of work-space to check individual VServer details without navigating back to the parent workspace.

Network Utilization(per second)

This view shows a bar chart of Network utilization for the selected VServer.

Network Errors

This view shows an area chart to view errors occurred in the network for the selected VServer.

Events

This view shows all the events occurred on the selected VServer.

placeholder

Chapter 2. Attributes

Attributes are the application properties that are being measured and reported by the IBM Tivoli Monitoring for Virtual Environments Agent for NetApp Storage. Attributes make up the key performance indicators (KPIs) that are reported in the application dashboards, and you can use them to create eventing thresholds for conditions that you want to monitor.

About attributes

Attributes are organized into attribute groups. Attributes in an attribute group relate to a single object such as an application, or to a single kind of data such as status information.

Attributes in a group can be used in queries, query-based views, situations, policy workflows, take action definitions, and launch application definitions. Chart or table views and situations are two examples of how attributes in a group can be used:

- Chart or table views

  Attributes are displayed in chart and table views. The chart and table views use queries to specify which attribute values to request from a monitoring agent. You use the Properties editor to apply filters and set styles to define the content and appearance of a view based on an existing query.
- Situations

  You use attributes to create situations that monitor the state of your operating system, database, or application. A situation describes a condition you want to test. When you start a situation, the values you assign to the situation attributes are compared with the values collected by the NetApp Storage agent and registers an *event* if the condition is met. You are alerted to events by indicator icons that are displayed in the Navigator.

Additional information about attributes

For more information about using attributes and attribute groups, see the *Tivoli Enterprise Portal User's Guide*.

For a list of the attribute groups, a list of the attributes in each attribute group, and descriptions of the attributes for this monitoring agent, see “Attribute groups for the monitoring agent” on page 9 and “Attributes in each attribute group” on page 10.

Attribute groups for the monitoring agent

The NetApp Storage agent contains the following attribute groups. For agents that use IBM Tivoli Monitoring infrastructure, attributes are in attribute groups. For agents that use the lightweight infrastructure, attributes are in data sets.

The table name depends on the maximum table name limits of the target database being used for the historical data collection. If the maximum name is 30 characters, any warehouse or historical table name longer than 30 characters is shortened to 30 characters.

Note: Agents that use the Tivoli Monitoring infrastructure refer to the historical table name as the warehouse table name.

- Attribute group name: Aggregates
  - Table name: KNU02AGREG
  - Warehouse or historical table name: KNU_AGGREGATES or KNU02AGREG
- Attribute group name: Cluster Node
  - Table name: KNU09CLSND
  - Warehouse or historical table name: KNU_CLUSTER_NODE or KNU09CLSND

- Attribute group name: Clusters
  - Table name: KNU08CLST
  - Warehouse or historical table name: KNU_CLUSTERS or KNU08CLST
- Attribute group name: DataSource
  - Table name: KNU10DTSR
  - Warehouse or historical table name: KNU_DATASOURCE or KNU10DTSR
- Attribute group name: Disks
  - Table name: KNU05DISK
  - Warehouse or historical table name: KNU_DISKS or KNU05DISK
- Attribute group name: Events
  - Table name: KNUEVNT
  - Warehouse or historical table name: KNU_EVENTS or KNUEVNT
- Attribute group name: Host FCP Targets Deprecated
  - Table name: KNUHOSTFCT
  - Warehouse or historical table name: KNU_HOST_FCP_TARGETS or KNUHOSTFCT
- Attribute group name: Host Network Interfaces Deprecated
  - Table name: KNUHOSTNIF
  - Warehouse or historical table name: KNU_HOST_NETWORK_INTERFACES or KNUHOSTNIF
- Attribute group name: Hosts Deprecated
  - Table name: KNU01HOST
  - Warehouse or historical table name: KNU_HOSTS or KNU01HOST
- Attribute group name: LUNs
  - Table name: KNU04LUN
  - Warehouse or historical table name: KNU_LUNS or KNU04LUN
- Attribute group name: Performance Object Status
  - Table name: KNUPOBJST
  - Warehouse or historical table name: KNU_PERFORMANCE_OBJECT_STATUS or KNUPOBJST
- Attribute group name: Qtrees
  - Table name: KNU06QTREE
  - Warehouse or historical table name: KNU_QTREES or KNU06QTREE
- Attribute group name: Volumes
  - Table name: KNU03VOL
  - Warehouse or historical table name: KNU_VOLUMES or KNU03VOL
- Attribute group name: Vserver
  - Table name: KNU07VSR
  - Warehouse or historical table name: KNU_VSERVER or KNU07VSR

Attributes in each attribute group

Attributes in each attribute group collect data that the agent uses for monitoring.

The description of each attribute group contains the following details:

- Whether the attribute group is a historical type that you can roll off to a data warehouse.

- Information such as whether the attribute is a key attribute, type, source, verification method, warehouse name (as applicable), and other names.

  A *key attribute* is an attribute that is used in warehouse aggregation to identify rows of data that represent the same object.

  The source information sometimes uses C programming code syntax for if-then-else clauses to describe how an attribute is derived, for example:

  ```
  (CPU_Pct < 0 ) || (Memory_Pct < 0 )? 0 : 1
  ```

  This example means that if the CPU_Pct attribute is less than 0 or if the Memory_Pct attribute is less than 0, then the attribute is set to 0. Otherwise, the attribute is set to 1.

Aggregates attribute group

The Aggregate attribute group contains information about aggregates. This attribute group is eligible for use with Tivoli Data Warehouse.

This attribute group contains the following attributes:

Aggregate Key attribute
The resource key for this aggregate, Source:Active IQ Unified Manager. This attribute is a key attribute. The type is string with enumerated values. The following values are defined: unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: AGGREGATE_KEY or AGGR_KEY (warehouse name), Aggregate Key (caption), Aggregate_Key (attribute name), and AGGR_KEY (column name).

Aggregate Name attribute
The name of this aggregate, Source:Active IQ Unified Manager. This attribute is a key attribute. The type is string with enumerated values. The following values are defined: unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: AGGREGATE_NAME or AGGR_NAME (warehouse name), Aggregate Name (caption), Aggregate_Name (attribute name), and AGGR_NAME (column name).

Aggregate Type attribute
The type of this aggregate.For example, traditional or aggregate, this attribute is deprecated since OCUM 6.x. The type is string with enumerated values. The following values are defined: unavailable (unavailable), traditional (traditional), aggregate (aggregate). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: AGGREGATE_TYPE or AGGR_TYPE (warehouse name), Aggregate Type (caption), Aggregate_Type (attribute name), and AGGR_TYPE (column name).

Block Rate attribute
The number of block-based read and write operations that are performed per second for this aggregate, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: BLOCK_RATE (warehouse name), Block Rate (caption), Block_Rate (attribute name), and BLOCK_RATE (column name).

Committed Warehouse attribute
Indicates whether the committed data space should be ignored or included by the warehouse, Source:Active IQ Unified Manager. The type is integer (32-bit gauge) with enumerated values. The following values are defined: Exclude (0), Include (1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: COMMITTED_WAREHOUSE or CMTD_WRHS (warehouse name), Committed Warehouse (caption), Committed_Warehouse (attribute name), and CMTD_WRHS (column name).

Composite Status attribute
A composite of the status fields indicating the maximum severity of all the fields, this attribute is deprecated since OCUM 6.x. The type is integer (32-bit gauge) with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: COMPOSITE_STATUS or CMP_STS (warehouse name), Composite Status (caption), Composite_Status (attribute name), and CMP_STS (column name).

CP Read Blocks attribute
The number of blocks that are read per second on this aggregate during the consistency point, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: CP_READ_BLOCKS or CP_RD_BLK (warehouse name), CP Read Blocks (caption), CP_Read_Blocks (attribute name), and CP_RD_BLK (column name).

CP Read Latency attribute
The average latency (in microseconds) per block for the read operations during a consistency point, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: CP_READ_LATENCY or CPRDLAT (warehouse name), CP Read Latency (caption), CP_Read_Latency (attribute name), and CPRDLAT (column name).

CP Reads attribute
The number of read operations that are performed per second on this aggregate during a consistency point, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: CP_READS or CP_RD (warehouse name), CP Reads (caption), CP_Reads (attribute name), and CP_RD (column name).

File Rate attribute
The number of file-based read and write operations that are performed per second on this aggregate, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: FILE_RATE (warehouse name), File Rate (caption), File_Rate (attribute name), and FILE_RATE (column name).

Host Name attribute
The name of the host that contains this aggregate, This attribute is deprecated since OCUM 6.x. This attribute is a key attribute. The type is string with enumerated values. The following values are defined: unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: HOST_NAME (warehouse name), Host Name (caption), Host_Name (attribute name), and HOST_NAME (column name).

Latency attribute
The latency (in microseconds) of all the operations that are performed on this aggregate, Source:Active IQ Unified Manager REST API. The type is real number (64-bit gauge) with one decimal

places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: LATENCY or LAT (warehouse name), Latency (caption), Latency (attribute name), and LAT (column name).

Node attribute
The managed system name of the agent. This attribute is a key attribute. The type is string.

The source for this attribute is the agent

The following names are defined for this attribute: NODE (warehouse name), Node (caption), ORIGINNODE (attribute name), and ORIGINNODE (column name).

Node Name attribute
The name of the associated cluster node, Source:Active IQ Unified Manager. This attribute is a key attribute. The type is string with enumerated values. The following values are defined: unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: NODE_NAME or NOD_NAME (warehouse name), Node Name (caption), Node_Name (attribute name), and NOD_NAME (column name).

Percent Used attribute
The percentage of memory (in GB) that is being used in the aggregate, Source:Active IQ Unified Manager. The type is real number (32-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: PERCENT_USED or PCT_USED (warehouse name), Percent Used (caption), Percent_Used (attribute name), and PCT_USED (column name).

Perf Status attribute
Indicates how well this aggregate is performing, this attribute is deprecated since OCUM 6.x. The type is string with enumerated values. The following values are defined: unavailable (unavailable), unknown (unknown), normal (normal), information (information), unmanaged (unmanaged), warning (warning), error (error), critical (critical), emergency (emergency). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: PERF_STATUS or PERF_STS (warehouse name), Perf Status (caption), Perf_Status (attribute name), and PERF_STS (column name).

Perf Warehouse attribute
Indicates whether the performance data must be ignored or included by the warehouse, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is integer (32-bit gauge) with enumerated values. The following values are defined: Exclude (0), Include (1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: PERF_WAREHOUSE or PERF_WRHS (warehouse name), Perf Warehouse (caption), Perf_Warehouse (attribute name), and PERF_WRHS (column name).

Read Throughput attribute
The data read (in bytes per second) by an aggregate, Source:Active IQ Unified Manager REST API. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: READ_THROUGHPUT or READTHRPT (warehouse name), Read Throughput (caption), Read_Throughput (attribute name), and READTHRPT (column name).

Run Status attribute
Indicates how well this aggregate is running, Source:Active IQ Unified Manager. The type is string with enumerated values. The following values are defined: unavailable (unavailable), unknown (unknown), normal (normal), information (information), warning (warning), error (error), critical (critical). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: RUN_STATUS or RUN_STS (warehouse name), Run Status (caption), Run_Status (attribute name), and RUN_STS (column name).

Size Available attribute
The memory (in GB) that is available for the aggregate to use, Source:Active IQ Unified Manager. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: SIZE_AVAILABLE or SIZE_AVAIL (warehouse name), Size Available (caption), Size_Available (attribute name), and SIZE_AVAIL (column name).

Size Total attribute
The memory (in GB) that is available in this aggregate, Source:Active IQ Unified Manager. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: SIZE_TOTAL or SIZE_TOTL (warehouse name), Size Total (caption), Size_Total (attribute name), and SIZE_TOTL (column name).

Size Used attribute
The memory (in GB) that is being used in the aggregate, Source:Active IQ Unified Manager. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: SIZE_USED (warehouse name), Size Used (caption), Size_Used (attribute name), and SIZE_USED (column name).

Size Warehouse attribute
Indicates whether the size of the data should be ignored or included by the warehouse, Source:Active IQ Unified Manager. The type is integer (32-bit gauge) with enumerated values. The following values are defined: Exclude (0), Include (1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: SIZE_WAREHOUSE or SIZE_WRHS (warehouse name), Size Warehouse (caption), Size_Warehouse (attribute name), and SIZE_WRHS (column name).

Throughput attribute
The total data that is sent and received (in bytes per second) by an aggregate, Source:Active IQ Unified Manager REST API. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: THROUGHPUT or THRPT (warehouse name), Throughput (caption), Throughput (attribute name), and THRPT (column name).

Timestamp attribute
The local time at the agent when the data was collected. The type is string.

The source for this attribute is the agent

The following names are defined for this attribute: TIMESTAMP (warehouse name), Timestamp (caption), Timestamp (attribute name), and TIMESTAMP (column name).

Total Space Committed attribute
The total space (in GB) that is committed by the aggregate, Source:Active IQ Unified Manager. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: TOTAL_SPACE_COMMITTED or SPACE_CMTD (warehouse name), Total Space Committed (caption), Total_Space_Committed (attribute name), and SPACE_CMTD (column name).

Total Transfers attribute

The total number of transfers that are serviced per second by the aggregate, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: TOTAL_TRANSFERS or TOTL_XFER (warehouse name), Total Transfers (caption), Total_Transfers (attribute name), and TOTL_XFER (column name).

User Read Blocks attribute

The number of blocks that are read per second from this aggregate, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: USER_READ_BLOCKS or USR_RD_BLK (warehouse name), User Read Blocks (caption), User_Read_Blocks (attribute name), and USR_RD_BLK (column name).

User Read Latency attribute

The average latency (in microseconds) per block for the read operations that are performed by the user, Source:Active IQ Unified Manager REST API. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: USERREADLATENCY or USRRDLAT (warehouse name), User Read Latency (caption), UserReadLatency (attribute name), and USRRDLAT (column name).

User Reads attribute

The number of read operations that are performed per second on this aggregate by the user, Source:Active IQ Unified REST API. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: USER_READS or USR_RD (warehouse name), User Reads (caption), User_Reads (attribute name), and USR_RD (column name).

User Write Blocks attribute

The number of blocks that are written per second to this aggregate, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: USER_WRITE_BLOCKS or USR_WR_BLK (warehouse name), User Write Blocks (caption), User_Write_Blocks (attribute name), and USR_WR_BLK (column name).

User Write Latency attribute

The average latency (in microseconds) per block for the write operations that are performed by the user, Source:Active IQ Unified Manager REST API. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: USERWRITELATENCY or USRWTLAT (warehouse name), User Write Latency (caption), UserWriteLatency (attribute name), and USRWTLAT (column name).

User Writes attribute

The number of write operations that are performed per second on this aggregate by the user, Source:Active IQ Unified REST API. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: USER_WRITES or USR_WR (warehouse name), User Writes (caption), User_Writes (attribute name), and USR_WR (column name).

Utilization attribute
The CPU utilization (in percentage) of this aggregate, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: UTILIZATION or UTIL (warehouse name), Utilization (caption), Utilization (attribute name), and UTIL (column name).

Write Throughput attribute
The data write (in bytes per second) by an aggregate, Source:Active IQ Unified Manager REST API. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: WRITE_THROUGHPUT or WRTTHRPT (warehouse name), Write Throughput (caption), Write_Throughput (attribute name), and WRTTHRPT (column name).

Cluster Node attribute group

The Cluster Node attribute group contains information about cluster nodes. This attribute group is eligible for use with Tivoli Data Warehouse.

This attribute group contains the following attributes:

Avg Processor Busy attribute
The average processor utilization (in percentage) across all processors in the system, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: AVG_PROCESSOR_BUSY or AVG_PR_BSY (warehouse name), Avg Processor Busy (caption), Avg_Processor_Busy (attribute name), and AVG_PR_BSY (column name).

Cluster Key attribute
The resource key of the cluster where the node is present, Source:Active IQ Unified Manager. This attribute is a key attribute. The type is string with enumerated values. The following values are defined: unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: CLUSTER_KEY or CL_KEY (warehouse name), Cluster Key (caption), Cluster_Key (attribute name), and CL_KEY (column name).

Cluster Name attribute
The name of the cluster, Source:Active IQ Unified Manager. This attribute is a key attribute. The type is string with enumerated values. The following values are defined: unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: CLUSTER_NAME or CLST_NAME (warehouse name), Cluster Name (caption), Cluster_Name (attribute name), and CLST_NAME (column name).

Cluster Node Key attribute
The resource key of the node, Source:Active IQ Unified Manager. This attribute is a key attribute. The type is string with enumerated values. The following values are defined: unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: CLUSTER_NODE_KEY or CN_KEY (warehouse name), Cluster Node Key (caption), Cluster_Node_Key (attribute name), and CN_KEY (column name).

CPU Busy attribute

The time (in percentage) for which one or more processors is busy in the system, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: CPU_BUSY (warehouse name), CPU Busy (caption), CPU_Busy (attribute name), and CPU_BUSY (column name).

Failed Fan Status attribute

The status of failed fans, Source:Active IQ Unified Manager. The type is string with enumerated values. The following values are defined: unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: FAILED_FAN_STATUS or FLDFANSTS (warehouse name), Failed Fan Status (caption), Failed_Fan_Status (attribute name), and FLDFANSTS (column name).

FailOver State attribute

Storage failover configuration state, Source:Active IQ Unified Manager. The type is string with enumerated values. The following values are defined: unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: FAILOVER_STATE or FAILOVERST (warehouse name), FailOver State (caption), FailOver_State (attribute name), and FAILOVERST (column name).

Location attribute

The physical location of the node as reported by the data open network technology for appliance products (ONTAP) server, Source:Active IQ Unified Manager. This attribute is a key attribute. The type is string with enumerated values. The following values are defined: unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: LOCATION or CN_LOC (warehouse name), Location (caption), Location (attribute name), and CN_LOC (column name).

Max Aggregate Utilization attribute

The maximum aggregate utilization by this cluster node, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: MAX_AGGREGATE_UTILIZATION or MAX_AGG_UZ (warehouse name), Max Aggregate Utilization (caption), Max_Aggregate_Utilization (attribute name), and MAX_AGG_UZ (column name).

Memory Size attribute

Memory size of node in GB, Source:Active IQ Unified Manager. This attribute is a key attribute. The type is real number (64-bit gauge) with three decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: MEMORY_SIZE or MEMORY_SZ (warehouse name), Memory Size (caption), Memory_Size (attribute name), and MEMORY_SZ (column name).

Name attribute

The name of this cluster node, Source:Active IQ Unified Manager. This attribute is a key attribute. The type is string with enumerated values. The following values are defined: unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: CLUSTER_NODE_NAME or CN_NAME (warehouse name), Name (caption), Cluster_Node_Name (attribute name), and CN_NAME (column name).

Net Data Received attribute

The data that is received (in KB per second) over the network, this attribute is deprecated since Active IQ Unified Manager 9.7. This attribute is a key attribute. The type is integer (64-bit gauge) with

enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: NET_DATA_RECV or CN_DT_RCV (warehouse name), Net Data Received (caption), Net_Data_Recv (attribute name), and CN_DT_RCV (column name).

Net Data Sent attribute
The data that is sent (in KB per second) over the network.this attribute is deprecated since Active IQ Unified Manager 9.7. This attribute is a key attribute. The type is integer (64-bit gauge) with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: NET_DATA_SENT or CN_DT_SNT (warehouse name), Net Data Sent (caption), Net_Data_Sent (attribute name), and CN_DT_SNT (column name).

Node attribute
The managed system name of the agent. This attribute is a key attribute. The type is string.

The source for this attribute is the agent

The following names are defined for this attribute: NODE (warehouse name), Node (caption), ORIGINNODE (attribute name), and ORIGINNODE (column name).

NVRAM Battery Status attribute
The status of the non-volatile random access memory (NVRAM) battery, Source:Active IQ Unified Manager. This attribute is a key attribute. The type is string with enumerated values. The following values are defined: battery ok (battery_ok), battery partially discharged (battery_partially_discharged), battery fully discharged (battery_fully_discharged), battery not present (battery_not_present), battery near end of life (battery_near_end_of_life), battery at end of life (battery_at_end_of_life), battery unknown (battery_unknown), battery over charged (battery_over_charged), battery fully charged (battery_fully_charged). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: NVRAM_BATTERY_STATUS or CN_NVR (warehouse name), NVRAM Battery Status (caption), NVRAM_Battery_Status (attribute name), and CN_NVR (column name).

Other Operations attribute
The number of other fibre channel protocol (FCP) operations at the node level, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: OTHER_OPS or OTHR_OPS (warehouse name), Other Operations (caption), Other_Ops (attribute name), and OTHR_OPS (column name).

Port Count attribute
The number of physical ports (ethernet and fibre channel) in the node, Source:Active IQ Unified Manager. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: CLUSTER_NODE_PORT_COUNT or CN_PCNT (warehouse name), Port Count (caption), Cluster_Node_Port_Count (attribute name), and CN_PCNT (column name).

Read Operations attribute
The number of aggregated FCP read operations at the node level, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: READ_OPS or RD_OPS (warehouse name), Read Operations (caption), Read_Ops (attribute name), and RD_OPS (column name).

Read Throughput attribute

The data that is read (in KB per second) from this cluster node, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: READ_THROUGHPUT or RD_THRGPUT (warehouse name), Read Throughput (caption), Read_Throughput (attribute name), and RD_THRGPUT (column name).

Run Status attribute

The current status of the node, Source:Active IQ Unified Manager. The type is string with enumerated values. The following values are defined: unavailable (unavailable), unknown (unknown), normal (normal), information (information), warning (warning), error (error), critical (critical). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: CLUSTER_NODE_STATUS or CN_STAT (warehouse name), Run Status (caption), Cluster_Node_Status (attribute name), and CN_STAT (column name).

Serial Number attribute

The serial number of the node, Source:Active IQ Unified Manager. This attribute is a key attribute. The type is string with enumerated values. The following values are defined: unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: SERIAL_NUMBER or CN_SRL_NUM (warehouse name), Serial Number (caption), Serial_Number (attribute name), and CN_SRL_NUM (column name).

State attribute

The state of this cluster node, the possible values of this attribute are online and offline, Source:Active IQ Unified Manager. This attribute is a key attribute. The type is string with enumerated values. The following values are defined: online (online), offline (offline). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: CLUSTER_NODE_STATE or CN_STATE (warehouse name), State (caption), Cluster_Node_State (attribute name), and CN_STATE (column name).

Sys Avg Latency attribute

The average latency (in microseconds) of the system, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: SYS_AVG_LATENCY or SYS_AVG_LT (warehouse name), Sys Avg Latency (caption), Sys_Avg_Latency (attribute name), and SYS_AVG_LT (column name).

Sys Read Latency attribute

The read latency (in microseconds) of the system, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: SYS_READ_LATENCY or SYS_RD_LT (warehouse name), Sys Read Latency (caption), Sys_Read_Latency (attribute name), and SYS_RD_LT (column name).

Sys Write Latency attribute

The write latency (in microseconds) of the system, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: SYS_WRITE_LATENCY or SYS_WR_LT (warehouse name), Sys Write Latency (caption), Sys_Write_Latency (attribute name), and SYS_WR_LT (column name).

Timestamp attribute
The local time at the agent when the data was collected. The type is string.

The source for this attribute is the agent

The following names are defined for this attribute: TIMESTAMP (warehouse name), Timestamp (caption), Timestamp (attribute name), and TIMESTAMP (column name).

Total Throughput attribute
The total data that is sent and received (in KB per second) by the cluster node, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: TOTAL_THROUGHPUT or TO_THRGPUT (warehouse name), Total Throughput (caption), Total_Throughput (attribute name), and TO_THRGPUT (column name).

UpTime attribute
The total time (in hours) for which the node is active, Source:Active IQ Unified Manager. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: CLUSTER_NODE_UPTIME or CN_UPTIME (warehouse name), UpTime (caption), Cluster_Node_Uptime (attribute name), and CN_UPTIME (column name).

Utilization attribute
The processor utilization by this cluster node, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: UTILIZATION or UTLZN (warehouse name), Utilization (caption), Utilization (attribute name), and UTLZN (column name).

Write Throughput attribute
The data that is written (in KB per second) to this cluster node, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: WRITE_THROUGHPUT or WR_THRGPUT (warehouse name), Write Throughput (caption), Write_Throughput (attribute name), and WR_THRGPUT (column name).

Clusters attribute group

The Clusters attribute group contains information about clusters. This attribute group is eligible for use with Tivoli Data Warehouse.

This attribute group contains the following attributes:

Address attribute
The primary IP address of the cluster, Source:Active IQ Unified Manager. This attribute is a key attribute. The type is string with enumerated values. The following values are defined: unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: CLUSTER_ADDRESS or CLST_ADDR (warehouse name), Address (caption), Cluster_Address (attribute name), and CLST_ADDR (column name).

Cluster Key attribute

The resource key for the cluster, Source:Active IQ Unified Manager. This attribute is a key attribute. The type is string with enumerated values. The following values are defined: unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: CLUSTER_KEY or CL_KEY (warehouse name), Cluster Key (caption), Cluster_Key (attribute name), and CL_KEY (column name).

Diagnosis Status attribute

The diagnosis status of the cluster, Possible values of this attribute are ok, ok-with-suppressed, degraded, or unreachable, Source:Active IQ Unified Manager. The type is string with enumerated values. The following values are defined: ok (ok), ok-with-suppressed (ok-with-suppressed), degraded (degraded), unreachable (unreachable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: CLUSTER_DIAGNOSIS_STATUS or CL_DG_STAT (warehouse name), Diagnosis Status (caption), Cluster_Diagnosis_Status (attribute name), and CL_DG_STAT (column name).

Max Aggregate Utilization attribute

The maximum aggregate usage by this cluster in percentage, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: MAX_AGGREGATE_UTILIZATION or MAX_AGG_UZ (warehouse name), Max Aggregate Utilization (caption), Max_Aggregate_Utilization (attribute name), and MAX_AGG_UZ (column name).

Max Node Utilization attribute

The maximum node usage by this cluster in percentage, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: MAX_NODE_UTILIZATION or MAX_NOD_UZ (warehouse name), Max Node Utilization (caption), Max_Node_Utilization (attribute name), and MAX_NOD_UZ (column name).

Name attribute

The name of the cluster, Source:Active IQ Unified Manager. This attribute is a key attribute. The type is string with enumerated values. The following values are defined: unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: CLUSTER_NAME or CLST_NAME (warehouse name), Name (caption), Cluster_Name (attribute name), and CLST_NAME (column name).

Node attribute

The managed system name of the agent. This attribute is a key attribute. The type is string.

The source for this attribute is the agent

The following names are defined for this attribute: NODE (warehouse name), Node (caption), ORIGINNODE (attribute name), and ORIGINNODE (column name).

Read Latency attribute

The read latency (in microseconds) of the cluster, Source:Active IQ Unified Manager REST API. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: READ_LATENCY or READLTCY (warehouse name), Read Latency (caption), Read_Latency (attribute name), and READLTCY (column name).

Read Operations attribute
The number of read operations that are serviced per second by the cluster, Source:Active IQ Unified Manager REST API. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: READ_IOPS or READIOPS (warehouse name), Read Operations (caption), Read_Iops (attribute name), and READIOPS (column name).

Read Throughput attribute
The data read (in KB per second) by the cluster, Source:Active IQ Unified Manager REST API. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: READ_THROUGHPUT or READTHRPT (warehouse name), Read Throughput (caption), Read_Throughput (attribute name), and READTHRPT (column name).

Run Status attribute
The current status of the host that is based on all events, Source:Active IQ Unified Manager. The type is string with enumerated values. The following values are defined: unavailable (unavailable), unknown (unknown), normal (normal), information (information), warning (warning), error (error), critical (critical). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: CLUSTER_STATUS or CLST_STAT (warehouse name), Run Status (caption), Cluster_Status (attribute name), and CLST_STAT (column name).

Serial Number attribute
The serial number of the cluster, Source:Active IQ Unified Manager. This attribute is a key attribute. The type is string with enumerated values. The following values are defined: unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: SERIAL_NUMBER or CL_SRL_NUM (warehouse name), Serial Number (caption), Serial_Number (attribute name), and CL_SRL_NUM (column name).

Timestamp attribute
The local time at the agent when the data was collected. The type is string.

The source for this attribute is the agent

The following names are defined for this attribute: TIMESTAMP (warehouse name), Timestamp (caption), Timestamp (attribute name), and TIMESTAMP (column name).

Total Operations attribute
The number of operations that are serviced per second by the cluster, Source:Active IQ Unified Manager REST API. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: TOTAL_OPS or TOTLOPS (warehouse name), Total Operations (caption), Total_Ops (attribute name), and TOTLOPS (column name).

Total Throughput attribute
The total data that is sent and received (in KB per second) by the cluster, Source:Active IQ Unified Manager REST API. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: TOTAL_THROUGHPUT or TOTLTHRPT (warehouse name), Total Throughput (caption), Total_Throughput (attribute name), and TOTLTHRPT (column name).

Version attribute
The version of the cluster, Source:Active IQ Unified Manager. This attribute is a key attribute. The type is string with enumerated values. The following values are defined: unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: CLUSTER_VERSION or CLST_VERSN (warehouse name), Version (caption), Cluster_Version (attribute name), and CLST_VERSN (column name).

Write Latency attribute
The write latency (in microseconds) of the cluster, Source:Active IQ Unified Manager REST API. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for thcifsis attribute: WRITE_LATENCY or WRTLTCY (warehouse name), Write Latency (caption), Write_Latency (attribute name), and WRTLTCY (column name).

Write Operations attribute
The number of write operations that are serviced per second by the cluster, Source:Active IQ Unified Manager REST API. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: WRITE_IOPS or WRTIOPS (warehouse name), Write Operations (caption), Write_Iops (attribute name), and WRTIOPS (column name).

Write Throughput attribute
The data write (in KB per second) by the cluster, Source:Active IQ Unified Manager REST API. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: WRITE_THROUGHPUT or WRTTHRPT (warehouse name), Write Throughput (caption), Write_Throughput (attribute name), and WRTTHRPT (column name).

DataSource attribute group

The Datasource attribute group brief information about the configured data sources. This attribute group is eligible for use with Tivoli Data Warehouse.

This attribute group contains the following attributes:

Agent Connection attribute
Current status of the agent connection with configured data source. The type is string with enumerated values. The following values are defined: Down (false), Up (true). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: AGENT_CONNECTION or AGNCN (warehouse name), Agent Connection (caption), Agent_Connection (attribute name), and AGNCN (column name).

Data Source attribute
Name of the product that is being monitored. The type is string with enumerated values. The following values are defined: unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: DATA_SOURCE or DS (warehouse name), Data Source (caption), Data_Source (attribute name), and DS (column name).

IP / Host Name attribute
IP address of the data source. The type is string with enumerated values. The following values are defined: unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: IP_ADDRESS or IP (warehouse name), IP / Host Name (caption), IP_Address (attribute name), and IP (column name).

Node attribute
The managed system name of the agent. This attribute is a key attribute. The type is string.

The source for this attribute is the agent

The following names are defined for this attribute: NODE (warehouse name), Node (caption), ORIGINNODE (attribute name), and ORIGINNODE (column name).

Port attribute
Port number on which the data source is running. This attribute is a key attribute. The type is string with enumerated values. The following values are defined: unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: PORT (warehouse name), Port (caption), Port (attribute name), and PORT (column name).

Timestamp attribute
The local time at the agent when the data was collected. The type is string.

The source for this attribute is the agent

The following names are defined for this attribute: TIMESTAMP (warehouse name), Timestamp (caption), Timestamp (attribute name), and TIMESTAMP (column name).

Version attribute
Versions of the data source. This attribute is a key attribute. The type is string with enumerated values. The following values are defined: unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: VERSION (warehouse name), Version (caption), Version (attribute name), and VERSION (column name).

Disks attribute group

The Disks attribute group contains information about disks. This attribute group is eligible for use with Tivoli Data Warehouse.

This attribute group contains the following attributes:

Aggregate Key attribute
The resource key of the associated aggregates, Source:Active IQ Unified Manager. The type is string with enumerated values. The following values are defined: unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: AGGREGATE_KEY or AGGR_KEY (warehouse name), Aggregate Key (caption), Aggregate_Key (attribute name), and AGGR_KEY (column name).

Aggregate Name attribute
The name of the aggregate that contains the disk, Source:Active IQ Unified Manager. This attribute is a key attribute. The type is string with enumerated values. The following values are defined: unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: AGGREGATE_NAME or AGGR_NAME (warehouse name), Aggregate Name (caption), Aggregate_Name (attribute name), and AGGR_NAME (column name).

Block Rate attribute
The number of block read and write operations that occurred per second on the disk, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: BLOCK_RATE (warehouse name), Block Rate (caption), Block_Rate (attribute name), and BLOCK_RATE (column name).

Cluster Key attribute

The resource key of the associated cluster, Source:Active IQ Unified Manager. The type is string with enumerated values. The following values are defined: unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: CLUSTER_KEY or CLST_KEY (warehouse name), Cluster Key (caption), Cluster_Key (attribute name), and CLST_KEY (column name).

Composite Latency attribute

The sum of the read, write, and consistency point latency for the disk, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: COMPOSITE_LATENCY or CMP_LATNCY (warehouse name), Composite Latency (caption), Composite_Latency (attribute name), and CMP_LATNCY (column name).

Container Type attribute

Type of the overlying disk container, Source:Active IQ Unified Manager. The type is string with enumerated values. The following values are defined: unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: CONTAINER_TYPE or CONT_TYPE (warehouse name), Container Type (caption), Container_Type (attribute name), and CONT_TYPE (column name).

CP Read Blocks attribute

The number of blocks that are transferred per second to the disk for the consistency point read operations, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: CP_READ_BLOCKS or CP_RD_BLK (warehouse name), CP Read Blocks (caption), CP_Read_Blocks (attribute name), and CP_RD_BLK (column name).

CP Read Latency attribute

The average latency (in milliseconds) per block for consistency point read operations that occurred from the disk, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: CP_READ_LATENCY or CP_LATNCY (warehouse name), CP Read Latency (caption), CP_Read_Latency (attribute name), and CP_LATNCY (column name).

CP Reads attribute

The number of read operations that occurred per second during the consistency point on the disk, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: CP_READS or CP_RD (warehouse name), CP Reads (caption), CP_Reads (attribute name), and CP_RD (column name).

Disk Busy attribute

The percentage of elapsed time since the last outstanding request to the disk, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: DISK_BUSY (warehouse name), Disk Busy (caption), Disk_Busy (attribute name), and DISK_BUSY (column name).

Disk Name attribute
The name of disk, Source:Active IQ Unified Manager. This attribute is a key attribute. The type is string with enumerated values. The following values are defined: unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: DISK_NAME (warehouse name), Disk Name (caption), Disk_Name (attribute name), and DISK_NAME (column name).

Disk Size attribute
The size (in GB) of disk, Source:Active IQ Unified Manager. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: DISK_SIZE (warehouse name), Disk Size (caption), Disk_Size (attribute name), and DISK_SIZE (column name).

Disk Type attribute
The type of disk, Source:Active IQ Unified Manager. The type is string with enumerated values. The following values are defined: unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: DISK_TYPE (warehouse name), Disk Type (caption), Disk_Type (attribute name), and DISK_TYPE (column name).

Disk UID attribute
The unique identifier (UID) or worldwide name (WWN) of the disk, Source:Active IQ Unified Manager. The type is string with enumerated values. The following values are defined: unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: DISK_UID_OR_WWN or UID_WWN (warehouse name), Disk UID (caption), Disk_UID_or_WWN (attribute name), and UID_WWN (column name).

Failed Reason attribute
Cuase of the disk failure, Source:Active IQ Unified Manager. The type is string with enumerated values. The following values are defined: unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: FAILED_REASON or FLD_REASON (warehouse name), Failed Reason (caption), Failed_Reason (attribute name), and FLD_REASON (column name).

File Rate attribute
The number of file-based read and write operations that occurred per second on the disk, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: FILE_RATE (warehouse name), File Rate (caption), File_Rate (attribute name), and FILE_RATE (column name).

Guaranteed Read Latency attribute
The average latency (in microseconds) per block for guaranteed read operations, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: GUARANTEED_READ_LATENCY or GRDLAT (warehouse name), Guaranteed Read Latency (caption), Guaranteed_Read_Latency (attribute name), and GRDLAT (column name).

Guaranteed Write Latency attribute
The average latency (in microseconds) per block for guaranteed write operations, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is real number (64-bit gauge) with one

decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: GUARANTEED_WRITE_LATENCY or GWTLAT (warehouse name), Guaranteed Write Latency (caption), Guaranteed_Write_Latency (attribute name), and GWTLAT (column name).

Host Name Deprecated attribute

The name of the host that contains the logical unit number (LUN), this attribute is deprecated since OCUM 6.x. This attribute is a key attribute. The type is string with enumerated values. The following values are defined: unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: HOST_NAME (warehouse name), Host Name Deprecated (caption), Host_Name (attribute name), and HOST_NAME (column name).

Is Offline attribute

Indicates whether the disk is offline, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is string with enumerated values. The following values are defined: unavailable (unavailable), Yes (true), No (false). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: IS_OFFLINE or OFFLINE (warehouse name), Is Offline (caption), Is_Offline (attribute name), and OFFLINE (column name).

Is Virtual attribute

Indicates whether the disk is a virtual disk, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is string with enumerated values. The following values are defined: unavailable (unavailable), Yes (true), No (false). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: IS_VIRTUAL or VIRTUAL (warehouse name), Is Virtual (caption), Is_Virtual (attribute name), and VIRTUAL (column name).

Key attribute

The resource key for this disk, Source:Active IQ Unified Manager. This attribute is a key attribute. The type is string with enumerated values. The following values are defined: unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: KEY or DISK_KEY (warehouse name), Key (caption), Key (attribute name), and DISK_KEY (column name).

Node attribute

The managed system name of the agent. This attribute is a key attribute. The type is string.

The source for this attribute is the agent

The following names are defined for this attribute: NODE (warehouse name), Node (caption), ORIGINNODE (attribute name), and ORIGINNODE (column name).

Node Key attribute

The resource key for the node, Source:Active IQ Unified Manager. The type is string with enumerated values. The following values are defined: unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: NODE_KEY or NOD_KEY (warehouse name), Node Key (caption), Node_Key (attribute name), and NOD_KEY (column name).

Node Name attribute

The name of the cluster node that is associated with this disk, Source:Active IQ Unified Manager. The type is string with enumerated values. The following values are defined: unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: NODE_NAME (warehouse name), Node Name (caption), Node_Name (attribute name), and NODE_NAME (column name).

Perf Warehouse attribute
Indicates whether the performance data must be ignored or included by the warehouse, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is integer (32-bit gauge) with enumerated values. The following values are defined: Exclude (0), Include (1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: PERF_WAREHOUSE or PERF_WRHS (warehouse name), Perf Warehouse (caption), Perf_Warehouse (attribute name), and PERF_WRHS (column name).

Serial Number attribute
Serial number of the disk, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is string with enumerated values. The following values are defined: unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: SERIAL_NUMBER or SERL_NUM (warehouse name), Serial Number (caption), Serial_Number (attribute name), and SERL_NUM (column name).

Size Warehouse attribute
Indicates whether the size data should be ignored or included by the warehouse, Source:Active IQ Unified Manager. The type is integer (32-bit gauge) with enumerated values. The following values are defined: Exclude (0), Include (1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: SIZE_WAREHOUSE or SIZE_WRHS (warehouse name), Size Warehouse (caption), Size_Warehouse (attribute name), and SIZE_WRHS (column name).

Timestamp attribute
The local time at the agent when the data was collected. The type is string.

The source for this attribute is the agent

The following names are defined for this attribute: TIMESTAMP (warehouse name), Timestamp (caption), Timestamp (attribute name), and TIMESTAMP (column name).

Total Latency attribute
The total latency (in microseconds) of the disk, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: TOTAL_LATENCY or TOTLAT (warehouse name), Total Latency (caption), Total_Latency (attribute name), and TOTLAT (column name).

Total Operations attribute
The number of operations that are serviced per second by the disk, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: TOTAL_OPS or TOTLOPS (warehouse name), Total Operations (caption), Total_Ops (attribute name), and TOTLOPS (column name).

Total Throughput attribute
The total data that is sent and received (in bytes per second) from the disk, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: TOTAL_THROUGHPUT or TOTLTHRPT (warehouse name), Total Throughput (caption), Total_Throughput (attribute name), and TOTLTHRPT (column name).

Total Transfers attribute
The total number of transfers that are serviced per second by the disk, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is real number (64-bit gauge) with one decimal places

of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: TOTAL_TRANSFERS or TOTL_XFER (warehouse name), Total Transfers (caption), Total_Transfers (attribute name), and TOTL_XFER (column name).

Used Size attribute

Used size (in GB) of the disk, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is real number (64-bit gauge) with three decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: USED_SIZE or USD_BYTES (warehouse name), Used Size (caption), Used_Size (attribute name), and USD_BYTES (column name).

Used Size Percent attribute

Used size (in %) of the total disk, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is integer (64-bit gauge) with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: SIZE_PER (warehouse name), Used Size Percent (caption), Size_Per (attribute name), and SIZE_PER (column name).

User Read Blocks attribute

The number of blocks that are transferred per second from the disk for the read operations that are performed by the user, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: USER_READ_BLOCKS or USR_RD_BLK (warehouse name), User Read Blocks (caption), User_Read_Blocks (attribute name), and USR_RD_BLK (column name).

User Read Latency attribute

The average latency (in milliseconds) per block for the read operations that are performed from a disk by the users, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: USER_READ_LATENCY or RD_LATNCY (warehouse name), User Read Latency (caption), User_Read_Latency (attribute name), and RD_LATNCY (column name).

User Reads attribute

The number of read operations that are performed per second from the disk by the user, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: USER_READS or USR_RD (warehouse name), User Reads (caption), User_Reads (attribute name), and USR_RD (column name).

User Write Blocks attribute

The number of blocks that are transferred per second from the disk for the write operations that are performed by the user, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: USER_WRITE_BLOCKS or USR_WR_BLK (warehouse name), User Write Blocks (caption), User_Write_Blocks (attribute name), and USR_WR_BLK (column name).

User Write Latency attribute
The average latency (in milliseconds) per block for the write operations that are performed to the disk by the users, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: USER_WRITE_LATENCY or WR_LATNCY (warehouse name), User Write Latency (caption), User_Write_Latency (attribute name), and WR_LATNCY (column name).

User Writes attribute
The number of write operations that are performed per second on the disk by the user, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: USER_WRITES or USR_WR (warehouse name), User Writes (caption), User_Writes (attribute name), and USR_WR (column name).

Volume Name attribute
The name of the volume that is associated with this disk, Source:Active IQ Unified Manager. This attribute is a key attribute. The type is string with enumerated values. The following values are defined: unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: VOLUME_NAME or VOL_NAME (warehouse name), Volume Name (caption), Volume_Name (attribute name), and VOL_NAME (column name).

Events attribute group

This attribute group contains information about events. This attribute group is eligible for use with Tivoli Data Warehouse.

This attribute group contains the following attributes:

About attribute
The description of the type of the event.Source:OnCommand/Active IQ Unified Manager. The type is string with enumerated values. The following values are defined: unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: EVENT_ABOUT or EA (warehouse name), About (caption), Event_About (attribute name), and EA (column name).

Condition attribute
The condition of the event.Source:OnCommand/Active IQ Unified Manager. The type is string with enumerated values. The following values are defined: unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: EVENT_CONDITION or EC (warehouse name), Condition (caption), Event_Condition (attribute name), and EC (column name).

ID attribute
The identifier of the event that must be listed.Source:OnCommand/Active IQ Unified Manager. This attribute is a key attribute. The type is integer (32-bit gauge) with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: EVENT_ID (warehouse name), ID (caption), Event_ID (attribute name), and EVENT_ID (column name).

Impact Area attribute
The area of impact of the event.Source:OnCommand/Active IQ Unified Manager. The type is string with enumerated values. The following values are defined: unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: EVENT_IMPACT_AREA or EIA (warehouse name), Impact Area (caption), Event_Impact_Area (attribute name), and EIA (column name).

Impact Level attribute
The level of impact of the event.Source:OnCommand/Active IQ Unified Manager. This attribute is a key attribute. The type is string with enumerated values. The following values are defined: unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: IMPACT_LEVEL or IL (warehouse name), Impact Level (caption), Impact_level (attribute name), and IL (column name).

Name attribute
The name of the event.Source:OnCommand/Active IQ Unified Manager. This attribute is a key attribute. The type is string with enumerated values. The following values are defined: unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: EVENT_NAME (warehouse name), Name (caption), Event_Name (attribute name), and EVENT_NAME (column name).

Node attribute
The managed system name of the agent. This attribute is a key attribute. The type is string.

The source for this attribute is the agent

The following names are defined for this attribute: NODE (warehouse name), Node (caption), ORIGINNODE (attribute name), and ORIGINNODE (column name).

Severity attribute
The severity of the event.Source:OnCommand/Active IQ Unified Manager. The type is string with enumerated values. The following values are defined: unavailable (unavailable), normal (normal), information (information), warning (warning), error (error), critical (critical). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: EVENT_SEVERITY or ES (warehouse name), Severity (caption), Event_Severity (attribute name), and ES (column name).

Source Key attribute
The identifier of the resource on which the event is raised.Source:OnCommand/Active IQ Unified Manager. The type is string with enumerated values. The following values are defined: unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: EVENT_SOURCE_KEY or EVTSRCKEY (warehouse name), Source Key (caption), Event_Source_Key (attribute name), and EVTSRCKEY (column name).

Source Name attribute
The name of the source of the event.Source:OnCommand/Active IQ Unified Manager. The type is string with enumerated values. The following values are defined: unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: EVENT_SOURCE_NAME or ESN (warehouse name), Source Name (caption), Event_Source_Name (attribute name), and ESN (column name).

Source Type attribute
The type of object that generated the event.Source:OnCommand/Active IQ Unified Manager. The type is string with enumerated values. The following values are defined: unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: EVENT_SOURCE_TYPE or EST (warehouse name), Source Type (caption), Event_Source_Type (attribute name), and EST (column name).

State attribute
The state of the event.Source:OnCommand/Active IQ Unified Manager. This attribute is a key attribute. The type is string with enumerated values. The following values are defined: unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: EVENT_STATE or ES0 (warehouse name), State (caption), Event_State (attribute name), and ES0 (column name).

Time attribute
The time when the event occurred.Source:OnCommand/Active IQ Unified Manager. This attribute is a key attribute. The type is timestamp.

The following names are defined for this attribute: EVENT_TIME (warehouse name), Time (caption), Event_Time (attribute name), and EVENT_TIME (column name).

Timestamp attribute
The time the event was generated. The type is string.

The source for this attribute is the agent

The following names are defined for this attribute: TIMESTAMP (warehouse name), Timestamp (caption), Timestamp (attribute name), and TIMESTAMP (column name).

Type attribute
The type or the class to which the event belongs.Source:OnCommand/Active IQ Unified Manager. The type is string with enumerated values. The following values are defined: unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: EVENT_TYPE (warehouse name), Type (caption), Event_Type (attribute name), and EVENT_TYPE (column name).

LUNs attribute group

The LUNs attribute group contains information about LUNs. This attribute group is eligible for use with Tivoli Data Warehouse.

This attribute group contains the following attributes:

Average Latency attribute
The average time (in milliseconds) that is required to perform all the operations on this LUN, this attribute is unsupported since Active IQ Unified Manager 9.7. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: AVG_LATENCY or AVG_LATNCY (warehouse name), Average Latency (caption), Avg_Latency (attribute name), and AVG_LATNCY (column name).

Composite Status Deprecated attribute
A composite of the status fields indicating the maximum severity of all the fields, this attribute is unsupported since Active IQ Unified Manager 9.7. The type is real number (32-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: COMPOSITE_STATUS or CMP_STS (warehouse name), Composite Status Deprecated (caption), Composite_Status (attribute name), and CMP_STS (column name).

Host Name Deprecated attribute
The name of the host that contains this disk, this attribute is unsupported since Active IQ Unified Manager 9.7. This attribute is a key attribute. The type is string with enumerated values. The following values are defined: unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: HOST_NAME (warehouse name), Host Name Deprecated (caption), Host_Name (attribute name), and HOST_NAME (column name).

LUN Key attribute

The resource key of this Lun, Source:Active IQ Unified Manager. This attribute is a key attribute. The type is string with enumerated values. The following values are defined: unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: LUN_KEY (warehouse name), LUN Key (caption), LUN_Key (attribute name), and LUN_KEY (column name).

LUN Path attribute

The path name of the LUN including the volume or qtree where the LUN exists, Source:Active IQ Unified Manager. This attribute is a key attribute. The type is string with enumerated values. The following values are defined: unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: LUN_PATH (warehouse name), LUN Path (caption), LUN_Path (attribute name), and LUN_PATH (column name).

LUN Size attribute

The size (in GB) of this LUN, Source:Active IQ Unified Manager. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: LUN_SIZE (warehouse name), LUN Size (caption), LUN_Size (attribute name), and LUN_SIZE (column name).

Node attribute

The managed system name of the agent. This attribute is a key attribute. The type is string.

The source for this attribute is the agent

The following names are defined for this attribute: NODE (warehouse name), Node (caption), ORIGINNODE (attribute name), and ORIGINNODE (column name).

Other Ops attribute

The number of other operations that are performed per second on this LUN, this attribute is unsupported since Active IQ Unified Manager 9.7. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: OTHER_OPS (warehouse name), Other Ops (caption), Other_Ops (attribute name), and OTHER_OPS (column name).

Perf Status Deprecated attribute

Indicates the performance of this LUN, this attribute is unsupported since Active IQ Unified Manager 9.7. The type is string with enumerated values. The following values are defined: unavailable (unavailable), unknown (unknown), normal (normal), information (information), unmanaged (unmanaged), warning (warning), error (error), critical (critical), emergency (emergency). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: PERF_STATUS or PERF_STS (warehouse name), Perf Status Deprecated (caption), Perf_Status (attribute name), and PERF_STS (column name).

Performance Warehouse attribute

Indicates whether the performance data must be ignored or included by the warehouse, this attribute is unsupported since Active IQ Unified Manager 9.7. The type is integer (32-bit gauge) with enumerated values. The following values are defined: Exclude (0), Include (1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: PERF_WAREHOUSE or PERF_WRHS (warehouse name), Performance Warehouse (caption), Perf_Warehouse (attribute name), and PERF_WRHS (column name).

Qtree Key attribute
The resource key of the associated Qtree, Source:Active IQ Unified Manager. The type is string with enumerated values. The following values are defined: unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: QTREE_KEY (warehouse name), Qtree Key (caption), Qtree_Key (attribute name), and QTREE_KEY (column name).

Read Data attribute
The data that is read (in KB per second) from this LUN, this attribute is unsupported since Active IQ Unified Manager 9.7. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: READ_DATA or RD_DATA (warehouse name), Read Data (caption), Read_Data (attribute name), and RD_DATA (column name).

Read Ops attribute
The number of read operations that are performed per second on this LUN, this attribute is unsupported since Active IQ Unified Manager 9.7. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: READ_OPS (warehouse name), Read Ops (caption), Read_Ops (attribute name), and READ_OPS (column name).

Run Status attribute
Indicates how well this LUN is running, Source:Active IQ Unified Manager. The type is string with enumerated values. The following values are defined: unavailable (unavailable), unknown (unknown), normal (normal), information (information), warning (warning), error (error), critical (critical). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: RUN_STATUS or RUN_STS (warehouse name), Run Status (caption), Run_Status (attribute name), and RUN_STS (column name).

Size Warehouse attribute
Indicates whether the size data must be ignored or included by the warehouse, Source:Active IQ Unified Manager. The type is integer (32-bit gauge) with enumerated values. The following values are defined: Exclude (0), Include (1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: SIZE_WAREHOUSE or SIZE_WRHS (warehouse name), Size Warehouse (caption), Size_Warehouse (attribute name), and SIZE_WRHS (column name).

StorageVM Key attribute
The resource key of the associated storage-vm/vServer, Source:Active IQ Unified Manager. The type is string with enumerated values. The following values are defined: unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: STORAGEVM_KEY or STRGVM_KEY (warehouse name), StorageVM Key (caption), StorageVM_Key (attribute name), and STRGVM_KEY (column name).

Timestamp attribute
The local time at the agent when the data was collected. The type is string.

The source for this attribute is the agent

The following names are defined for this attribute: TIMESTAMP (warehouse name), Timestamp (caption), Timestamp (attribute name), and TIMESTAMP (column name).

Total Ops attribute
The number of operations that serviced per second by this LUN, this attribute is unsupported since Active IQ Unified Manager 9.7. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: TOTAL_OPS or TOTL_OPS (warehouse name), Total Ops (caption), Total_Ops (attribute name), and TOTL_OPS (column name).

Volume Key attribute
The resource key of the associated volume, Source:Active IQ Unified Manager. The type is string with enumerated values. The following values are defined: unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: VOLUME_KEY or VOL_KEY (warehouse name), Volume Key (caption), Volume_Key (attribute name), and VOL_KEY (column name).

Volume Name attribute
The name of the volume that contains this LUN, Source:Active IQ Unified Manager. This attribute is a key attribute. The type is string with enumerated values. The following values are defined: unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: VOLUME_NAME or VOL_NAME (warehouse name), Volume Name (caption), Volume_Name (attribute name), and VOL_NAME (column name).

Write Data attribute
The data that written (in KB per second) to this LUN, this attribute is unsupported since Active IQ Unified Manager 9.7. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: WRITE_DATA or WR_DATA (warehouse name), Write Data (caption), Write_Data (attribute name), and WR_DATA (column name).

Write Ops attribute
The number of write operations that are performed per second on this LUN, this attribute is unsupported since Active IQ Unified Manager 9.7. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: WRITE_OPS (warehouse name), Write Ops (caption), Write_Ops (attribute name), and WRITE_OPS (column name).

Performance Object Status attribute group

The Performance Object Status attribute group contains information that reflects the status of other attribute groups so you can see the status of all performance objects that make up this application all at once. Each of these other performance attribute groups is represented by a row in this table (or other type of view). The status for an attribute group reflects the result of the last attempt to collect data for that attribute group, so you can see whether the agent is collecting data correctly. Unlike other attribute groups, the Performance Object Status attribute group does not reflect the state of the monitored application. This attribute group is most often used to determine why data is not available for one of the performance attribute groups. This attribute group is eligible for use with Tivoli Data Warehouse.

This attribute group contains the following attributes:

Error Code attribute
The error code associated with the query. The type is integer with enumerated values. The following values are defined: NO ERROR (0), GENERAL ERROR (1), OBJECT NOT FOUND (2), COUNTER NOT FOUND (3), NAMESPACE ERROR (4), OBJECT CURRENTLY UNAVAILABLE (5), COM LIBRARY INIT FAILURE (6), SECURITY INIT FAILURE (7), PROXY SECURITY FAILURE (9), NO INSTANCES RETURNED (10), ASSOCIATOR QUERY FAILED (11), REFERENCE QUERY FAILED (12), NO RESPONSE RECEIVED (13), CANNOT FIND JOINED QUERY (14), CANNOT FIND JOIN ATTRIBUTE IN QUERY 1 RESULTS (15), CANNOT FIND JOIN ATTRIBUTE IN QUERY 2 RESULTS (16), QUERY 1 NOT A SINGLETON (17), QUERY 2 NOT A SINGLETON (18), NO INSTANCES RETURNED IN QUERY 1 (19), NO INSTANCES RETURNED IN QUERY 2 (20), CANNOT FIND ROLLUP QUERY (21), CANNOT FIND ROLLUP ATTRIBUTE (22), FILE OFFLINE (23), NO HOSTNAME (24), MISSING LIBRARY (25), ATTRIBUTE COUNT MISMATCH (26),

ATTRIBUTE NAME MISMATCH (27), COMMON DATA PROVIDER NOT STARTED (28), CALLBACK REGISTRATION ERROR (29), MDL LOAD ERROR (30), AUTHENTICATION FAILED (31), CANNOT RESOLVE HOST NAME (32), SUBNODE UNAVAILABLE (33), SUBNODE NOT FOUND IN CONFIG (34), ATTRIBUTE ERROR (35), CLASSPATH ERROR (36), CONNECTION FAILURE (37), FILTER SYNTAX ERROR (38), FILE NAME MISSING (39), SQL QUERY ERROR (40), SQL FILTER QUERY ERROR (41), SQL DB QUERY ERROR (42), SQL DB FILTER QUERY ERROR (43), PORT OPEN FAILED (44), ACCESS DENIED (45), TIMEOUT (46), NOT IMPLEMENTED (47), REQUESTED A BAD VALUE (48), RESPONSE TOO BIG (49), GENERAL RESPONSE ERROR (50), SCRIPT NONZERO RETURN (51), SCRIPT NOT FOUND (52), SCRIPT LAUNCH ERROR (53), CONF FILE DOES NOT EXIST (54), CONF FILE ACCESS DENIED (55), INVALID CONF FILE (56), EIF INITIALIZATION FAILED (57), CANNOT OPEN FORMAT FILE (58), FORMAT FILE SYNTAX ERROR (59), REMOTE HOST UNAVAILABLE (60), EVENT LOG DOES NOT EXIST (61), PING FILE DOES NOT EXIST (62), NO PING DEVICE FILES (63), PING DEVICE LIST FILE MISSING (64), SNMP MISSING PASSWORD (65), DISABLED (66), URLS FILE NOT FOUND (67), XML PARSE ERROR (68), NOT INITIALIZED (69), ICMP SOCKETS FAILED (70), DUPLICATE CONF FILE (71), DELETED CONFIGURATION (72). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: ERROR_CODE or ERRCODE (warehouse name), Error Code (caption), Error_Code (attribute name), and ERRCODE (column name).

Node attribute

The managed system name of the agent. This attribute is a key attribute. The type is string.

The source for this attribute is the agent

The following names are defined for this attribute: NODE (warehouse name), Node (caption), ORIGINNODE (attribute name), and ORIGINNODE (column name).

Object Name attribute

The name of the performance object. The type is string.

The following names are defined for this attribute: OBJECT_NAME or OBJNAME (warehouse name), Object Name (caption), Object_Name (attribute name), and OBJNAME (column name).

Object Status attribute

The status of the performance object. The type is integer with enumerated values. The following values are defined: ACTIVE (0), INACTIVE (1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: OBJECT_STATUS or OBJSTTS (warehouse name), Object Status (caption), Object_Status (attribute name), and OBJSTTS (column name).

Object Type attribute

The type of the performance object. The type is integer with enumerated values. The following values are defined: WMI (0), PERFMON (1), WMI ASSOCIATION GROUP (2), JMX (3), SNMP (4), SHELL COMMAND (5), JOINED GROUPS (6), CIMOM (7), CUSTOM (8), ROLLUP DATA (9), WMI REMOTE DATA (10), LOG FILE (11), JDBC (12), CONFIG DISCOVERY (13), NT EVENT LOG (14), FILTER (15), SNMP EVENT (16), PING (17), DIRECTOR DATA (18), DIRECTOR EVENT (19), SSH REMOTE SHELL COMMAND (20). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: OBJECT_TYPE or OBJTYPE (warehouse name), Object Type (caption), Object_Type (attribute name), and OBJTYPE (column name).

Query Name attribute

The name of the attribute group. This attribute is a key attribute. The type is string.

The following names are defined for this attribute: QUERY_NAME or ATTRGRP (warehouse name), Query Name (caption), Query_Name (attribute name), and ATTRGRP (column name).

Timestamp attribute

The local time at the agent when the data was collected. The type is string.

The source for this attribute is the agent

The following names are defined for this attribute: TIMESTAMP (warehouse name), Timestamp (caption), Timestamp (attribute name), and TIMESTAMP (column name).

Qtrees attribute group

The Qtrees attribute group contains information about qtrees. This attribute group is eligible for use with Tivoli Data Warehouse.

This attribute group contains the following attributes:

CIFS Ops Deprecated attribute
The number of CIFS operations that are performed per second on the qtree, this attribute is deprecated since OCUM 6.x. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: CIFS_OPS (warehouse name), CIFS Ops Deprecated (caption), CIFS_Ops (attribute name), and CIFS_OPS (column name).

Disk Space Limit attribute
The disk space limit that is applied to hard quotas in this qtree, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is integer (64-bit gauge) with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: DISK_SPACE_LIMIT or SPACE_LMT (warehouse name), Disk Space Limit (caption), Disk_Space_Limit (attribute name), and SPACE_LMT (column name).

Export Policy attribute
The export policy name of Qtree, Source:Active IQ Unified Manager. The type is string with enumerated values. The following values are defined: unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: EXPORT_POLICY_NAME or EXPRT_PLCY (warehouse name), Export Policy (caption), Export_Policy_Name (attribute name), and EXPRT_PLCY (column name).

Files Limit attribute
The maximum number of files on a hard quota in this qtree, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is integer (64-bit gauge) with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: FILES_LIMIT or FILES_LMT (warehouse name), Files Limit (caption), Files_Limit (attribute name), and FILES_LMT (column name).

Files Percent Used attribute
The percentage of files used in this qtree, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is real number (32-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: FILES_PERCENT_USED or FILES_PCT (warehouse name), Files Percent Used (caption), Files_Percent_Used (attribute name), and FILES_PCT (column name).

Files Used attribute
The number of files under this qtree, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is integer (64-bit gauge) with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: FILES_USED (warehouse name), Files Used (caption), Files_Used (attribute name), and FILES_USED (column name).

Host Name Deprecated attribute
The name of the host that contains this qtree, this attribute is deprecated since OCUM 6.x. This attribute is a key attribute. The type is string with enumerated values. The following values are defined: unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: HOST_NAME (warehouse name), Host Name Deprecated (caption), Host_Name (attribute name), and HOST_NAME (column name).

NFS Ops Deprecated attribute
The number of NFS operations that are performed per second on the qtree, this attribute is deprecated since OCUM 6.x. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: NFS_OPS (warehouse name), NFS Ops Deprecated (caption), NFS_Ops (attribute name), and NFS_OPS (column name).

Node attribute
The managed system name of the agent. This attribute is a key attribute. The type is string.

The source for this attribute is the agent

The following names are defined for this attribute: NODE (warehouse name), Node (caption), ORIGINNODE (attribute name), and ORIGINNODE (column name).

Perf Status Deprecated attribute
Indicates how well this qtree is performing, possible values of this attribute are unavailable, unknown, normal, information, unmanaged, warning, error, critical, or emergency, this attribute is deprecated since OCUM Active IQ Unified Manager 9.7. The type is string with enumerated values. The following values are defined: unavailable (unavailable), unknown (unknown), normal (normal), information (information), unmanaged (unmanaged), warning (warning), error (error), critical (critical), emergency (emergency). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: PERF_STATUS or PERF_STS (warehouse name), Perf Status Deprecated (caption), Perf_Status (attribute name), and PERF_STS (column name).

Qtree Key attribute
The resource key for this Qtree, Source:Active IQ Unified Manager. This attribute is a key attribute. The type is string with enumerated values. The following values are defined: unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: QTREE_KEY or QTR_KEY (warehouse name), Qtree Key (caption), Qtree_Key (attribute name), and QTR_KEY (column name).

Qtree Name attribute
The name of this qtree, Source:Active IQ Unified Manager. This attribute is a key attribute. The type is string with enumerated values. The following values are defined: unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: QTREE_NAME or QTR_NAME (warehouse name), Qtree Name (caption), Qtree_Name (attribute name), and QTR_NAME (column name).

Run Status attribute
Indicates how well this qtree is running, possible values of this attribute are unavailable, unknown, normal, information, unmanaged, warning, error, critical, or emergency, Source:Active IQ Unified Manager. The type is string with enumerated values. The following values are defined: unavailable (unavailable), unknown (unknown), normal (normal), information (information), warning (warning), error (error), critical (critical). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: RUN_STATUS or RUN_STS (warehouse name), Run Status (caption), Run_Status (attribute name), and RUN_STS (column name).

Security Style attribute
The security style applicable to Qtree, Source:Active IQ Unified Manager. The type is string with enumerated values. The following values are defined: unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: SECURITY_STYLE or SCRTY_STYL (warehouse name), Security Style (caption), Security_Style (attribute name), and SCRTY_STYL (column name).

Soft Limit attribute
The disk space limit applied to soft quotas in this qtree, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is integer (64-bit gauge) with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: SOFT_LIMIT or SOFT_LMT (warehouse name), Soft Limit (caption), Soft_Limit (attribute name), and SOFT_LMT (column name).

Space Percent Used attribute
The percentage of total space (in GB) that is used in this qtree, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is real number (32-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: SPACE_PERCENT_USED or SPACE_PCT (warehouse name), Space Percent Used (caption), Space_Percent_Used (attribute name), and SPACE_PCT (column name).

Space Used attribute
The disk space used in this qtree, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is integer (64-bit gauge) with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: SPACE_USED (warehouse name), Space Used (caption), Space_Used (attribute name), and SPACE_USED (column name).

StorageVM Key attribute
The resource key of the associated Storage-VM, Source:Active IQ Unified Manager. The type is string with enumerated values. The following values are defined: unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: STORAGEVM_KEY or STRGVM_KEY (warehouse name), StorageVM Key (caption), StorageVM_Key (attribute name), and STRGVM_KEY (column name).

StorageVM Name attribute
The name of storage-vm associated to Qtree, Source:Active IQ Unified Manager. The type is string with enumerated values. The following values are defined: unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: SVM_NAME (warehouse name), StorageVM Name (caption), SVM_Name (attribute name), and SVM_NAME (column name).

Timestamp attribute
The local time at the agent when the data was collected. The type is string.

The source for this attribute is the agent

The following names are defined for this attribute: TIMESTAMP (warehouse name), Timestamp (caption), Timestamp (attribute name), and TIMESTAMP (column name).

Total Ops Deprecated attribute
The total operations that are performed per second on the qtree, this attribute is deprecated since OCUM 6.x. The type is real number (64-bit gauge) with one decimal places of precision with

enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: TOTAL_OPS or TOTL_OPS (warehouse name), Total Ops Deprecated (caption), Total_Ops (attribute name), and TOTL_OPS (column name).

Volume Key attribute
The resource key of the associated Volume, Source:Active IQ Unified Manager. The type is string with enumerated values. The following values are defined: unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: VOLUME_KEY or VOL_KEY (warehouse name), Volume Key (caption), Volume_Key (attribute name), and VOL_KEY (column name).

Volume Name attribute
The name of the volume that contains this qtree, Source:Active IQ Unified Manager. This attribute is a key attribute. The type is string with enumerated values. The following values are defined: unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: VOLUME_NAME or VOL_NAME (warehouse name), Volume Name (caption), Volume_Name (attribute name), and VOL_NAME (column name).

Volumes attribute group

The Volumes attribute group contains information about volumes. This attribute group is eligible for use with Tivoli Data Warehouse.

This attribute group contains the following attributes:

AFS Available attribute
The available memory (in GB) in the active file system (AFS) of this volume, the value of this attribute is either the available space in the aggregate, or the value that is calculated by subtracting the value of the AFS Used attribute from the value of the AFS Total attribute; whichever is lesser, Source:Active IQ Unified Manager. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: AFS_AVAIL (warehouse name), AFS Available (caption), AFS_Avail (attribute name), and AFS_AVAIL (column name).

AFS Data Deprecated attribute
The memory (in GB) that is used to hold the user data in the AFS of this volume, the value of this attribute matches the sum of the file sizes; this value includes the data and the hole reserves, if any, this attribute is deprecated since OCUM 6.x. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: AFS_DATA (warehouse name), AFS Data Deprecated (caption), AFS_Data (attribute name), and AFS_DATA (column name).

AFS Percent Used attribute
The percentage of the memory (in GB) that is used to hold the AFS data, Source:Active IQ Unified Manager. The type is real number (32-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: AFS_PERCENT_USED or AFS_PCT (warehouse name), AFS Percent Used (caption), AFS_Percent_Used (attribute name), and AFS_PCT (column name).

AFS Total attribute
The memory (in GB) in the AFS of this volume that is calculated by subtracting the snapshot reserve from the volume size, Source:Active IQ Unified Manager. The type is real number (64-bit gauge) with

one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: AFS_TOTAL (warehouse name), AFS Total (caption), AFS_Total (attribute name), and AFS_TOTAL (column name).

AFS Used attribute

The memory (in GB) that is used to hold the AFS data of this volume, Source:Active IQ Unified Manager. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: AFS_USED (warehouse name), AFS Used (caption), AFS_Used (attribute name), and AFS_USED (column name).

AFS Warehouse Deprecated attribute

Indicates whether the AFS data must be ignored or included by the warehouse, this attribute is deprecated since OCUM 6.x. The type is integer (32-bit gauge) with enumerated values. The following values are defined: Exclude (0), Include (1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: AFS_WAREHOUSE or AFS_WRHS (warehouse name), AFS Warehouse Deprecated (caption), AFS_Warehouse (attribute name), and AFS_WRHS (column name).

Aggregate Key attribute

The resource key of the associated aggregates and available only if the style of volume is flexible, Source:Active IQ Unified Manager. This attribute is a key attribute. The type is string with enumerated values. The following values are defined: unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: AGGREGATE_KEY or AGGR_KEY (warehouse name), Aggregate Key (caption), Aggregate_Key (attribute name), and AGGR_KEY (column name).

Aggregate Name attribute

The name of the aggregate that contains this volume and applicable only if the style of Volume is Flexible, Source:Active IQ Unified Manager. This attribute is a key attribute. The type is string with enumerated values. The following values are defined: unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: AGGREGATE_NAME or AGGR_NAME (warehouse name), Aggregate Name (caption), Aggregate_Name (attribute name), and AGGR_NAME (column name).

Autogrow Increment Size attribute

The increment size (in GB) by which this volume grows and applicable only if the style of volume is Flexible, Source:Active IQ Unified Manager. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: AUTOGROW_INCREMENT_SIZE or ATGRINCRSZ (warehouse name), Autogrow Increment Size (caption), Autogrow_Increment_Size (attribute name), and ATGRINCRSZ (column name).

Autosize Enabled attribute

Indicates whether autosize is enabled and whether the size data must be ignored or included by the warehouse and applicable only if the style of Volume is Flexible, Source:Active IQ Unified Manager. The type is integer (32-bit gauge) with enumerated values. The following values are defined: Disabled (0), Enabled (1), unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: AUTOSIZE_ENABLED or AUTOSIZE (warehouse name), Autosize Enabled (caption), Autosize_Enabled (attribute name), and AUTOSIZE (column name).

Average latency attribute
The average time (in microseconds) to perform all the operations on the volume, Source:Active IQ Unified Manager REST API. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: AVG_LATENCY or AVGLAT (warehouse name), Average latency (caption), Avg_latency (attribute name), and AVGLAT (column name).

CIFS other latency attribute
The average time (in microseconds) for the write anywhere file layout (WAFL) file system to process other common internet file system (CIFS) operations to this volume, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: CIFS_OTHER_LATENCY or CIFSOTLAT (warehouse name), CIFS other latency (caption), CIFS_other_latency (attribute name), and CIFSOTLAT (column name).

CIFS Other Operations attribute
The number of other CIFS operations that are performed on this volume, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: CIFS_OTHER_OPS or CIPSOPS (warehouse name), CIFS Other Operations (caption), CIFS_Other_Ops (attribute name), and CIPSOPS (column name).

CIFS Read latency attribute
The average time that is required for the WAFL file system to process CIFS read requests to the volume, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: CIFS_READ_LATENCY or CIFSRDLAT (warehouse name), CIFS Read latency (caption), CIFS_read_latency (attribute name), and CIFSRDLAT (column name).

CIFS Read Operations attribute
The number of CIFS read operations that are performed on this volume, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: CIFS_READ_OPS or CIFSRDOPS (warehouse name), CIFS Read Operations (caption), CIFS_read_ops (attribute name), and CIFSRDOPS (column name).

CIFS Write latency attribute
The average time (in microseconds) for the CIFS write operations that are performed on this volume, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: CIFS_WRITE_LATENCY or CIFSWTLAT (warehouse name), CIFS Write latency (caption), CIFS_write_latency (attribute name), and CIFSWTLAT (column name).

CIFS Write Operations attribute
The number of CIFS write operations that are performed on the volume, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is real number (64-bit gauge) with one decimal places

of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: CIFS_WRITE_OPS or CIFSWTOPS (warehouse name), CIFS Write Operations (caption), CIFS_write_ops (attribute name), and CIFSWTOPS (column name).

Composite Data Rate attribute

The sum of the read and write metrics (in KB per second) of this volume, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: COMPOSITE_DATA_RATE or CMP_RATE (warehouse name), Composite Data Rate (caption), Composite_Data_Rate (attribute name), and CMP_RATE (column name).

Composite Latency attribute

The sum of the read, write, and other latency metrics of this volume, Source:Active IQ Unified Manager REST API. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: COMPOSITE_LATENCY or CMP_LATNCY (warehouse name), Composite Latency (caption), Composite_Latency (attribute name), and CMP_LATNCY (column name).

Composite Status Deprecated attribute

A composite of the status fields that indicates the maximum severity of all the fields, this attribute is deprecated since OCUM 6.x. The type is real number (32-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: COMPOSITE_STATUS or CMP_STS (warehouse name), Composite Status Deprecated (caption), Composite_Status (attribute name), and CMP_STS (column name).

HOST NAME Deprecated attribute

The name of the host that contains this volume, this attribute is deprecated since OCUM 6.x. This attribute is a key attribute. The type is string with enumerated values. The following values are defined: unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: HOST_NAME (warehouse name), HOST NAME Deprecated (caption), Host_Name (attribute name), and HOST_NAME (column name).

Is Dedupe Enabled attribute

Indicates whether the deduplication is enabled on this Volume, this attribute is deprecated since OCUM 6.x. The type is integer (32-bit gauge) with enumerated values. The following values are defined: Disabled (0), Enabled (1), unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: IS_DEDUPE_ENABLED or DEDUPED (warehouse name), Is Dedupe Enabled (caption), Is_Dedupe_Enabled (attribute name), and DEDUPED (column name).

iSCSI Read Operations attribute

The total number of read operations for all the LUNs in the system that are accessed over iSCSI, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: ISCSI_READ_OPS or ISCSIROPS (warehouse name), iSCSI Read Operations (caption), iSCSI_Read_Ops (attribute name), and ISCSIROPS (column name).

Key attribute
The resource key for this volume, Source:Active IQ Unified Manager. This attribute is a key attribute. The type is string with enumerated values. The following values are defined: unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: KEY or VOL_KEY (warehouse name), Key (caption), Key (attribute name), and VOL_KEY (column name).

Max Percent Used attribute
The maximum percentage used from the active file system, overwrite, and snapshot data for this volume, Source:Active IQ Unified Manager. The type is real number (32-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: MAX_PERCENT_USED or MAX_PCT (warehouse name), Max Percent Used (caption), Max_Percent_Used (attribute name), and MAX_PCT (column name).

Maximum Size attribute
The maximum size (in GB) to which this volume grows if autosize is enabled and it is applicable only if the style of Volume is Flexible, Source:Active IQ Unified Manager. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: MAXIMUM_SIZE or MAX_SIZE (warehouse name), Maximum Size (caption), Maximum_Size (attribute name), and MAX_SIZE (column name).

Name attribute
The name of this volume, Source:Active IQ Unified Manager. This attribute is a key attribute. The type is string with enumerated values. The following values are defined: unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: VOLUME_NAME or VOL_NAME (warehouse name), Name (caption), Volume_Name (attribute name), and VOL_NAME (column name).

NFS Other Latency attribute
The average time (in microseconds) that is required to perform other network file system (NFS) operations on this volume, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: NFS_OTHER_LATENCY or NFSOLAT (warehouse name), NFS Other Latency (caption), NFS_Other_Latency (attribute name), and NFSOLAT (column name).

NFS Other Operations attribute
The number of other NFS operations that are performed on this volume, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: NFS_OTHER_OPS or NFSOTOPS (warehouse name), NFS Other Operations (caption), NFS_other_ops (attribute name), and NFSOTOPS (column name).

NFS Read latency attribute
The average time (in microseconds) for the NFS read operations that are performed on this volume, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is real number (64-bit

gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: NFS_READ_LATENCY or NFSRDLAT (warehouse name), NFS Read latency (caption), NFS_read_latency (attribute name), and NFSRDLAT (column name).

NFS Read Operations attribute

The number of NFS read operations that are performed on this volume, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: NFS_READ_OPS or NFSRDOPS (warehouse name), NFS Read Operations (caption), NFS_read_ops (attribute name), and NFSRDOPS (column name).

NFS Write Latency attribute

The average time (in microseconds) that is required to perform NFS write operations on this volume, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: NFS_WRITE_LATENCY or NFSRTOPS (warehouse name), NFS Write Latency (caption), NFS_Write_Latency (attribute name), and NFSRTOPS (column name).

NFS Write Operations attribute

The number of NFS write operations that are performed per second on this volume, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: NFS_WRITE_OPS or NFSROPS (warehouse name), NFS Write Operations (caption), NFS_write_ops (attribute name), and NFSROPS (column name).

Node attribute

The managed system name of the agent. This attribute is a key attribute. The type is string.

The source for this attribute is the agent

The following names are defined for this attribute: NODE (warehouse name), Node (caption), ORIGINNODE (attribute name), and ORIGINNODE (column name).

Other Latency attribute

The average time (in milliseconds) that is required to perform other operations on this volume, Source:Active IQ Unified Manager REST API. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: OTHER_LATENCY or OTH_LATNCY (warehouse name), Other Latency (caption), Other_Latency (attribute name), and OTH_LATNCY (column name).

Other Ops attribute

The number of other operations that are performed per second on this volume, Source:Active IQ Unified Manager REST API. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: OTHER_OPS or OTH_OPS (warehouse name), Other Ops (caption), Other_Ops (attribute name), and OTH_OPS (column name).

Overwrite Reserve Available attribute
The memory (in GB) that is available as reserved space for the data overwrite operations on this volume, Source:Active IQ Unified Manager. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: OVERWRITE_RESERVE_AVAIL or OVR_AVAIL (warehouse name), Overwrite Reserve Available (caption), Overwrite_Reserve_Avail (attribute name), and OVR_AVAIL (column name).

Overwrite Reserve Percent Used attribute
The percentage of memory (in GB) that is used to hold the overwritten data for this volume, Source:Active IQ Unified Manager. The type is real number (32-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: OVERWRITE_RESERVE_PERCENT_USED or OVR_PCT (warehouse name), Overwrite Reserve Percent Used (caption), Overwrite_Reserve_Percent_Used (attribute name), and OVR_PCT (column name).

Overwrite Reserve Total attribute
The memory (in GB) that is reserved for the data overwrite operations, this memory space is reserved for overwriting the logical unit numbers and other space-reserved files when the volume contains snapshots and the value of the AFS Avail attribute is zero, Source:Active IQ Unified Manager. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: OVERWRITE_RESERVE_TOTAL or OVR_TOTL (warehouse name), Overwrite Reserve Total (caption), Overwrite_Reserve_Total (attribute name), and OVR_TOTL (column name).

Overwrite Reserve Used attribute
The memory (in GB) that is used in the overwrite reserve space, Source:Active IQ Unified Manager. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: OVERWRITE_RESERVE_USED or OVR_USED (warehouse name), Overwrite Reserve Used (caption), Overwrite_Reserve_Used (attribute name), and OVR_USED (column name).

Overwrite Warehouse attribute
Indicates whether the overwrite reserve data must be ignored or included by the warehouse, Source:Active IQ Unified Manager. The type is integer (32-bit gauge) with enumerated values. The following values are defined: Exclude (0), Include (1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: OVERWRITE_WAREHOUSE or OVR_WRHS (warehouse name), Overwrite Warehouse (caption), Overwrite_Warehouse (attribute name), and OVR_WRHS (column name).

Perf Status Deprecated attribute
Indicates the performance of this Volume.The possible values are unavailable, unknown, normal, information, unmanaged, warning, error, critical, or emergency, this attribute is deprecated since OCUM 6.x. The type is string with enumerated values. The following values are defined: unavailable (unavailable), unknown (unknown), normal (normal), information (information), unmanaged (unmanaged), warning (warning), error (error), critical (critical), emergency (emergency). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: PERF_STATUS or PERF_STS (warehouse name), Perf Status Deprecated (caption), Perf_Status (attribute name), and PERF_STS (column name).

Perf Warehouse attribute

Indicates whether the performance data must be ignored or included by the warehouse, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is integer (32-bit gauge) with enumerated values. The following values are defined: Exclude (0), Include (1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: PERF_WAREHOUSE or PERF_WRHS (warehouse name), Perf Warehouse (caption), Perf_Warehouse (attribute name), and PERF_WRHS (column name).

Quota Committed Space attribute

Displays the amount of physical space in GB in the Qtrees that can be used before the system generates a Volume Quota Overcommitted event, Source:Active IQ Unified Manager. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: QUOTA_COMMITTED_SPACE or QTACMTDSP (warehouse name), Quota Committed Space (caption), Quota_Committed_Space (attribute name), and QTACMTDSP (column name).

Read Data attribute

The number of read operations that are performed (in KB per second) on this volume, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: READ_DATA or RD_DATA (warehouse name), Read Data (caption), Read_Data (attribute name), and RD_DATA (column name).

Read Latency attribute

The average time (in milliseconds) that is required to perform read operations on this volume, Source:Active IQ Unified Manager REST API. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: READ_LATENCY or RD_LATNCY (warehouse name), Read Latency (caption), Read_Latency (attribute name), and RD_LATNCY (column name).

Read Ops attribute

The number of read operations that are performed per second on this volume, Source:Active IQ Unified Manager REST API. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: READ_OPS or RD_OPS (warehouse name), Read Ops (caption), Read_Ops (attribute name), and RD_OPS (column name).

Read Throughput attribute

The total data that is received (in bytes per second) by this volume, Source:Active IQ Unified Manager REST API. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: READ_THROUGHPUT or RDTTHRPT (warehouse name), Read Throughput (caption), Read_throughput (attribute name), and RDTTHRPT (column name).

Run Status attribute

Indicates running status for this volume, the possible values of this attribute are unavailable, unknown, normal, information, unmanaged, warning, error, critical, or emergency, Source:Active IQ Unified Manager. The type is string with enumerated values. The following values are defined: unavailable (unavailable), unknown (unknown), normal (normal), information (information), warning (warning), error (error), critical (critical). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: RUN_STATUS or RUN_STS (warehouse name), Run Status (caption), Run_Status (attribute name), and RUN_STS (column name).

Size Used attribute
Size utilization in GB that are used to hold active file system data and snapshot reserve of this volume, Source:Active IQ Unified Manager. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: SIZE_USED or SZ_USD (warehouse name), Size Used (caption), Size_Used (attribute name), and SZ_USD (column name).

Size Used Percent attribute
Percentage of bytes that are used to hold active file system data and snapshot reserve of this volume, Source:Active IQ Unified Manager. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: SIZE_USED_PERCENT or SZ_USD_PER (warehouse name), Size Used Percent (caption), Size_Used_Percent (attribute name), and SZ_USD_PER (column name).

Size Warehouse attribute
Indicates whether the size data must be ignored or included by the warehouse, Source:Active IQ Unified Manager. The type is integer (32-bit gauge) with enumerated values. The following values are defined: Exclude (0), Include (1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: SIZE_WAREHOUSE or SIZE_WRHS (warehouse name), Size Warehouse (caption), Size_Warehouse (attribute name), and SIZE_WRHS (column name).

Snapshot Autodelete attribute
Indicates whether snapshot autodelete is enabled on this volume, Source:Active IQ Unified Manager. The type is integer (32-bit gauge) with enumerated values. The following values are defined: Disabled (0), Enabled (1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: IS_SNAPSHOT_AUTODELETE_ENABLED or SNPDELEBLD (warehouse name), Snapshot Autodelete (caption), Is_Snapshot_Autodelete_Enabled (attribute name), and SNPDELEBLD (column name).

Snapshot Reserve Available attribute
The memory (in GB) in the snapshot reserve for this volume, If the value of the Snapshot Reserve Used attribute is greater than the value of the Snapshot Reserve Total attribute, the value of this attribute is zero, Source:Active IQ Unified Manager. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: SNAPSHOT_RESERVE_AVAIL or SNP_AVL (warehouse name), Snapshot Reserve Available (caption), Snapshot_Reserve_Avail (attribute name), and SNP_AVL (column name).

Snapshot Reserve Percent Used attribute
The percentage of the memory (in GB) that is used to hold the snapshot data for this volume, Source:Active IQ Unified Manager. The type is real number (32-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: SNAPSHOT_RESERVE_PERCENT_USED or SNP_PCT (warehouse name), Snapshot Reserve Percent Used (caption), Snapshot_Reserve_Percent_Used (attribute name), and SNP_PCT (column name).

Snapshot Reserve Total attribute
The memory (in GB) of the snapshot reserve on this volume, Source:Active IQ Unified Manager. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The

following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: SNAPSHOT_RESERVE_TOTAL or SNP_TOTL (warehouse name), Snapshot Reserve Total (caption), Snapshot_Reserve_Total (attribute name), and SNP_TOTL (column name).

Snapshot Reserve Used attribute
The memory (in GB) that is used to hold the snapshot data, The value of this attribute can be greater than the size of the snapshot reserve. This attribute value does not include the space that is used out of the snapshot reserve, Source:Active IQ Unified Manager. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: SNAPSHOT_RESERVE_USED or SNP_USED (warehouse name), Snapshot Reserve Used (caption), Snapshot_Reserve_Used (attribute name), and SNP_USED (column name).

Snapshot Warehouse attribute
Indicates whether the snapshot reserve data must be ignored or included by the warehouse, Source:Active IQ Unified Manager. The type is integer (32-bit gauge) with enumerated values. The following values are defined: Exclude (0), Include (1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: SNAPSHOT_WAREHOUSE or SNP_WRHS (warehouse name), Snapshot Warehouse (caption), Snapshot_Warehouse (attribute name), and SNP_WRHS (column name).

State attribute
Indicates the state of this volume possible values of this attribute are unavailable, initializing, failed, offline, online, partial, restricted, or unknown, Source:Active IQ Unified Manager. The type is string with enumerated values. The following values are defined: unavailable (unavailable), initializing (initializing), failed (failed), offline (offline), online (online), partial (partial), restricted (restricted), unknown (unknown). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: VOLUME_STATE or VOL_STATE (warehouse name), State (caption), Volume_State (attribute name), and VOL_STATE (column name).

Timestamp attribute
The local time at the agent when the data was collected. The type is string.

The source for this attribute is the agent

The following names are defined for this attribute: TIMESTAMP (warehouse name), Timestamp (caption), Timestamp (attribute name), and TIMESTAMP (column name).

Total Latency attribute
The total time (in milliseconds) that is required to perform all the operations on this volume, Source:Active IQ Unified Manager REST API. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: TOTAL_LATENCY or TOTL_LAT (warehouse name), Total Latency (caption), Total_Latency (attribute name), and TOTL_LAT (column name).

Total Ops attribute
The sum of the read, write, and other operations metrics for this volume, Source:Active IQ Unified Manager REST API. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: TOTAL_OPS or TOTL_OPS (warehouse name), Total Ops (caption), Total_Ops (attribute name), and TOTL_OPS (column name).

Total throughput attribute
The total data that is sent and received (in bytes per second) by this volume, Source:Active IQ Unified Manager REST API. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: TOTAL_THROUGHPUT or TOTTHRPT (warehouse name), Total throughput (caption), Total_throughput (attribute name), and TOTTHRPT (column name).

Type attribute
The type of this volume, either read-write, load-sharing, data-protection, data-cache or temporary, Source:Active IQ Unified Manager. The type is string with enumerated values. The following values are defined: unavailable (unavailable), read-write (rw), load-sharing (ls), data-protection (dp), data-cache (dc), temporary (tmp). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: VOLUME_TYPE or VOL_TYPE (warehouse name), Type (caption), Volume_Type (attribute name), and VOL_TYPE (column name).

Volume Size attribute
The size (in GB) of this volume, including the snapshot reserve, Source:Active IQ Unified Manager. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: VOLUME_SIZE or VOL_SIZE (warehouse name), Volume Size (caption), Volume_Size (attribute name), and VOL_SIZE (column name).

Volume Style attribute
Style of a volume, the following are the possible values: flexible or infinite, Source:Active IQ Unified Manager. The type is string with enumerated values. The following values are defined: unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: VOLUME_STYLE or VOL_STYLE (warehouse name), Volume Style (caption), Volume_Style (attribute name), and VOL_STYLE (column name).

vServer Key attribute
The resource key of associated vServers, Source:Active IQ Unified Manager. This attribute is a key attribute. The type is string with enumerated values. The following values are defined: unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: VSERVER_KEY or VSR_KEY (warehouse name), vServer Key (caption), vServer_Key (attribute name), and VSR_KEY (column name).

Write Data attribute
The number of write operations that are performed (in KB per second) on this volume, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: WRITE_DATA or WR_DATA (warehouse name), Write Data (caption), Write_Data (attribute name), and WR_DATA (column name).

Write Latency attribute
The average time (in milliseconds) that is required to perform write operations on this volume, Source:Active IQ Unified Manager REST API. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: WRITE_LATENCY or WR_LATNCY (warehouse name), Write Latency (caption), Write_Latency (attribute name), and WR_LATNCY (column name).

Write Ops attribute
The number of write operations that are performed per second on this volume, Source:Active IQ Unified Manager REST API. The type is real number (64-bit gauge) with one decimal places of

precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: WRITE_OPS or WR_OPS (warehouse name), Write Ops (caption), Write_Ops (attribute name), and WR_OPS (column name).

Write Throughput attribute
The total data that is sent (in bytes per second) by this volume, Source:Active IQ Unified Manager REST API. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: WRITE_THROUGHPUT or WRTTHRPT (warehouse name), Write Throughput (caption), Write_throughput (attribute name), and WRTTHRPT (column name).

Vserver attribute group

The Vserver attribute group contains information about Vservers. This attribute group is eligible for use with Tivoli Data Warehouse.

This attribute group contains the following attributes:

CIFS Authentication Style attribute
The CIFS server information that matches the specified authentication style, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is string with enumerated values. The following values are defined: domain (domain), workgroup (workgroup), unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: CIFS_AUTHENTICATION_STYLE or CIFSAUTH (warehouse name), CIFS Authentication Style (caption), CIFS_Authentication_Style (attribute name), and CIFSAUTH (column name).

CIFS Domain attribute
The name of the active CIFS domain of the Vserver, Source:Active IQ Unified Manager 9.7. The type is string with enumerated values. The following values are defined: unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: CIFS_DOMAIN or CIFSDOM (warehouse name), CIFS Domain (caption), CIFS_Domain (attribute name), and CIFSDOM (column name).

CIFS Enabled attribute
The status that indicates whether the Common Internet File System (CIFS) is enabled for the Vserver or not, Source:Active IQ Unified Manager REST API. The type is integer (32-bit gauge) with enumerated values. The following values are defined: Disabled (0), Enabled (1), unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: IS_CIFS_ENABLED or CIFS (warehouse name), CIFS Enabled (caption), Is_CIFS_Enabled (attribute name), and CIFS (column name).

CIFS Latency attribute
The aggregated CIFS latency (in milliseconds) at the Vserver level, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: CIFS_LATENCY or CIFS_LAT (warehouse name), CIFS Latency (caption), CIFS_Latency (attribute name), and CIFS_LAT (column name).

CIFS Ops attribute
The aggregated CIFS operations that are performed per second at the Vserver level, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is real number (64-bit gauge) with one

decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: CIFS_OPS (warehouse name), CIFS Ops (caption), CIFS_Ops (attribute name), and CIFS_OPS (column name).

Cluster Key attribute
The resource key of the Cluster that is associated to the vServer, Source:Active IQ Unified Manager REST API. This attribute is a key attribute. The type is string with enumerated values. The following values are defined: unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: CLUSTER_KEY or CLST_KEY (warehouse name), Cluster Key (caption), Cluster_Key (attribute name), and CLST_KEY (column name).

Cluster Name attribute
The name of the cluster where the Vserver is located, Source:Active IQ Unified Manager. The type is string with enumerated values. The following values are defined: unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: CLUSTER_NAME or CLST_NAME (warehouse name), Cluster Name (caption), Cluster_Name (attribute name), and CLST_NAME (column name).

Domain Name attribute
The name of the active NIS domain of the Vserver, Source:Active IQ Unified Manager. The type is string with enumerated values. The following values are defined: unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: NIS_DOMAIN_NAME or DOM_NAME (warehouse name), Domain Name (caption), NIS_Domain_Name (attribute name), and DOM_NAME (column name).

Export Policy Enabled attribute
The status that indicates whether a specific client is allowed access the specific export path or not, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is integer (32-bit gauge) with enumerated values. The following values are defined: Disabled (0), Enabled (1), unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: IS_EXPORT_POLICY_ENABLED or EXPORTPLCY (warehouse name), Export Policy Enabled (caption), Is_Export_Policy_Enabled (attribute name), and EXPORTPLCY (column name).

FCP Enabled attribute
The status that indicates whether the Fibre Channel Protocol (FCP) service is enabled for the Vserver or not, Source:Active IQ Unified Manager REST API. The type is integer (32-bit gauge) with enumerated values. The following values are defined: Disabled (0), Enabled (1), unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: IS_FCP_ENABLED or FCP (warehouse name), FCP Enabled (caption), Is_FCP_Enabled (attribute name), and FCP (column name).

FCP Node Name attribute
The FCP node name that is used for managing the World Wide Port Names (WWPN) of FCP data logical interfaces in a Vserver, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is string with enumerated values. The following values are defined: unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: FCP_NODE_NAME or FCPNODE (warehouse name), FCP Node Name (caption), FCP_Node_Name (attribute name), and FCPNODE (column name).

Is DNS Enabled attribute
The status that indiactes whether the domain name system (DNS) service is enabled for the Vserver or not, Source:Active IQ Unified Manager. The type is integer (32-bit gauge) with enumerated values. The following values are defined: Disabled (0), Enabled (1), unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: IS_DNS_ENABLED or DNS (warehouse name), Is DNS Enabled (caption), Is_DNS_Enabled (attribute name), and DNS (column name).

Is Kerberos Enabled attribute

The status that indicates whether the Kerberos security is enabled for the Vserver or not, Source:Active IQ Unified Manager. The type is integer (32-bit gauge) with enumerated values. The following values are defined: Disabled (0), Enabled (1), unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: IS_KERBEROS_ENABLED or KERBEROS (warehouse name), Is Kerberos Enabled (caption), Is_Kerberos_Enabled (attribute name), and KERBEROS (column name).

Is LDAP Client Enabled attribute

The status that indicates whether the lightweight directory access protocol (LDAP) client configuration is enabled for the Vserver or not, Source:Active IQ Unified Manager. The type is integer (32-bit gauge) with enumerated values. The following values are defined: Disabled (0), Enabled (1), unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: IS_LDAP_CLIENT_ENABLED or LDAP_CLNT (warehouse name), Is LDAP Client Enabled (caption), Is_LDAP_Client_Enabled (attribute name), and LDAP_CLNT (column name).

Is NIS Enabled attribute

The status that indicates whether the network information service (NIS) is enabled for the Vserver or not, Source:Active IQ Unified Manager. The type is integer (32-bit gauge) with enumerated values. The following values are defined: Disabled (0), Enabled (1), unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: IS_NIS_ENABLED or NIS (warehouse name), Is NIS Enabled (caption), Is_NIS_Enabled (attribute name), and NIS (column name).

ISCSI Enabled attribute

The status that indicates whether the Internet Small Computer System Interface (iSCSI) service is enabled for the Vserver or not, Source:Active IQ Unified Manager REST API. The type is integer (32-bit gauge) with enumerated values. The following values are defined: Disabled (0), Enabled (1), unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: IS_ISCSI_ENABLED or ISCSI (warehouse name), ISCSI Enabled (caption), Is_ISCSI_Enabled (attribute name), and ISCSI (column name).

ISCSI Node Name attribute

The ISCSI target node name for the StorageVM, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is string with enumerated values. The following values are defined: unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: ISCSI_NODE_NAME or ISCSINODE (warehouse name), ISCSI Node Name (caption), ISCSI_Node_Name (attribute name), and ISCSINODE (column name).

iSCSI Read Operations attribute

The aggregated number of read operations for all the LUNs in the system that are accessed over iSCSI, at the Vserver level, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: ISCSI_READ_OPS or ISC_RD_OPS (warehouse name), iSCSI Read Operations (caption), iSCSI_Read_Ops (attribute name), and ISC_RD_OPS (column name).

iSCSI Write Operations attribute

The aggregated number of write operations for all the LUNs in the system that are accessed over iSCSI, at the Vserver level, this attribute is deprecated since Active IQ Unified Manager 9.7. The type

is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: ISCSI_WRITE_OPS or ISC_WR_OPS (warehouse name), iSCSI Write Operations (caption), ISCSI_Write_Ops (attribute name), and ISC_WR_OPS (column name).

Maximum Volumes attribute
The maximum number of volumes that are created on the StorageVM, the value -1 indicates unlimited volume, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is integer (64-bit gauge) with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: MAXIMUM_VOLUMES or MAXVOLS (warehouse name), Maximum Volumes (caption), Maximum_Volumes (attribute name), and MAXVOLS (column name).

Name attribute
The name of the Vserver, Source:Active IQ Unified Manager. The type is string with enumerated values. The following values are defined: unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: VSERVER_NAME or VSR_NAME (warehouse name), Name (caption), Vserver_Name (attribute name), and VSR_NAME (column name).

Network Receive Data attribute
The data received (in bytes per second) over the network, this attribute is unsupported since Active IQ Unified Manager 9.7. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: NET_RECEIVE_DATA or NWRCVDATA (warehouse name), Network Receive Data (caption), Net_Receive_Data (attribute name), and NWRCVDATA (column name).

Network Receive Errors attribute
The errors received (per second) over the network, this attribute is unsupported since Active IQ Unified Manager 9.7. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: NET_RECEIVE_ERRORS or NWRCVERR (warehouse name), Network Receive Errors (caption), Net_Receive_Errors (attribute name), and NWRCVERR (column name).

Network Receive Packet attribute
The packets received (per second) over the network, this attribute is unsupported since Active IQ Unified Manager 9.7. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: NET_RECEIVE_PACKET or NWRCVPCKT (warehouse name), Network Receive Packet (caption), Net_Receive_Packet (attribute name), and NWRCVPCKT (column name).

Network Sent Data attribute
The data sent (in bytes per second) over the network, this attribute is unsupported since Active IQ Unified Manager 9.7. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: NET_SENT_DATA or NWSENTDATA (warehouse name), Network Sent Data (caption), Net_Sent_Data (attribute name), and NWSENTDATA (column name).

Network Sent Errors attribute

The errors sent (per second) over the network, this attribute is unsupported since Active IQ Unified Manager 9.7. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: NET_SENT_ERRORS or NWSENTERR (warehouse name), Network Sent Errors (caption), Net_Sent_Errors (attribute name), and NWSENTERR (column name).

Network Sent Packet attribute

The packets sent (per second) over the network, this attribute is unsupported since Active IQ Unified Manager 9.7. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: NET_SENT_PACKET or NWSENTPCKT (warehouse name), Network Sent Packet (caption), Net_Sent_Packet (attribute name), and NWSENTPCKT (column name).

Network Total Packets attribute

The total packets transferred (per second) over the network, this attribute is unsupported since Active IQ Unified Manager 9.7. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: NET_TOTAL_PACKETS or NWTOTPCKT (warehouse name), Network Total Packets (caption), Net_Total_Packets (attribute name), and NWTOTPCKT (column name).

Network Total Throughput attribute

The total amount of data moved successfully from one place to another per second, this attribute is unsupported since Active IQ Unified Manager 9.7. The type is real number (64-bit gauge) with one decimal places of precision with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: NET_TOTAL_THROUGHPUT or NWTOTHRU (warehouse name), Network Total Throughput (caption), Net_Total_Throughput (attribute name), and NWTOTHRU (column name).

NFS Enabled attribute

The status that indicates whether the Network File System (NFS) service is enabled for the Vserver or not, Source:Active IQ Unified Manager REST API. The type is integer (32-bit gauge) with enumerated values. The following values are defined: Disabled (0), Enabled (1), unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: IS_NFS_ENABLED or NFS (warehouse name), NFS Enabled (caption), Is_NFS_Enabled (attribute name), and NFS (column name).

Node attribute

The managed system name of the agent. This attribute is a key attribute. The type is string.

The source for this attribute is the agent

The following names are defined for this attribute: NODE (warehouse name), Node (caption), ORIGINNODE (attribute name), and ORIGINNODE (column name).

Operational State attribute

The Vserver information that matches the specified operational-state, such as running, stopped, or not_mapped, Source:Active IQ Unified Manager REST API. The type is string with enumerated values.

The following values are defined: running (running), stopped (stopped), unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: OPERATIONAL_STATE or OPSTATE (warehouse name), Operational State (caption), Operational_State (attribute name), and OPSTATE (column name).

Repository attribute
The status that indicates whether the Vserver contains infinite volume, Source:Active IQ Unified Manager. The type is integer (32-bit gauge) with enumerated values. The following values are defined: Disabled (0), Enabled (1), unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: IS_REPOSITORY or REPOSITORY (warehouse name), Repository (caption), Is_Repository (attribute name), and REPOSITORY (column name).

Root Volume attribute
The name of the Vserver root volume, Source:Active IQ Unified Manager. The type is string with enumerated values. The following values are defined: unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: ROOT_VOLUME_NAME or RTVOL_NAME (warehouse name), Root Volume (caption), Root_Volume_Name (attribute name), and RTVOL_NAME (column name).

Run Status attribute
The current status of the Vserver that is based on all events, Source:Active IQ Unified Manager. The type is string with enumerated values. The following values are defined: unavailable (unavailable), unknown (unknown), normal (normal), information (information), warning (warning), error (error), critical (critical). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: VSERVER_STATUS or VSR_STATUS (warehouse name), Run Status (caption), Vserver_Status (attribute name), and VSR_STATUS (column name).

State attribute
The state of the Vserver, the possible values of this attribute are running, stopped, starting, or stopping, Source:Active IQ Unified Manager. The type is string with enumerated values. The following values are defined: running (running), stopped (stopped), starting (starting), stopping (stopping). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: VSERVER_STATE or VSR_STATE (warehouse name), State (caption), Vserver_State (attribute name), and VSR_STATE (column name).

Timestamp attribute
The local time at the agent when the data was collected. The type is string.

The source for this attribute is the agent

The following names are defined for this attribute: TIMESTAMP (warehouse name), Timestamp (caption), Timestamp (attribute name), and TIMESTAMP (column name).

Type attribute
The type of the Vserver, such as not_mapped, cluster, data, node, or admin, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is string with enumerated values. The following values are defined: cluster (cluster), data (data), admin (admin), node (node), unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: VSERVER_TYPE or VSR_TYPE (warehouse name), Type (caption), Vserver_Type (attribute name), and VSR_TYPE (column name).

Volume Bytes Avail attribute
The available space (in bytes) in the volume that belongs to the StorageVM, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is integer (64-bit gauge) with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: VOLUME_BYTES_AVAIL or VOLAVAIL (warehouse name), Volume Bytes Avail (caption), Volume_Bytes_Avail (attribute name), and VOLAVAIL (column name).

Volume Bytes Total attribute
The total capacity of the volume (in bytes) that belongs to the StorageVM, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is integer (64-bit gauge) with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: VOLUME_BYTES_TOTAL or VOLTOTAL (warehouse name), Volume Bytes Total (caption), Volume_Bytes_Total (attribute name), and VOLTOTAL (column name).

Volume Bytes Used attribute
The space that is used (in bytes) by data in the volume that belongs to the StorageVM, this attribute is deprecated since Active IQ Unified Manager 9.7. The type is integer (64-bit gauge) with enumerated values. The following values are defined: unavailable (-1). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: VOLUME_BYTES_USED or VOLUSED (warehouse name), Volume Bytes Used (caption), Volume_Bytes_Used (attribute name), and VOLUSED (column name).

VServer Key attribute
The resource key of the vServer, Source:Active IQ Unified Manager This attribute is a key attribute. The type is string with enumerated values. The following values are defined: unavailable (unavailable). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: KEY or VSR_KEY (warehouse name), VServer Key (caption), Key (attribute name), and VSR_KEY (column name).

Disk capacity planning for historical data

Disk capacity planning for a monitoring agent is a prediction of the amount of disk space to be consumed by the historical data in each attribute group that is collecting historical data. Required disk storage is an important factor when you are defining data collection rules and your strategy for historical data collection.

The Capacity planning for historical data table provides the following information, which is required to calculate disk space for this monitoring agent:

Table
Table name as it is displayed in the warehouse database, if the attribute group is configured to be written to the warehouse. The table name listed here corresponds to the table name in “Attribute groups for the monitoring agent” on page 9.

Attribute group
Name of the attribute group that is used to create the table in the warehouse database if it is short enough to fit in the table naming constraints of the database that is being used for the warehouse. The attribute group name listed here corresponds to the Warehouse table name in “Attribute groups for the monitoring agent” on page 9.

Bytes per row (agent)
Estimate of the record length for each row or instance that is written to the agent disk for historical data collection. This estimate can be used for agent disk space planning purposes.

Database bytes per row (warehouse)
Estimate of the record length for detailed records that are written to the warehouse database, if the attribute group is configured to be written to the warehouse. Detailed records are records that have been uploaded from the agent for long-term historical data collection. This estimate can be used for warehouse disk-space planning purposes.

Aggregate bytes per row (warehouse)
Estimate of the record length for aggregate records that are written to the warehouse database, if the attribute group is configured to be written to the warehouse. Aggregate records are created by the Summarization agent for attribute groups that have been configured for summarization. This estimate can be used for warehouse disk-space planning purposes.

In addition to the information in the tables, you must know the number of rows of data that you plan to collect. An attribute group can have single or multiple rows of data, depending on the application environment that is being monitored. For example, if your attribute group monitors each processor in your computer and you have a dual processor computer, the number of rows is two.

Table 1. Capacity planning for historical data logged by the

Table	Attribute group	Bytes per row (agent)	Database bytes per row (warehouse)	Aggregate bytes per row (warehouse)
KNU02AGREG	KNU_AGGREGATES	688	879	2092
KNU08CLST	KNU_CLUSTERS	596	635	876
KNU09CLSND	KNU_CLUSTER_NODE	1212	1356	2107
KNU10DTSR	KNU_DATASOURCE	396	397	434
KNU05DISK	KNU_DISKS	1962	2166	3395
KNUEVNT	KNU_EVENTS	1296	1305	1342
KNU01HOST	KNU_HOSTS	977	1169	2519
KNUHOSTFCT	KNU_HOST_FCP_TARGETS	424	447	703
KNUHOSTNIF	KNU_HOST_NETWORK_INTERFACES	351	460	1022
KNU04LUN	KNU_LUNS	1176	1268	1842
KNUPOBJST	KNU_PERFORMANCE_OBJECT_STATUS	288	289	326
KNU06QTREE	KNU_QTREES	972	1034	1541
KNU03VOL	KNU_VOLUMES	1404	1889	4788
KNU07VSR	KNU_VSERVER	1264	1396	2607

For more information about historical data collection, see "Managing historical data" in the *IBM Tivoli Monitoring Administrator's Guide*.

Chapter 3. Situations

A situation is a logical expression involving one or more system conditions. Situations are used to monitor the condition of systems in your network. You can manage situations from the Tivoli Enterprise Portal by using the Situation Editor or from the command-line interface using the tacmd commands for situations. You can manage private situations in the private configuration XML file.

About situations

The monitoring agents that you use to monitor your system environment include a set of predefined situations that you can use as-is. You can also create new situations to meet your requirements.

Predefined situations contain attributes that check for system conditions common to many enterprises. Using predefined situations can improve the speed with which you can begin using the IBM Tivoli Monitoring for Virtual Environments Agent for NetApp Storage. You can change the conditions or values being monitored by a predefined situation to the conditions or values best suited to your enterprise.

You can display predefined situations and create your own situations using the Situation editor. The Situation editor initially lists the situations associated with the navigator item that you selected. When you click a situation name or create a situation, a panel opens with the following tabs:

Formula
Formula describing the condition being tested.

Distribution
List of managed systems (operating systems, subsystems, or applications) to which the situation can be distributed. All the NetApp Storage agent managed systems are assigned by default.

Expert advice
Comments and instructions to be read in the event workspace.

Action
Command to be sent to the system.

EIF
Customize forwarding of the event to an Event Integration Facility receiver. (Available when the Tivoli Enterprise Monitoring Server is configured to forward events.)

Until
Options to close the event after a period of time, or when another situation becomes true.

Additional information about situations

The *Tivoli Enterprise Portal User's Guide* contains more information about predefined and custom situations and how to use them to respond to alerts.

For a list of the predefined situations and information about each individual situation for this monitoring agent, see “Predefined situations” on page 59.

Predefined situations

The monitoring agent contains predefined situations, which are organized by Navigator item.

Agent level Navigator items

- NetApp Storage
  - Not applicable
- Aggregates
  - Not applicable
  - KNU_AggregateRunStatusAbnormal

- Disks
  - Not applicable
- Events
  - Not applicable
- LUNs
  - Not applicable
  - KNU_LUNRunStatusAbnormal
- Monitored DataSource
  - Not applicable
  - KNU_Agent_Down
- Qtrees
  - Not applicable
  - KNU_QtreeRunStatusAbnormal
- Volumes
  - Not applicable
  - KNU_VolumeRunStatusAbnormal
- Vserver
  - Not applicable

Situation descriptions

Each situation description provides information about the situation that you can use to monitor the condition of systems in your network.

The situation descriptions provide the following information:

Description
Information about the conditions that the situation tests.

Attribute groups
Names of the attribute groups that contain the attributes from which the situation retrieves data samples.

Formula
Syntax that contains one or more logical expressions that describe the conditions for the situation to monitor.

Distribution
Whether the situation is automatically distributed to instances of the agent or is available for manual distribution.

Run at startup
Whether the situation starts monitoring when the agent starts.

Sampling interval
Number of seconds that elapse between one sample of data that the monitoring agent collects for the server and the next sample.

Situation persistence
Whether the conditions specified in the situation evaluate to "true" for the defined number of occurrences in a row before the situation is raised. The default of one means that no persistence-checking takes place.

Severity
Severity of the predefined events: Warning, Informational, or Critical.

Clearing conditions
Controls when a true situation closes: after a period, when another situation is true, or whichever occurs first if both are selected.

NetApp Storage navigator item

No predefined situations are included for this navigator item. The situation descriptions are organized by the navigator item to which the situations are relevant.

placeholder

Aggregates navigator item

No predefined situations are included for this navigator item. The situation descriptions are organized by the navigator item to which the situations are relevant.

KNU_AggregateRunStatusAbnormal situation

Description
The run status of this aggregate is not normal.

The situation is evaluated for each distinct value of the Host_Name attribute.

Attribute groups
This situation uses the following attribute groups:

•

Formula

```
*IF *VALUE KNU_AGGREGATES.Run_Status *NE 'unavailable' *AND *VALUE
KNU_AGGREGATES.Run_Status *NE 'normal' *AND *VALUE
KNU_AGGREGATES.Run_Status *NE 'information'
```

See “Attributes in each attribute group” on page 10 for descriptions of the attributes in this formula.

Distribution
This situation is automatically distributed to instances of this agent.

Run at startup
Yes

Sampling interval
30 seconds

Situation persistence
The number of times the condition specified by the situation must occur for the situation to be true is 1.

Error conditions
Warning

Clearing conditions
The situation clears when the condition becomes false.

placeholder

Disks navigator item

No predefined situations are included for this navigator item. The situation descriptions are organized by the navigator item to which the situations are relevant.

placeholder

Events navigator item

No predefined situations are included for this navigator item. The situation descriptions are organized by the navigator item to which the situations are relevant.

placeholder

LUNs navigator item

No predefined situations are included for this navigator item. The situation descriptions are organized by the navigator item to which the situations are relevant.

KNU_LUNRunStatusAbnormal situation

Description
The run status of this LUN is not normal.

The situation is evaluated for each distinct value of the Host_Name attribute.

Attribute groups
This situation uses the following attribute groups:

•

Formula

```
*IF *VALUE KNU_LUNS.Run_Status *NE 'unavailable' *AND *VALUE
KNU_LUNS.Run_Status *NE 'normal' *AND *VALUE KNU_LUNS.Run_Status *NE
'information'
```

See "Attributes in each attribute group" on page 10 for descriptions of the attributes in this formula.

Distribution
This situation is automatically distributed to instances of this agent.

Run at startup
Yes

Sampling interval
30 seconds

Situation persistence
The number of times the condition specified by the situation must occur for the situation to be true is 1.

Error conditions
Warning

Clearing conditions
The situation clears when the condition becomes false.

placeholder

Monitored DataSource navigator item

No predefined situations are included for this navigator item. The situation descriptions are organized by the navigator item to which the situations are relevant.

KNU_Agent_Down situation

Description
The agent connection is down.

The situation is evaluated for each distinct value of the Version attribute.

Attribute groups
This situation uses the following attribute groups:

-

Formula

```
*IF *VALUE KNU_DATASOURCE.Agent_Connection *EQ 'Down'
```

See “Attributes in each attribute group” on page 10 for descriptions of the attributes in this formula.

Distribution
This situation is automatically distributed to instances of this agent.

Run at startup
Yes

Sampling interval
30 seconds

Situation persistence
The number of times the condition specified by the situation must occur for the situation to be true is 1.

Error conditions
Critical

Clearing conditions
The situation clears when the condition becomes false.

placeholder

Qtrees navigator item

No predefined situations are included for this navigator item. The situation descriptions are organized by the navigator item to which the situations are relevant.

KNU_QtreeRunStatusAbnormal situation

Description
The run status of this qtree is not normal.This situation is deprecated since OCUM 6.x.

The situation is evaluated for each distinct value of the Host_Name attribute.

Attribute groups
This situation uses the following attribute groups:

-

Formula

```
*IF *VALUE KNU_QTREES.Run_Status *NE 'unavailable' *AND *VALUE
KNU_QTREES.Run_Status *NE 'normal' *AND *VALUE KNU_QTREES.Run_Status *NE
'information'
```

See “Attributes in each attribute group” on page 10 for descriptions of the attributes in this formula.

Distribution
This situation is automatically distributed to instances of this agent.

Run at startup
Yes

Sampling interval
30 seconds

Situation persistence
The number of times the condition specified by the situation must occur for the situation to be true is 1.

Error conditions
Warning

Clearing conditions
The situation clears when the condition becomes false.

placeholder

Volumes navigator item

No predefined situations are included for this navigator item. The situation descriptions are organized by the navigator item to which the situations are relevant.

KNU_VolumeRunStatusAbnormal situation

Description
The run status of this volume is not normal.

The situation is evaluated for each distinct value of the Host_Name attribute.

Attribute groups
This situation uses the following attribute groups:

•

Formula

```
*IF *VALUE KNU_VOLUMES.Run_Status *NE 'unavailable' *AND *VALUE
KNU_VOLUMES.Run_Status *NE 'normal' *AND *VALUE KNU_VOLUMES.Run_Status
*NE 'information'
```

See “Attributes in each attribute group” on page 10 for descriptions of the attributes in this formula.

Distribution
This situation is automatically distributed to instances of this agent.

Run at startup
Yes

Sampling interval
30 seconds

Situation persistence
The number of times the condition specified by the situation must occur for the situation to be true is 1.

Error conditions
Warning

Clearing conditions
The situation clears when the condition becomes false.

placeholder

Vserver navigator item

No predefined situations are included for this navigator item. The situation descriptions are organized by the navigator item to which the situations are relevant.

placeholder

Chapter 4. Take Action commands

Take Action commands can be run from the portal client or included in a situation or a policy.

About Take Action commands

When included in a situation, the command runs when the situation becomes true. A Take Action command in a situation is also referred to as *reflex automation*. When you enable a Take Action command in a situation, you automate a response to system conditions. For example, you can use a Take Action command to send a command to restart a process on the managed system or to send a text message to a cell phone.

In advanced automation, policies are used to take actions, schedule work, and automate manual tasks. A policy comprises a series of automated steps called activities that are connected to create a workflow. After an activity is completed, the Tivoli Enterprise Portal receives return-code feedback, and advanced automation logic responds with subsequent activities that are prescribed by the feedback.

A basic Take Action command shows the return code of the operation in a message box that is displayed after the action is completed or in a log file. After you close this window, no further information is available for this action.

Additional information about Take Action commands

For more information about working with Take Action commands, see "Take Action commands" in the *Tivoli Enterprise Portal User's Guide*.

For a list of the Take Action commands for this monitoring agent and a description of each command, see “Predefined Take Action commands” on page 65 and the information for each individual command.

Predefined Take Action commands

Not all agents have predefined Take Action commands. But you can create Take Action commands for any agent.

The IBM Tivoli Monitoring for Virtual Environments Agent for NetApp Storage does not provide predefined Take Action commands.

Take Action command descriptions

Each Take Action command description provides information you can use to decide whether to run the Take Action command or whether to include the Take Action command in a situation or a policy.

The descriptions of the Take Action commands provide the following information:

Description
Actions the command performs on the system to which it is sent, and the permissions required for the Take Action command to function.

System command
Syntax for the command required to run the Take Action command from a situation or policy.

Arguments
List of parameters, if any, for the Take Action command with a short description and the default value (if any) for each one. This section is not included if the Take Action command has no arguments.

Destination systems
Where the command is to be run, which can be on the Managed System (agent) where the agent is located or on the Managing System (Tivoli Enterprise Monitoring Server) to which it is connected.

Return codes
Information that the Take Action command returns.

Chapter 5. Policies

Policies are used as an advanced automation technique for implementing more complex workflow strategies than you can create through simple automation. All agents do not provide predefined policies, but you can create policies for any agent.

A *policy* is a set of automated system processes that can take actions, schedule work for users, or automate manual tasks. You use the Workflow Editor to design policies. You control the order in which the policy executes a series of automated steps, which are also called *activities*. Policies are connected to create a workflow. After an activity is completed, the Tivoli Enterprise Portal receives return-code feedback, and advanced automation logic responds with subsequent activities prescribed by the feedback.

For more information about working with policies, see "Automation with policies" in the *Tivoli Enterprise Portal User's Guide*.

For information about using the Workflow Editor, see the *IBM Tivoli Monitoring Administrator's Guide* or the Tivoli Enterprise Portal online help.

Predefined policies

Not all agents have predefined policies. But you can create policies for any agent.

The IBM Tivoli Monitoring for Virtual Environments Agent for NetApp Storage does not provide predefined policies.

Chapter 6. Event mapping

The Tivoli Event Integration Facility (EIF) interface is used to forward situation events to Tivoli Netcool/OMNIbus or Tivoli Enterprise Console®.

EIF events specify an event class, and the event data is specified as name-value pairs that identify the name of an event slot and the value for the slot. An event class can have subclasses. IBM Tivoli Monitoring provides the base event class definitions and a set of base slots that are included in all monitoring events. Agents extend the base event classes to define subclasses that include agent-specific slots. For NetApp Storage agent events, the event classes correspond to the agent attribute groups, and the agent-specific slots correspond to the attributes in the attribute group.

The situation editor in the Tivoli Enterprise Portal can be used to perform custom mapping of data to EIF slots instead of using the default mapping described in this topic. For more information about EIF slot customization, see the *Tivoli Enterprise Portal User's Guide*.

Tivoli Enterprise Console requires that event classes and their slots are defined in BAROC (Basic Recorder of Objects in C) files. Each agent provides a BAROC file that contains event class definitions for the agent and is installed on the Tivoli Enterprise Monitoring Server in the TECLIB directory (`install_dir/cms/TECLIB` for Windows systems and `install_dir/tables/TEMS_hostname/TECLIB` for UNIX systems) when application support for the agent is installed. The BAROC file for the agent and the base BAROC files provided with Tivoli Monitoring must also be installed onto the Tivoli Enterprise Console. For details, see "Setting up event forwarding to Tivoli Enterprise Console" in the *IBM Tivoli Monitoring Installation and Setup Guide*.

Each of the event classes is a child of KNU_Base and is defined in the `knu.baroc` (version 07.30.02) file. The KNU_Base event class can be used for generic rules processing for any event from the IBM Tivoli Monitoring for Virtual Environments Agent for NetApp Storage.

For events that are generated by situations in the Aggregates attribute group, events are sent by using the ITM_KNU_AGGREGATES event class. This event class contains the following slots:

- aggregate_key: STRING
- aggregate_key_enum: STRING
- aggregate_name: STRING
- aggregate_name_enum: STRING
- aggregate_type: STRING
- aggregate_type_enum: STRING
- block_rate: REAL
- block_rate_enum: STRING
- committed_warehouse: INTEGER
- committed_warehouse_enum: STRING
- composite_status: INTEGER
- composite_status_enum: STRING
- cp_reads: REAL
- cp_reads_enum: STRING
- cp_read_blocks: REAL
- cp_read_blocks_enum: STRING
- cp_read_latency: REAL
- cp_read_latency_enum: STRING

- file_rate: REAL
- file_rate_enum: STRING
- host_name: STRING
- host_name_enum: STRING
- latency: REAL
- latency_enum: STRING
- node: STRING
- node_name: STRING
- node_name_enum: STRING
- percent_used: REAL
- percent_used_enum: STRING
- perf_status: STRING
- perf_status_enum: STRING
- perf_warehouse: INTEGER
- perf_warehouse_enum: STRING
- run_status: STRING
- run_status_enum: STRING
- size_available: REAL
- size_available_enum: STRING
- size_total: REAL
- size_total_enum: STRING
- size_used: REAL
- size_used_enum: STRING
- size_warehouse: INTEGER
- size_warehouse_enum: STRING
- throughput: REAL
- throughput_enum: STRING
- timestamp: STRING
- total_space_committed: REAL
- total_space_committed_enum: STRING
- total_transfers: REAL
- total_transfers_enum: STRING
- userreadlatency: REAL
- userreadlatency_enum: STRING
- userwritelatency: REAL
- userwritelatency_enum: STRING
- user_reads: REAL
- user_reads_enum: STRING
- user_read_blocks: REAL

- user_read_blocks_enum: STRING
- user_writes: REAL
- user_writes_enum: STRING
- user_write_blocks: REAL
- user_write_blocks_enum: STRING
- utilization: REAL
- utilization_enum: STRING

For events that are generated by situations in the Cluster Node attribute group, events are sent by using the ITM_KNU_CLUSTER_NODE event class. This event class contains the following slots:

- avg_processor_busy: REAL
- avg_processor_busy_enum: STRING
- cluster_key: STRING
- cluster_key_enum: STRING
- cluster_name: STRING
- cluster_name_enum: STRING
- cluster_node_key: STRING
- cluster_node_key_enum: STRING
- cluster_node_name: STRING
- cluster_node_name_enum: STRING
- cluster_node_port_count: REAL
- cluster_node_port_count_enum: STRING
- cluster_node_state: STRING
- cluster_node_state_enum: STRING
- cluster_node_status: STRING
- cluster_node_status_enum: STRING
- cluster_node_uptime: REAL
- cluster_node_uptime_enum: STRING
- cpu_busy: REAL
- cpu_busy_enum: STRING
- failed_fan_status: STRING
- failed_fan_status_enum: STRING
- failover_state: STRING
- failover_state_enum: STRING
- location: STRING
- location_enum: STRING
- max_aggregate_utilization: REAL
- max_aggregate_utilization_enum: STRING
- memory_size: REAL
- memory_size_enum: STRING

- net_data_recv: REAL
- net_data_recv_enum: STRING
- net_data_sent: REAL
- net_data_sent_enum: STRING
- node: STRING
- nvram_battery_status: STRING
- nvram_battery_status_enum: STRING
- other_ops: REAL
- other_ops_enum: STRING
- read_ops: REAL
- read_ops_enum: STRING
- read_throughput: REAL
- read_throughput_enum: STRING
- serial_number: STRING
- serial_number_enum: STRING
- sys_avg_latency: REAL
- sys_avg_latency_enum: STRING
- sys_read_latency: REAL
- sys_read_latency_enum: STRING
- sys_write_latency: REAL
- sys_write_latency_enum: STRING
- timestamp: STRING
- total_throughput: REAL
- total_throughput_enum: STRING
- utilization: REAL
- utilization_enum: STRING
- write_throughput: REAL
- write_throughput_enum: STRING

For events that are generated by situations in the Clusters attribute group, events are sent by using the ITM_KNU_CLUSTERS event class. This event class contains the following slots:

- cluster_address: STRING
- cluster_address_enum: STRING
- cluster_diagnosis_status: STRING
- cluster_diagnosis_status_enum: STRING
- cluster_key: STRING
- cluster_key_enum: STRING
- cluster_name: STRING
- cluster_name_enum: STRING
- cluster_status: STRING

- cluster_status_enum: STRING
- cluster_version: STRING
- cluster_version_enum: STRING
- max_aggregate_utilization: REAL
- max_aggregate_utilization_enum: STRING
- max_node_utilization: REAL
- max_node_utilization_enum: STRING
- node: STRING
- serial_number: STRING
- serial_number_enum: STRING
- timestamp: STRING
- total_ops: REAL
- total_ops_enum: STRING
- total_throughput: REAL
- total_throughput_enum: STRING

For events that are generated by situations in the DataSource attribute group, events are sent by using the ITM_KNU_DATASOURCE event class. This event class contains the following slots:

- agent_connection: STRING
- agent_connection_enum: STRING
- data_source: STRING
- data_source_enum: STRING
- ip_address: STRING
- ip_address_enum: STRING
- node: STRING
- port: STRING
- port_enum: STRING
- timestamp: STRING
- version: STRING
- version_enum: STRING

For events that are generated by situations in the Disks attribute group, events are sent by using the ITM_KNU_DISKS event class. This event class contains the following slots:

- aggregate_key: STRING
- aggregate_key_enum: STRING
- aggregate_name: STRING
- aggregate_name_enum: STRING
- block_rate: REAL
- block_rate_enum: STRING
- cluster_key: STRING
- cluster_key_enum: STRING

- composite_latency: REAL
- composite_latency_enum: STRING
- container_type: STRING
- container_type_enum: STRING
- cp_reads: REAL
- cp_reads_enum: STRING
- cp_read_blocks: REAL
- cp_read_blocks_enum: STRING
- cp_read_latency: REAL
- cp_read_latency_enum: STRING
- disk_busy: REAL
- disk_busy_enum: STRING
- disk_name: STRING
- disk_name_enum: STRING
- disk_size: REAL
- disk_size_enum: STRING
- disk_type: STRING
- disk_type_enum: STRING
- disk_uid_or_wwn: STRING
- disk_uid_or_wwn_enum: STRING
- failed_reason: STRING
- failed_reason_enum: STRING
- file_rate: REAL
- file_rate_enum: STRING
- guaranteed_read_latency: REAL
- guaranteed_read_latency_enum: STRING
- guaranteed_write_latency: REAL
- guaranteed_write_latency_enum: STRING
- host_name: STRING
- host_name_enum: STRING
- is_offline: STRING
- is_offline_enum: STRING
- is_virtual: STRING
- is_virtual_enum: STRING
- key: STRING
- key_enum: STRING
- node: STRING
- node_key: STRING
- node_key_enum: STRING

- node_name: STRING
- node_name_enum: STRING
- perf_warehouse: INTEGER
- perf_warehouse_enum: STRING
- serial_number: STRING
- serial_number_enum: STRING
- size_per: REAL
- size_per_enum: STRING
- size_warehouse: INTEGER
- size_warehouse_enum: STRING
- timestamp: STRING
- total_latency: REAL
- total_latency_enum: STRING
- total_ops: REAL
- total_ops_enum: STRING
- total_throughput: REAL
- total_throughput_enum: STRING
- total_transfers: REAL
- total_transfers_enum: STRING
- used_size: REAL
- used_size_enum: STRING
- user_reads: REAL
- user_reads_enum: STRING
- user_read_blocks: REAL
- user_read_blocks_enum: STRING
- user_read_latency: REAL
- user_read_latency_enum: STRING
- user_writes: REAL
- user_writes_enum: STRING
- user_write_blocks: REAL
- user_write_blocks_enum: STRING
- user_write_latency: REAL
- user_write_latency_enum: STRING
- volume_name: STRING
- volume_name_enum: STRING

For events that are generated by situations in the Events attribute group, events are sent by using the ITM_KNU_EVENTS event class. This event class contains the following slots:

- event_about: STRING
- event_about_enum: STRING

- event_condition: STRING
- event_condition_enum: STRING
- event_id: INTEGER
- event_id_enum: STRING
- event_impact_area: STRING
- event_impact_area_enum: STRING
- event_name: STRING
- event_name_enum: STRING
- event_severity: STRING
- event_severity_enum: STRING
- event_source_key: STRING
- event_source_key_enum: STRING
- event_source_name: STRING
- event_source_name_enum: STRING
- event_source_type: STRING
- event_source_type_enum: STRING
- event_state: STRING
- event_state_enum: STRING
- event_time: STRING
- event_type: STRING
- event_type_enum: STRING
- impact_level: STRING
- impact_level_enum: STRING
- node: STRING
- timestamp: STRING

For events that are generated by situations in the Host FCP Targets Deprecated attribute group, events are sent by using the ITM_KNU_HOST_FCP_TARGETS event class. This event class contains the following slots:

- data_link_rate: INTEGER
- data_link_rate_enum: STRING
- host_name: STRING
- host_name_enum: STRING
- node: STRING
- perf_warehouse: INTEGER
- perf_warehouse_enum: STRING
- read_ops: REAL
- read_ops_enum: STRING
- speed: STRING
- speed_enum: STRING

- switch_name: STRING
- switch_name_enum: STRING
- switch_port: INTEGER
- switch_port_enum: STRING
- target_name: STRING
- target_name_enum: STRING
- target_port_name: STRING
- target_port_name_enum: STRING
- target_status: STRING
- target_status_enum: STRING
- timestamp: STRING
- write_ops: REAL
- write_ops_enum: STRING

For events that are generated by situations in the Host Network Interfaces Deprecated attribute group, events are sent by using the ITM_KNU_HOST_NETWORK_INTERFACES event class. This event class contains the following slots:

- administrative_status: STRING
- administrative_status_enum: STRING
- errors_received_per_sec: REAL
- errors_received_per_sec_enum: STRING
- errors_transmitted_per_sec: REAL
- errors_transmitted_per_sec_enum: STRING
- host_name: STRING
- host_name_enum: STRING
- interface_name: STRING
- interface_name_enum: STRING
- ip_address: STRING
- ip_address_enum: STRING
- link_speed: INTEGER
- link_speed_enum: STRING
- multicast_received_per_sec: REAL
- multicast_received_per_sec_enum: STRING
- multicast_transmitted_per_sec: REAL
- multicast_transmitted_per_sec_enum: STRING
- node: STRING
- number_ip_addresses: INTEGER
- number_ip_addresses_enum: STRING
- operational_status: STRING
- operational_status_enum: STRING

- packets_received_per_sec: REAL
- packets_received_per_sec_enum: STRING
- packets_transmitted_per_sec: REAL
- packets_transmitted_per_sec_enum: STRING
- perf_warehouse: INTEGER
- perf_warehouse_enum: STRING
- physical_address: STRING
- physical_address_enum: STRING
- received_kb_per_sec: REAL
- received_kb_per_sec_enum: STRING
- timestamp: STRING
- transmitted_kb_per_sec: REAL
- transmitted_kb_per_sec_enum: STRING

For events that are generated by situations in the Hosts Deprecated attribute group, events are sent by using the ITM_KNU_HOSTS event class. This event class contains the following slots:

- cifs_ops: REAL
- cifs_ops_enum: STRING
- comm_status: STRING
- comm_status_enum: STRING
- composite_status: INTEGER
- composite_status_enum: STRING
- cpu_busy: REAL
- cpu_busy_enum: STRING
- description: STRING
- description_enum: STRING
- disk_data_read: REAL
- disk_data_read_enum: STRING
- disk_data_written: REAL
- disk_data_written_enum: STRING
- fcp_ops: REAL
- fcp_ops_enum: STRING
- fcp_read_data: REAL
- fcp_read_data_enum: STRING
- fcp_read_latency: REAL
- fcp_read_latency_enum: STRING
- fcp_read_ops: REAL
- fcp_read_ops_enum: STRING
- fcp_throughput: REAL
- fcp_throughput_enum: STRING

- fcp_write_data: REAL
- fcp_write_data_enum: STRING
- fcp_write_latency: REAL
- fcp_write_latency_enum: STRING
- fcp_write_ops: REAL
- fcp_write_ops_enum: STRING
- fqdn: STRING
- fqdn_enum: STRING
- host_name: STRING
- host_name_enum: STRING
- host_status: STRING
- host_status_enum: STRING
- host_type: STRING
- host_type_enum: STRING
- ip_address: STRING
- ip_address_enum: STRING
- iscsi_ops: REAL
- iscsi_ops_enum: STRING
- iscsi_read_data: REAL
- iscsi_read_data_enum: STRING
- iscsi_read_latency: REAL
- iscsi_read_latency_enum: STRING
- iscsi_read_ops: REAL
- iscsi_read_ops_enum: STRING
- iscsi_throughput: REAL
- iscsi_throughput_enum: STRING
- iscsi_write_data: REAL
- iscsi_write_data_enum: STRING
- iscsi_write_latency: REAL
- iscsi_write_latency_enum: STRING
- iscsi_write_ops: REAL
- iscsi_write_ops_enum: STRING
- net_data_recv: REAL
- net_data_recv_enum: STRING
- net_data_sent: REAL
- net_data_sent_enum: STRING
- nfs_ops: REAL
- nfs_ops_enum: STRING
- node: STRING

- perf_status: STRING
- perf_status_enum: STRING
- perf_warehouse: INTEGER
- perf_warehouse_enum: STRING
- run_status: STRING
- run_status_enum: STRING
- timestamp: STRING
- total_data_rate: REAL
- total_data_rate_enum: STRING
- total_ops: REAL
- total_ops_enum: STRING

For events that are generated by situations in the LUNs attribute group, events are sent by using the ITM_KNU_LUNS event class. This event class contains the following slots:

- avg_latency: REAL
- avg_latency_enum: STRING
- composite_status: REAL
- composite_status_enum: STRING
- host_name: STRING
- host_name_enum: STRING
- lun_key: STRING
- lun_key_enum: STRING
- lun_path: STRING
- lun_path_enum: STRING
- lun_size: REAL
- lun_size_enum: STRING
- node: STRING
- other_ops: REAL
- other_ops_enum: STRING
- perf_status: STRING
- perf_status_enum: STRING
- perf_warehouse: INTEGER
- perf_warehouse_enum: STRING
- qtree_key: STRING
- qtree_key_enum: STRING
- read_data: REAL
- read_data_enum: STRING
- read_ops: REAL
- read_ops_enum: STRING
- run_status: STRING

- run_status_enum: STRING
- size_warehouse: INTEGER
- size_warehouse_enum: STRING
- storagevm_key: STRING
- storagevm_key_enum: STRING
- timestamp: STRING
- total_ops: REAL
- total_ops_enum: STRING
- volume_key: STRING
- volume_key_enum: STRING
- volume_name: STRING
- volume_name_enum: STRING
- write_data: REAL
- write_data_enum: STRING
- write_ops: REAL
- write_ops_enum: STRING

For events that are generated by situations in the Performance Object Status attribute group, events are sent by using the ITM_KNU_PERFORMANCE_OBJECT_STATUS event class. This event class contains the following slots:

- error_code: INTEGER
- error_code_enum: STRING
- node: STRING
- object_name: STRING
- object_status: INTEGER
- object_status_enum: STRING
- object_type: INTEGER
- object_type_enum: STRING
- query_name: STRING
- timestamp: STRING

For events that are generated by situations in the Qtrees attribute group, events are sent by using the ITM_KNU_QTREES event class. This event class contains the following slots:

- cifs_ops: REAL
- cifs_ops_enum: STRING
- disk_space_limit: REAL
- disk_space_limit_enum: STRING
- files_limit: REAL
- files_limit_enum: STRING
- files_percent_used: REAL
- files_percent_used_enum: STRING
- files_used: REAL

- files_used_enum: STRING
- host_name: STRING
- host_name_enum: STRING
- nfs_ops: REAL
- nfs_ops_enum: STRING
- node: STRING
- perf_status: STRING
- perf_status_enum: STRING
- qtree_key: STRING
- qtree_key_enum: STRING
- qtree_name: STRING
- qtree_name_enum: STRING
- run_status: STRING
- run_status_enum: STRING
- soft_limit: REAL
- soft_limit_enum: STRING
- space_percent_used: REAL
- space_percent_used_enum: STRING
- space_used: REAL
- space_used_enum: STRING
- storagevm_key: STRING
- storagevm_key_enum: STRING
- timestamp: STRING
- total_ops: REAL
- total_ops_enum: STRING
- volume_key: STRING
- volume_key_enum: STRING
- volume_name: STRING
- volume_name_enum: STRING

For events that are generated by situations in the Volumes attribute group, events are sent by using the ITM_KNU_VOLUMES event class. This event class contains the following slots:

- afs_avail: REAL
- afs_avail_enum: STRING
- afs_data: REAL
- afs_data_enum: STRING
- afs_percent_used: REAL
- afs_percent_used_enum: STRING
- afs_total: REAL
- afs_total_enum: STRING

- afs_used: REAL
- afs_used_enum: STRING
- afs_warehouse: INTEGER
- afs_warehouse_enum: STRING
- aggregate_key: STRING
- aggregate_key_enum: STRING
- aggregate_name: STRING
- aggregate_name_enum: STRING
- autogrow_increment_size: REAL
- autogrow_increment_size_enum: STRING
- autosize_enabled: INTEGER
- autosize_enabled_enum: STRING
- avg_latency: REAL
- avg_latency_enum: STRING
- cifs_other_latency: REAL
- cifs_other_latency_enum: STRING
- cifs_other_ops: REAL
- cifs_other_ops_enum: STRING
- cifs_read_latency: REAL
- cifs_read_latency_enum: STRING
- cifs_read_ops: REAL
- cifs_read_ops_enum: STRING
- cifs_write_latency: REAL
- cifs_write_latency_enum: STRING
- cifs_write_ops: REAL
- cifs_write_ops_enum: STRING
- composite_data_rate: REAL
- composite_data_rate_enum: STRING
- composite_latency: REAL
- composite_latency_enum: STRING
- composite_status: REAL
- composite_status_enum: STRING
- host_name: STRING
- host_name_enum: STRING
- iscsi_read_ops: REAL
- iscsi_read_ops_enum: STRING
- is_dedupe_enabled: INTEGER
- is_dedupe_enabled_enum: STRING
- is_snapshot_autodelete_enabled: INTEGER

- is_snapshot_autodelete_enabled_enum: STRING
- key: STRING
- key_enum: STRING
- maximum_size: REAL
- maximum_size_enum: STRING
- max_percent_used: REAL
- max_percent_used_enum: STRING
- nfs_other_latency: REAL
- nfs_other_latency_enum: STRING
- nfs_other_ops: REAL
- nfs_other_ops_enum: STRING
- nfs_read_latency: REAL
- nfs_read_latency_enum: STRING
- nfs_read_ops: REAL
- nfs_read_ops_enum: STRING
- nfs_write_latency: REAL
- nfs_write_latency_enum: STRING
- nfs_write_ops: REAL
- nfs_write_ops_enum: STRING
- node: STRING
- other_latency: REAL
- other_latency_enum: STRING
- other_ops: REAL
- other_ops_enum: STRING
- overwrite_reserve_avail: REAL
- overwrite_reserve_avail_enum: STRING
- overwrite_reserve_percent_used: REAL
- overwrite_reserve_percent_used_enum: STRING
- overwrite_reserve_total: REAL
- overwrite_reserve_total_enum: STRING
- overwrite_reserve_used: REAL
- overwrite_reserve_used_enum: STRING
- overwrite_warehouse: INTEGER
- overwrite_warehouse_enum: STRING
- perf_status: STRING
- perf_status_enum: STRING
- perf_warehouse: INTEGER
- perf_warehouse_enum: STRING
- quota_committed_space: REAL

- quota_committed_space_enum: STRING
- read_data: REAL
- read_data_enum: STRING
- read_latency: REAL
- read_latency_enum: STRING
- read_ops: REAL
- read_ops_enum: STRING
- read_throughput: REAL
- read_throughput_enum: STRING
- run_status: STRING
- run_status_enum: STRING
- size_used: REAL
- size_used_enum: STRING
- size_used_percent: REAL
- size_used_percent_enum: STRING
- size_warehouse: INTEGER
- size_warehouse_enum: STRING
- snapshot_reserve_avail: REAL
- snapshot_reserve_avail_enum: STRING
- snapshot_reserve_percent_used: REAL
- snapshot_reserve_percent_used_enum: STRING
- snapshot_reserve_total: REAL
- snapshot_reserve_total_enum: STRING
- snapshot_reserve_used: REAL
- snapshot_reserve_used_enum: STRING
- snapshot_warehouse: INTEGER
- snapshot_warehouse_enum: STRING
- timestamp: STRING
- total_latency: REAL
- total_latency_enum: STRING
- total_ops: REAL
- total_ops_enum: STRING
- total_throughput: REAL
- total_throughput_enum: STRING
- volume_name: STRING
- volume_name_enum: STRING
- volume_size: REAL
- volume_size_enum: STRING
- volume_state: STRING

- volume_state_enum: STRING
- volume_style: STRING
- volume_style_enum: STRING
- volume_type: STRING
- volume_type_enum: STRING
- vserver_key: STRING
- vserver_key_enum: STRING
- write_data: REAL
- write_data_enum: STRING
- write_latency: REAL
- write_latency_enum: STRING
- write_ops: REAL
- write_ops_enum: STRING
- write_throughput: REAL
- write_throughput_enum: STRING

For events that are generated by situations in the Vserver attribute group, events are sent by using the ITM_KNU_VSERVER event class. This event class contains the following slots:

- cifs_authentication_style: STRING
- cifs_authentication_style_enum: STRING
- cifs_domain: STRING
- cifs_domain_enum: STRING
- cifs_latency: REAL
- cifs_latency_enum: STRING
- cifs_ops: REAL
- cifs_ops_enum: STRING
- cluster_key: STRING
- cluster_key_enum: STRING
- cluster_name: STRING
- cluster_name_enum: STRING
- fcp_node_name: STRING
- fcp_node_name_enum: STRING
- iscsi_node_name: STRING
- iscsi_node_name_enum: STRING
- iscsi_read_ops: REAL
- iscsi_read_ops_enum: STRING
- iscsi_write_ops: REAL
- iscsi_write_ops_enum: STRING
- is_cifs_enabled: INTEGER
- is_cifs_enabled_enum: STRING

- is_dns_enabled: INTEGER
- is_dns_enabled_enum: STRING
- is_export_policy_enabled: INTEGER
- is_export_policy_enabled_enum: STRING
- is_fcp_enabled: INTEGER
- is_fcp_enabled_enum: STRING
- is_iscsi_enabled: INTEGER
- is_iscsi_enabled_enum: STRING
- is_kerberos_enabled: INTEGER
- is_kerberos_enabled_enum: STRING
- is_ldap_client_enabled: INTEGER
- is_ldap_client_enabled_enum: STRING
- is_nfs_enabled: INTEGER
- is_nfs_enabled_enum: STRING
- is_nis_enabled: INTEGER
- is_nis_enabled_enum: STRING
- is_repository: INTEGER
- is_repository_enum: STRING
- key: STRING
- key_enum: STRING
- maximum_volumes: REAL
- maximum_volumes_enum: STRING
- net_receive_data: REAL
- net_receive_data_enum: STRING
- net_receive_errors: REAL
- net_receive_errors_enum: STRING
- net_receive_packet: REAL
- net_receive_packet_enum: STRING
- net_sent_data: REAL
- net_sent_data_enum: STRING
- net_sent_errors: REAL
- net_sent_errors_enum: STRING
- net_sent_packet: REAL
- net_sent_packet_enum: STRING
- net_total_packets: REAL
- net_total_packets_enum: STRING
- net_total_throughput: REAL
- net_total_throughput_enum: STRING
- nis_domain_name: STRING

- nis_domain_name_enum: STRING
- node: STRING
- operational_state: STRING
- operational_state_enum: STRING
- root_volume_name: STRING
- root_volume_name_enum: STRING
- timestamp: STRING
- volume_bytes_avail: REAL
- volume_bytes_avail_enum: STRING
- volume_bytes_total: REAL
- volume_bytes_total_enum: STRING
- volume_bytes_used: REAL
- volume_bytes_used_enum: STRING
- vserver_name: STRING
- vserver_name_enum: STRING
- vserver_state: STRING
- vserver_state_enum: STRING
- vserver_status: STRING
- vserver_status_enum: STRING
- vserver_type: STRING
- vserver_type_enum: STRING

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