IBM Tivoli Monitoring for Virtual Environments Agent for Linux Kernel-based Virtual Machines
7.2 Fix Pack 6

Reference

Note

Before using this information and the product it supports, read the information in “Notices” on page 83.

This edition applies to version 7.2.0.6 of IBM Tivoli Monitoring for Virtual Environments Agent for Linux Kernel-based Virtual Machines (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.

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.

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.

Predefined workspaces

The Linux Kernel-based Virtual Machines agent provides predefined workspaces, which are organized by navigator item.

- Linux Kernel-based Virtual Machines navigator item
  - Linux Kernel-based Virtual Machines workspace
  - Agent Status workspace
  - Host CPU Comparison workspace
  - Host Memory Allocation Comparison workspace
  - Host Memory Use Comparison workspace
- Cluster navigator item
  - Cluster workspace
- Data Center navigator item
  - Data Center workspace
- Host navigator item

  - Host workspace
  - Host Detail workspace
  - Host Overview workspace
  - Host Relations workspace
- Storage Pool navigator item
  - Storage Pool workspace
  - Storage Pool Detail workspace
  - Storage Pool Overview workspace
- Virtual Machine navigator item
  - Virtual Machine workspace
  - Virtual Machine Detail workspace
  - Virtual Machine Overview 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.

Linux Kernel-based Virtual Machines navigator item

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

Linux Kernel-based Virtual Machines workspace
These workspaces show the most heavily used hosts and the least heavily used hosts based on various resources. The hosts are compared in absolute measurements and in percentage measurements.

This workspace contains the following views:

Host CPU Comparison
This workspace shows the most heavily used hosts and the least heavily used hosts in terms of CPU use.

Host Memory Allocation Comparison
This workspace shows the most heavily used hosts and the least heavily used hosts in terms of memory allocation.

Host Memory Use Comparison
This workspace shows the most heavily used hosts and the least heavily used hosts in terms of memory use.

Agent Status
This workspace shows the status for each attribute group of the agent.

Agent Status workspace
This workspace shows the status for each attribute group of the agent.

This workspace contains the following view:

Agent Status
This view shows the status for each attribute group of the agent.

Host CPU Comparison workspace
This workspace shows the most heavily used hosts and the least heavily used hosts in terms of CPU use. The hosts are compared in absolute measurements and in percentage measurements. The absolute measurements use CPU GHz to enable comparison between different machine types. All the CPU measurements can be seen by expanding the table view that holds all the detailed data.

This workspace contains the following views:

Top VM CPU GHz By Host
This view shows the most heavily used hosts based on the absolute measurement of CPU GHz consumed by the virtual machines on each host.

Top Unaccounted CPU GHz By Host
This view shows the least heavily used hosts based on the absolute measurement of CPU GHz unaccounted for by the virtual machines consumption on each host.

Top VM Consumed CPU Percent By Host
This view shows the most heavily used hosts based on the percentage of the CPU consumed by the virtual machines from the number of CPUs on each host.

Top Unaccounted CPU Percent By Host
This view shows the least heavily used hosts based on the percentage of the CPU that remains unaccounted for after subtracting the CPU consumed by the virtual machines on each host.

Hosts
This view shows all the CPU measurements for each host. The link at the beginning of each row takes you to the Host Detail workspace for the selected host.

Host Memory Allocation Comparison workspace
This workspace shows the most heavily used hosts and the least heavily used hosts in terms of memory allocation. The hosts are compared in absolute measurements and in percentage measurements. The absolute measurements use GB of memory. All the memory measurements can be seen by expanding the table view that holds all the detailed data.

This workspace contains the following views:

Top Allocated Memory By Host
This view shows the most heavily used hosts based on the absolute measurement of GB of memory allocated to the virtual machines on each host.

Top Unallocated Memory By Host
This view shows the least heavily used hosts based on the absolute measurement of GB of memory allocated to the virtual machines on each host.

Top Allocated Memory Percent By Host
This view shows the most heavily used hosts based on the percentage of the GB of memory allocated to the virtual machines from the GB of memory on each host.

Top Unallocated Memory Percent By Host
This view shows the least heavily used hosts based on the percentage of the memory that remains unallocated after subtracting the memory allocated to the virtual machines on each host.

Hosts
This view shows all the memory measurements for each host. The link at the beginning of each row takes you to the Host Detail workspace for the selected host.

Host Memory Use Comparison workspace
This workspace shows the most heavily used hosts and the least heavily used hosts in terms of memory use. The hosts are compared in absolute measurements and in percentage measurements. The absolute measurements use GB of memory. All the memory measurements can be seen by expanding the table view that holds all the detailed data.

This workspace contains the following views:

Top Used Memory By Host
This view shows the most heavily used hosts based on the absolute measurement of GB of memory used by the virtual machines on each host.

Top Unused Memory By Host
This view shows the least heavily used hosts based on the absolute measurement of GB of memory used by the virtual machines on each host.

Top Used Memory Percent By Host
This view shows the most heavily used hosts based on the percentage of the GB of memory used by the virtual machines from the GB of memory on each host.

Top Unused Memory Percent By Host
This view shows the least heavily used hosts based on the percentage of the memory that remains unused after subtracting the memory used by the virtual machines on each host.

Hosts
This view shows all the memory measurements for each host. The link at the beginning of each row takes you to the Host Detail workspace for the selected host.

Cluster navigator item

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

Cluster workspace
This workspace shows an overview of the clusters that are monitored by an agent instance.

This workspace contains the following view:

Cluster
This view shows detailed metrics of the cluster.

Data Center navigator item

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

Data Center workspace
This workspace shows an overview of the data centers that are monitored by an agent instance.

This workspace contains the following views:

Data Center
This view shows detailed metrics of the data centers that are monitored by an agent instance.

Data Center Storage
This view shows detailed metrics of the data center storage that is monitored by an agent instance.

Host navigator item

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

Host workspace
These workspaces show all the hosts that are being monitored by an agent instance, and detailed information about individual hosts and the data center resources related to a host.

This workspace contains the following views:

Host Overview
This workspace shows all the hosts that are being monitored by an agent instance.

Host Detail
This workspace shows detailed information about one host, including trend graphs of CPU and memory use, as well as defining characteristics, and CPU and memory metrics.

Host Relations
This workspace shows the data center resources that are related to one host.

Host Detail workspace
This view shows a trend graph of CPU capacity allocated and consumed by the virtual machines on the host.

This workspace contains the following views:

CPU Allocated and Consumed
This view shows a trend graph of CPU capacity allocated and consumed by the virtual machines on the host.

Memory Allocated and Consumed
This view shows a trend graph of memory allocated-to and used-by the virtual machines on the host.

Host Definition
This view shows the defining characteristics of the host.

Host CPU
This view shows the CPU metrics of the host.

Host Memory
This view shows the memory metrics of the host.

Host Networks
This view shows the network metrics of the host.

Host Overview workspace
This workspace shows all the hosts that are being monitored by an agent instance. Each view shows a different set of metrics about every host. Every row has a link that takes you to the Host Detail workspace for the selected host.

This workspace contains the following views:

Host CPU Metrics
This view shows the CPU metrics of every host that is being monitored by an agent instance.

Host Memory Metrics
This view shows the memory metrics of every host that is being monitored by an agent instance.

Host Definitions
This view shows the defining characteristics of every host that is being monitored by an agent instance.

Host Relations workspace
This workspace shows the data center resources that are related to one host.

This workspace contains the following views:

Virtual Machines
This view shows the virtual machines on the host.

Storage Pools
This view shows the storage pools on the host.

Storage Pool navigator item

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

Storage Pool workspace
These workspaces show an overview of the most heavily used and least heavily used storage pools monitored by an agent instance, as well as detailed information about individual storage pools.

This workspace contains the following views:

Storage Pool Overview
This workspace shows an overview of the most heavily used and least heavily used storage pools monitored by an agent instance.

Storage Pool Detail
This workspace shows detailed information about one storage pool, including trend graphs of percent storage used and GB of storage available, as well as defining characteristics of the storage pool.

Storage Pool Detail workspace
This workspace shows detailed information about one storage pool, including trend graphs of percent storage used and GB of storage available, as well as defining characteristics of the storage pool.

This workspace contains the following views:

Percent Used
This view shows a trend graph of percent used of the storage pool.

Storage Available (GB)
This view shows a trend graph of the GB of storage available on the storage pool.

Storage Pool Detail
This view shows the detail metrics of the storage pool.

Storage Pool Overview workspace
This workspace shows an overview of the most heavily used and least heavily used storage pools monitored by an agent instance.

This workspace contains the following views:

Top Storage Percent Used
This view shows the most heavily used storage pools based on percent used.

Top Storage Available (GB)
This view shows the least heavily used storage pools based on GB of storage available.

Storage Pools
This view shows the detail metrics of every storage pool monitored by an agent instance.

Virtual Machine navigator item

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

Virtual Machine workspace
These workspaces show an overview of the virtual machines monitored by an agent instance, including the virtual machines consuming the most CPU and the most memory, as well as detailed information about individual virtual machines.

This workspace contains the following views:

Virtual Machine Overview
This workspace shows an overview of the virtual machines monitored by an agent instance, including the virtual machines consuming the most CPU and the most memory.

Virtual Machine Detail
This workspace shows detailed information about one virtual machine, including trend graphs of CPU and memory use.

Virtual Machine Detail workspace
This workspace shows detailed information about one virtual machine, including trend graphs of CPU and memory use.

This workspace contains the following views:

CPUs Consumed
This view shows a trend graph of the number of CPUs consumed by the virtual machine.

CPU Percent
This view shows a trend graph of the number of CPUs consumed as a percent of the number of CPUs allocated to the virtual machine.

Memory Used
This view shows a trend graph of the GB of memory used by the virtual machine.

Memory Percent
This view shows a trend graph of amount of memory used as a percent of the memory allocated to the virtual machine.

Virtual Machine Detail
This view shows the detail metrics of the virtual machine.

Virtual Machine Networks
This view shows detailed metrics of the virtual machine networks.

Virtual Machine Disk Perf
This view shows detailed metrics of the virtual machine disk performance.

Virtual Machine Overview workspace
This workspace shows an overview of the virtual machines monitored by an agent instance, including the virtual machines consuming the most CPU and the most memory.

This workspace contains the following views:

Top VM CPUs Consumed
This view shows the virtual machines that are consuming the most CPU.

Top VM Memory Used (GB)
This view shows the virtual machines that are consuming the most memory.

Virtual Machines
This view shows the detail metrics of every virtual machine monitored by an agent instance.

Chapter 2. Attributes

Attributes are the application properties that are being measured and reported by the IBM Tivoli Monitoring for Virtual Environments Agent for Linux Kernel-based Virtual Machines.

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 Linux Kernel-based Virtual Machines 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 Linux Kernel-based Virtual Machines agent contains the following attribute groups. The table name depends on the maximum table name limits of the target database being used for the Tivoli Data Warehouse. If the maximum name is 30 characters, any warehouse table name longer than 30 characters is shortened to 30 characters.

- Attribute group name: Clusters
  - Table name: KV1CLUSTER
  - Warehouse table name: KV1_CLUSTERS or KV1CLUSTER
- Attribute group name: Data Center
  - Table name: KV1DCENTER
  - Warehouse table name: KV1_DATA_CENTER or KV1DCENTER
- Attribute group name: Data Center Storage
  - Table name: KV1DCSTGAG
  - Warehouse table name: KV1_DATA_CENTER_STORAGE or KV1DCSTGAG
- Attribute group name: Disks
  - Table name: KV1DISKS

  - Warehouse table name: KV1_DISKS
- Attribute group name: Disks Snapshot
  - Table name: KV1DSNAP
  - Warehouse table name: KV1_DISKS_SNAPSHOT or KV1DSNAP
- Attribute group name: Host CPU
  - Table name: KV1HOSTCG
  - Warehouse table name: KV1_HOST_CPU or KV1HOSTCG
- Attribute group name: Host Memory
  - Table name: KV1HOSTMG
  - Warehouse table name: KV1_HOST_MEMORY or KV1HOSTMG
- Attribute group name: Host Networks
  - Table name: KV1HOSTNWG
  - Warehouse table name: KV1_HOST_NETWORKS or KV1HOSTNWG
- Attribute group name: Hosts
  - Table name: KV1HOSTAG
  - Warehouse table name: KV1_HOSTS or KV1HOSTAG
- Attribute group name: Performance Object Status
  - Table name: KV1POBJST
  - Warehouse table name: KV1_PERFORMANCE_OBJECT_STATUS or KV1POBJST
- Attribute group name: Scheduler Parameters
  - Table name: KV1SCHPAG
  - Warehouse table name: KV1_SCHEDULER_PARAMETERS or KV1SCHPAG
- Attribute group name: Storage Pools
  - Table name: KV1STGPLAG
  - Warehouse table name: KV1_STORAGE_POOLS or KV1STGPLAG
- Attribute group name: Virtual Machine Disk Perf
  - Table name: KV1VMDPAG
  - Warehouse table name: KV1_VIRTUAL_MACHINE_DISK_PERF or KV1VMDPAG
- Attribute group name: Virtual Machine Networks
  - Table name: KV1VMNWG
  - Warehouse table name: KV1_VIRTUAL_MACHINE_NETWORKS or KV1VMNWG
- Attribute group name: Virtual Machines
  - Table name: KV1VMACHAG
  - Warehouse table name: KV1_VIRTUAL_MACHINES or KV1VMACHAG

Attributes in each attribute group

Attributes in each Linux Kernel-based Virtual Machines agent 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, 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.

Clusters attribute group

The Clusters attribute group contains information about Clusters, including clusters name, containing data center, and CPU Family. This attribute group is eligible for use with Tivoli Data Warehouse.

This attribute group contains the following attributes:

Cluster Name attribute
The name of the Cluster.The source of this attribute is RHEVM. 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).

Compatibility Major version attribute
The major compatibility version of the cluster.The source of this attribute is RHEVM. 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: COMPATIBILITY_MAJOR_VERSION or COM_MJVR (warehouse name), Compatibility Major version (caption), Compatibility_Major_Version (attribute name), and COM_MJVR (column name).

Compatibility Minor version attribute
The minor compatibility version of the cluster.The source of this attribute is RHEVM. 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: COMPATIBILITY_MINOR_VERSION or COM_MIVR (warehouse name), Compatibility Minor version (caption), Compatibility_Minor_Version (attribute name), and COM_MIVR (column name).

CPU Family attribute
The name of the CPU family.The source of this attribute is RHEVM. 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: CPU_FAMILY or CPU_FMLY (warehouse name), CPU Family (caption), CPU_Family (attribute name), and CPU_FMLY (column name).

Data Center attribute
The name of the data center.The source of this attribute is RHEVM. 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: DATA_CENTER or DC_NAME (warehouse name), Data Center (caption), Data_Center (attribute name), and DC_NAME (column name).

Enable Transparent Hugepages attribute
The enabled status of Transparent Hugepages.The source of this attribute is RHEVM. This attribute is a key attribute. The type is string with enumerated values. The following values are defined: Unavailable (unavailable), true (true), false (false). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: ENABLE_TRANSPARENT_HUGEPAGES or EN_HPG (warehouse name), Enable Transparent Hugepages (caption), Enable_Transparent_Hugepages (attribute name), and EN_HPG (column name).

Error Handling attribute
The virtual machine handling when a host within a cluster becomes non-operational.The source of this attribute is RHEVM. 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: ERROR_HANDLING or ERR_HNDL (warehouse name), Error Handling (caption), Error_Handling (attribute name), and ERR_HNDL (column name).

Gluster Service attribute
The option to show the Red Hat Storage services for this cluster.The source of this attribute is RHEVM. This attribute is a key attribute. The type is string with enumerated values. The following values are defined: Unavailable (unavailable), true (true), false (false). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: GLUSTER_SERVICE or GLST_HNDL (warehouse name), Gluster Service (caption), Gluster_Service (attribute name), and GLST_HNDL (column name).

Host CPU High Limit attribute
The CPU limits that control the highest CPU usage percentage before it is considered overloaded.The source of this attribute is RHEVM. 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: HOST_CPU_HIGH_LIMIT or CPU_HLMT (warehouse name), Host CPU High Limit (caption), Host_CPU_High_Limit (attribute name), and CPU_HLMT (column name).

Host CPU Low Limit attribute
The CPU limits that control the lowest CPU usage percentage before it is considered under-utilized.The source of this attribute is RHEVM. 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: HOST_CPU_LOW_LIMIT or CPU_LLMT (warehouse name), Host CPU Low Limit (caption), Host_CPU_Low_Limit (attribute name), and CPU_LLMT (column name).

Memory Overcommit percent attribute
The percentage of host memory that is allowed before no more virtual machines start on a host.The source of this attribute is RHEVM. 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: MEMORY_OVERCOMMIT_PERCENT or MEM_OVPCT (warehouse name), Memory Overcommit percent (caption), Memory_Overcommit_Percent (attribute name), and MEM_OVPCT (column name).

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

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

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

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

Virt Service attribute
The option to show the virtualization services for this cluster.The source of this attribute is RHEVM. This attribute is a key attribute. The type is string with enumerated values. The following values are defined: Unavailable (unavailable), true (true), false (false). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: VIRT_SERVICE or VIRT_SERV (warehouse name), Virt Service (caption), Virt_Service (attribute name), and VIRT_SERV (column name).

VM Scheduling Mode attribute
The VM scheduling mode for hosts in the cluster.The source of this attribute is RHEVM. 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: VM_SCHEDULING_MODE or SCHDL_MD (warehouse name), VM Scheduling Mode (caption), VM_Scheduling_Mode (attribute name), and SCHDL_MD (column name).

Wait period attribute
The time (in seconds) for which the host is overloaded before the load is moved to another host.The source of this attribute is RHEVM. 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: WAIT_PERIOD or WAIT_PRD (warehouse name), Wait period (caption), Wait_Period (attribute name), and WAIT_PRD (column name).

Data Center attribute group

The data center attribute group contains information about the data center, including the data center name, Storage type, Storage format, and Compatibility Major or Minor version. This attribute group is eligible for use with Tivoli Data Warehouse.

This attribute group contains the following attributes:

Compatibility Major version attribute
The major compatibility version of the data center.The source of this attribute is RHEVM. 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: COMPATIBILITY_MAJOR_VERSION or COM_MJVR (warehouse name), Compatibility Major version (caption), Compatibility_Major_Version (attribute name), and COM_MJVR (column name).

Compatibility Minor version attribute
The minor compatibility version of the data center.The source of this attribute is RHEVM. 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: COMPATIBILITY_MINOR_VERSION or COM_MIVR (warehouse name), Compatibility Minor version (caption), Compatibility_Minor_Version (attribute name), and COM_MIVR (column name).

Data Center attribute
The name of the data center.The source of this attribute is RHEVM. 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: DATA_CENTER or DC_NAME (warehouse name), Data Center (caption), Data_Center (attribute name), and DC_NAME (column name).

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

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

Status attribute
The status of the data center.The source of this attribute is RHEVM. This attribute is a key attribute. The type is string with enumerated values. The following values are defined: Unavailable (unavailable), uninitialized (uninitialized), up (up), maintenance (maintenance), not operational (not_operational), problematic (problematic), contend (contend). Any value that does not have a definition here is displayed in the User Interface.

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

Storage Format attribute
The storage format version of the data center.The source of this attribute is RHEVM. 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: STORAGE_FORMAT or STG_FRMT (warehouse name), Storage Format (caption), Storage_Format (attribute name), and STG_FRMT (column name).

Storage Type attribute
The storage type of the data center.The source of this attribute is RHEVM. This attribute is a key attribute. The type is string with enumerated values. The following values are defined: nfs (nfs), localfs (localfs), iscsi (iscsi), fcp (fcp), 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: STORAGE_TYPE or STG_TYPE (warehouse name), Storage Type (caption), Storage_Type (attribute name), and STG_TYPE (column name).

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

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

Data Center Storage attribute group

The data center Storage Group attribute group contains information about the storage type, domain, and bytes available. This attribute group is eligible for use with Tivoli Data Warehouse.

This attribute group contains the following attributes:

Data Center attribute
The name of the data center.The source of this attribute is RHEVM. 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: DATA_CENTER or DC_NAME (warehouse name), Data Center (caption), Data_Center (attribute name), and DC_NAME (column name).

Master Domain attribute
Indicates whether this domain is the master storage domain of the data center.The source of this attribute is RHEVM. This attribute is a key attribute. The type is string with enumerated values. The following values are defined: true (true), false (false), 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: MASTER_DOMAIN or MST_DMN (warehouse name), Master Domain (caption), Master_Domain (attribute name), and MST_DMN (column name).

Name attribute
The name of the storage domain.The source of this attribute is RHEVM. 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: NAME or STG_NAME (warehouse name), Name (caption), Name (attribute name), and STG_NAME (column name).

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

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

Space Available (GB) attribute
The space that is available in GB.The source of this attribute is RHEVM. The type is real number (64-bit gauge) with two 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_AVAILABLE_GB or SPACE_AVL (warehouse name), Space Available (GB) (caption), Space_Available_GB (attribute name), and SPACE_AVL (column name).

Space Committed (GB) attribute
The space that is committed in GB.The source of this attribute is RHEVM. The type is real number (64-bit gauge) with two 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_COMMITTED_GB or SPACE_COM (warehouse name), Space Committed (GB) (caption), Space_Committed_GB (attribute name), and SPACE_COM (column name).

Space Used (GB) attribute
The space that is used in GB.The source of this attribute is RHEVM. The type is real number (64-bit gauge) with two 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_USED_GB or SPACE_USD (warehouse name), Space Used (GB) (caption), Space_Used_GB (attribute name), and SPACE_USD (column name).

Status attribute
The status of the storage domain.The source of this attribute is RHEVM. This attribute is a key attribute. The type is string with enumerated values. The following values are defined: active (active), inactive (inactive), locked (locked), mixed (mixed), unattached (unattached), maintenance (maintenance), unknown (unknown), 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: STATUS (warehouse name), Status (caption), Status (attribute name), and STATUS (column name).

Storage Format attribute
The storage format version of the storage domain.The source of this attribute is RHEVM. 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: STORAGE_FORMAT or STG_FRMT (warehouse name), Storage Format (caption), Storage_Format (attribute name), and STG_FRMT (column name).

Storage Type attribute
The storage type of the storage domain.The source of this attribute is RHEVM. This attribute is a key attribute. The type is string with enumerated values. The following values are defined: nfs (nfs), localfs (localfs), iscsi (iscsi), fcp (fcp), 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: STORAGE_TYPE or STG_TYPE (warehouse name), Storage Type (caption), Storage_Type (attribute name), and STG_TYPE (column name).

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

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 storage domain.The source of this attribute is RHEVM. This attribute is a key attribute. The type is string with enumerated values. The following values are defined: data (data), iso (iso), export (export), 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: TYPE (warehouse name), Type (caption), Type (attribute name), and TYPE (column name).

Disks attribute group

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

This attribute group contains the following attributes:

Actual Size (GB) attribute
The actual size (in GB) of the disk.For Hypervisor, a value of N/A means that the data is not applicable.The source of this attribute is RHEVM. The type is real number (64-bit gauge) with two 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: ACTUAL_SIZE or ACT_SIZE (warehouse name), Actual Size (GB) (caption), Actual_Size (attribute name), and ACT_SIZE (column name).

Alias attribute
The alias of the disk.For Hypervisor, a value of N/A means that the data is not applicable.The source of this attribute is RHEVM. 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: ALIAS or DISK_ALIAS (warehouse name), Alias (caption), Alias (attribute name), and DISK_ALIAS (column name).

Bootable attribute
A Boolean value that indicates whether the disk is bootable or not.For Hypervisor, a value of N/A means that the data is not applicable.The source of this attribute is RHEVM. 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: BOOTABLE (warehouse name), Bootable (caption), Bootable (attribute name), and BOOTABLE (column name).

Data Read Rate (Kb) attribute
The data transfer rate in KB per second when the data is read from the disk.The source of this attribute is RHEVM. The type is real number (64-bit gauge) with two 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: DATA_READ_RATE or DISKS_R_RT (warehouse name), Data Read Rate (Kb) (caption), Data_Read_Rate (attribute name), and DISKS_R_RT (column name).

Data Write Rate (Kb) attribute
The data transfer rate in KB per second when data is written to the disk.The source of this attribute is RHEVM. The type is real number (64-bit gauge) with two 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: DATA_WRITE_RATE or DISKS_W_RT (warehouse name), Data Write Rate (Kb) (caption), Data_Write_Rate (attribute name), and DISKS_W_RT (column name).

Disk Flush Latency (sec) attribute

The disk flush latency in seconds.For Hypervisor, a value of N/A means that the data is not applicable.The source of this attribute is RHEVM. The type is real number (64-bit gauge) with two 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_FLUSH_LATENCY or DISKS_F_LT (warehouse name), Disk Flush Latency (sec) (caption), Disk_Flush_Latency (attribute name), and DISKS_F_LT (column name).

Disk Name attribute

The name of the disk.For Hypervisor, a value of N/A means that the data is not applicable.The source of this attribute is RHEVM. 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 Read Latency (sec) attribute

The disk read latency in seconds.For Hypervisor, a value of N/A means that the data is not applicable.The source of this attribute is RHEVM. The type is real number (64-bit gauge) with two 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_READ_LATENCY or DISKS_R_LT (warehouse name), Disk Read Latency (sec) (caption), Disk_Read_Latency (attribute name), and DISKS_R_LT (column name).

Disk Write Latency (sec) attribute

The disk write latency in seconds.For Hypervisor, a value of N/A means that the data is not applicable.The source of this attribute is RHEVM. The type is real number (64-bit gauge) with two 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_WRITE_LATENCY or DISKS_W_LT (warehouse name), Disk Write Latency (sec) (caption), Disk_Write_Latency (attribute name), and DISKS_W_LT (column name).

Image ID attribute

The image ID of the disk.For Hypervisor, a value of N/A means that the data is not applicable.The source of this attribute is RHEVM. 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: IMAGE_ID or IMG_ID (warehouse name), Image ID (caption), Image_ID (attribute name), and IMG_ID (column name).

Interface attribute

The interface of the disk.For Hypervisor, a value of N/A means that the data is not applicable.The source of this attribute is RHEVM. 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: INTERFACE or DISK_INTER (warehouse name), Interface (caption), Interface (attribute name), and DISK_INTER (column name).

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

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

Propagate Errors attribute
A Boolean value that indicates whether the disk errors are propagated to the guest operating system.For Hypervisor, a value of N/A means that the data is not applicable.The source of this attribute is RHEVM. 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: PROPAGATE_ERRORS or PROP_ERR (warehouse name), Propagate Errors (caption), Propagate_Errors (attribute name), and PROP_ERR (column name).

Provisioned Size (GB) attribute
The provisioned size (in GB) of the disk.For Hypervisor, a value of N/A means that the data is not applicable.The source of this attribute is RHEVM. The type is real number (64-bit gauge) with two 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: PROVISIONED_SIZE or PRO_SIZE (warehouse name), Provisioned Size (GB) (caption), Provisioned_Size (attribute name), and PRO_SIZE (column name).

Shareable attribute
A Boolean value that indicates whether the disk can be shared.For Hypervisor, a value of N/A means that the data is not applicable.The source of this attribute is RHEVM. 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: SHAREABLE (warehouse name), Shareable (caption), Shareable (attribute name), and SHAREABLE (column name).

Size (GB) attribute
The size (in GB) of the disk.For Hypervisor, a value of N/A means that the data is not applicable.The source of this attribute is RHEVM. The type is real number (64-bit gauge) with two 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 (warehouse name), Size (GB) (caption), Size (attribute name), and SIZE (column name).

State attribute
The state of the disk.For Hypervisor, a value of N/A means that the data is not applicable.The source of this attribute is RHEVM. 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: STATE (warehouse name), State (caption), State (attribute name), and STATE (column name).

Storage Pool UUID attribute
The unique identifier of the storage pool.For Hypervisor, a value of N/A means that the data is not applicable.The source of this attribute is RHEVM. 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: STORAGE_POOL_UUID or STGPL_UUID (warehouse name), Storage Pool UUID (caption), Storage_Pool_UUID (attribute name), and STGPL_UUID (column name).

Storage Type attribute
The storage type of the disk.For Hypervisor, a value of N/A means that the data is not applicable.The source of this attribute is RHEVM. 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: STORAGE_TYPE or STG_TYPE (warehouse name), Storage Type (caption), Storage_Type (attribute name), and STG_TYPE (column name).

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

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

Wipe After Delete attribute
A Boolean value that indicates whether data from the disk is permanently wiped or can be restored.For Hypervisor, a value of N/A means that the data is not applicable.The source of this attribute is RHEVM. 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: WIPE_AFTER_DELETE or WIFTR_DEL (warehouse name), Wipe After Delete (caption), Wipe_After_Delete (attribute name), and WIFTR_DEL (column name).

Disks Snapshot attribute group

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

This attribute group contains the following attributes:

Actual Size (GB) attribute
The actual size (in GB) of the disk snapshot.For Hypervisor, a value of N/A means that the data is not applicable.The source of this attribute is RHEVM. The type is real number (64-bit gauge) with two 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: ACTUAL_SIZE or ACT_SIZE (warehouse name), Actual Size (GB) (caption), Actual_Size (attribute name), and ACT_SIZE (column name).

Alias attribute
The alias for the disk snapshot.For Hypervisor, a value of N/A means that the data is not applicable.The source of this attribute is RHEVM. 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: ALIAS or SNAP_ALIAS (warehouse name), Alias (caption), Alias (attribute name), and SNAP_ALIAS (column name).

Bootable attribute
A Boolean value that indicates whether the disk snapshot is bootable.For Hypervisor, a value of N/A means that the data is not applicable.The source of this attribute is RHEVM. 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: BOOTABLE (warehouse name), Bootable (caption), Bootable (attribute name), and BOOTABLE (column name).

Format attribute
The format of the disk snapshot.For Hypervisor, a value of N/A means that the data is not applicable.The source of this attribute is RHEVM. 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: FORMAT (warehouse name), Format (caption), Format (attribute name), and FORMAT (column name).

Interface attribute
The interface of the disk snapshot.For Hypervisor, a value of N/A means that the data is not applicable.The source of this attribute is RHEVM. 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: INTERFACE or SNAP_INTER (warehouse name), Interface (caption), Interface (attribute name), and SNAP_INTER (column name).

Name attribute
The name of the disk snapshot.For Hypervisor, a value of N/A means that the data is not applicable.The source of this attribute is RHEVM. 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: NAME or SNAP_NAME (warehouse name), Name (caption), Name (attribute name), and SNAP_NAME (column name).

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

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

Propagate Errors attribute
A Boolean value that indicates whether the disk snapshot errors are propagated to the guest operating system.For Hypervisor, a value of N/A means that the data is not applicable.The source of this attribute is RHEVM. 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: PROPAGATE_ERRORS or PROP_ERR (warehouse name), Propagate Errors (caption), Propagate_Errors (attribute name), and PROP_ERR (column name).

Provisioned Size (GB) attribute
The provisioned size (in GB) of the disk snapshot.For Hypervisor, a value of N/A means that the data is not applicable.The source of this attribute is RHEVM. The type is real number (64-bit gauge) with two 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: PROVISIONED_SIZE or PRO_SIZE (warehouse name), Provisioned Size (GB) (caption), Provisioned_Size (attribute name), and PRO_SIZE (column name).

Shareable attribute
A Boolean value that indicates whether the disk snapshot can be shared.For Hypervisor, a value of N/A means that the data is not applicable.The source of this attribute is RHEVM. 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: SHAREABLE (warehouse name), Shareable (caption), Shareable (attribute name), and SHAREABLE (column name).

Size (GB) attribute
The size (in GB) of the disk snapshot.For Hypervisor, a value of N/A means that the data is not applicable.The source of this attribute is RHEVM. The type is real number (64-bit gauge) with two 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 or SNAP_SIZE (warehouse name), Size (GB) (caption), Size (attribute name), and SNAP_SIZE (column name).

Snapshot ID attribute
The ID of the disk snapshot.For Hypervisor, a value of N/A means that the data is not applicable.The source of this attribute is RHEVM. 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: SNAPSHOT_ID or SNAP_ID (warehouse name), Snapshot ID (caption), Snapshot_ID (attribute name), and SNAP_ID (column name).

Sparse attribute
A Boolean value that indicates whether the physical storage for the disk is preallocated.For Hypervisor, a value of N/A means that the data is not applicable.The source of this attribute is RHEVM. 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: SPARSE (warehouse name), Sparse (caption), Sparse (attribute name), and SPARSE (column name).

State attribute
The state of the disk snapshot.For Hypervisor, a value of N/A means that the data is not applicable.The source of this attribute is RHEVM. 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: STATE or SNAP_STATE (warehouse name), State (caption), State (attribute name), and SNAP_STATE (column name).

Storage Pool UUID attribute
The unique identifier of the storage pool.For Hypervisor, a value of N/A means that the data is not applicable.The source of this attribute is RHEVM. 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: STORAGE_POOL_UUID or STGPL_UUID (warehouse name), Storage Pool UUID (caption), Storage_Pool_UUID (attribute name), and STGPL_UUID (column name).

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

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

Wipe After Delete attribute
A Boolean value that indicates whether data on the disk snapshot is permanently wiped or can be restored.For Hypervisor, a value of N/A means that the data is not applicable.The source of this attribute is RHEVM. 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: WIPE_AFTER_DELETE or WIFTR_DEL (warehouse name), Wipe After Delete (caption), Wipe_After_Delete (attribute name), and WIFTR_DEL (column name).

Host CPU attribute group

The Host CPU attribute group contains information about host CPU capacity and virtual machine CPU consumption. This attribute group is eligible for use with Tivoli Data Warehouse.

This attribute group contains the following attributes:

CPU GHz Consumed Per VM Deprecated attribute
The number of CPU GHz consumed by the average virtual machine.This attribute is deprecated.The source of this attribute is RHEVM and KVM Hypervisor. The type is real number (64-bit gauge) with two 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_GHZ_CONSUMED_PER_VM or GHZ_PER_VM (warehouse name), CPU GHz Consumed Per VM Deprecated (caption), CPU_GHz_Consumed_Per_VM (attribute name), and GHZ_PER_VM (column name).

CPU GHz Unaccounted For attribute
The number of CPU GHz unaccounted for; includes system overhead and idle capacity.The source of this attribute is RHEVM and KVM Hypervisor. The type is real number (64-bit gauge) with two 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_GHZ_UNACCOUNTED_FOR or GHZ_UNACCT (warehouse name), CPU GHz Unaccounted For (caption), CPU_GHz_Unaccounted_For (attribute name), and GHZ_UNACCT (column name).

CPU Name attribute
The name of CPU Family.The source of this attribute is RHEVM. 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: CPU_NAME (warehouse name), CPU Name (caption), CPU_NAME (attribute name), and CPU_NAME (column name).

CPU Percent Consumed by VMs attribute
The very approximate percent consumed based on CPU capacity for the host and the consumption by the VMs.Does not take into account hypervisor overhead or non-virtual machine processes.The source of this attribute is RHEVM and KVM Hypervisor. The type is real number (64-bit gauge) with two 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_PERCENT_CONSUMED or CNSMD_P (warehouse name), CPU Percent Consumed by VMs (caption), CPU_Percent_Consumed (attribute name), and CNSMD_P (column name).

CPU Percent Unaccounted attribute
The very approximate percent available based on CPU capacity for the host. Does not take into account hypervisor overhead or non-virtual machine processes.The source of this attribute is RHEVM and KVM Hypervisor. The type is real number (64-bit gauge) with two 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_PERCENT_UNACCOUNTED or UNACCT_P (warehouse name), CPU Percent Unaccounted (caption), CPU_Percent_Unaccounted (attribute name), and UNACCT_P (column name).

CPUs Consumed Per VM Deprecated attribute
The number of CPUs consumed by the average virtual machine.This attribute is deprecated.The source of this attribute is RHEVM and KVM Hypervisor. The type is real number (64-bit gauge) with two 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: CPUS_CONSUMED_PER_VM or CPU_PER_VM (warehouse name), CPUs Consumed Per VM Deprecated (caption), CPUs_Consumed_Per_VM (attribute name), and CPU_PER_VM (column name).

CPUs Unaccounted For attribute
The number of CPU unaccounted for; includes system overhead and idle capacity.The source of this attribute is RHEVM and KVM Hypervisor. The type is real number (64-bit gauge) with two 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: CPUS_UNACCOUNTED_FOR or CPU_UNACCT (warehouse name), CPUs Unaccounted For (caption), CPUs_Unaccounted_For (attribute name), and CPU_UNACCT (column name).

Host Name attribute

The name of the host.The source of this attribute is RHEVM and KVM Hypervisor. 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).

Node attribute

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

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

Number of Active VMs attribute

The number of active virtual machines.The source of this attribute is RHEVM and KVM Hypervisor. 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: NUMBER_OF_ACTIVE_VMS or ACTV_COUNT (warehouse name), Number of Active VMs (caption), Number_Of_Active_VMs (attribute name), and ACTV_COUNT (column name).

Number of CPU GHz attribute

The number of CPU GHz in the host.The source of this attribute is RHEVM and KVM Hypervisor. The type is real number (64-bit gauge) with two 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: NUMBER_OF_CPU_GHZ or GHZ_COUNT (warehouse name), Number of CPU GHz (caption), Number_Of_CPU_GHz (attribute name), and GHZ_COUNT (column name).

Number of CPUs attribute

The number of CPUs in the host.The source of this attribute is RHEVM and KVM Hypervisor. 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: NUMBER_OF_CPUS or CPU_COUNT (warehouse name), Number of CPUs (caption), Number_of_CPUs (attribute name), and CPU_COUNT (column name).

Over Under Allocated CPU attribute

The number of CPUs allocated to active virtual machines over or under the amount available of CPUs.Negative values indicate over allocation.The source of this attribute is RHEVM and KVM Hypervisor. 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: OVER_UNDER_ALLOCATED_CPU or OV_UN_CPU (warehouse name), Over Under Allocated CPU (caption), Over_Under_Allocated_CPU (attribute name), and OV_UN_CPU (column name).

Over Under Allocated CPU GHz attribute

The amount of CPU GHz allocated to active virtual machines over or under the amount available of CPU GHz.Negative values indicate over allocation.The source of this attribute is RHEVM and KVM Hypervisor. The type is real number (64-bit gauge) with two 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: OVER_UNDER_ALLOCATED_CPU_GHZ or OV_UN_GHZ (warehouse name), Over Under Allocated CPU GHz (caption), Over_Under_Allocated_CPU_GHz (attribute name), and OV_UN_GHZ (column name).

Percent CPU Allocated to VMs attribute
The percent of CPU that is allocated to virtual machines.The source of this attribute is RHEVM and KVM Hypervisor. The type is real number (64-bit gauge) with two 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_CPU_ALLOCATED or C_ALLO_P (warehouse name), Percent CPU Allocated to VMs (caption), Percent_CPU_Allocated (attribute name), and C_ALLO_P (column name).

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

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

Virtual CPUs Allocated attribute
The number of CPUs allocated to active Virtual Machines.The source of this attribute is RHEVM and KVM Hypervisor. 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: VIRTUAL_CPUS_ALLOCATED or CPU_ALLO (warehouse name), Virtual CPUs Allocated (caption), Virtual_CPUs_Allocated (attribute name), and CPU_ALLO (column name).

VM CPU Fit Estimate attribute
The very approximate number of virtual machines that fit in the unaccounted CPU capacity.The source of this attribute is RHEVM and KVM Hypervisor. The type is real number (64-bit gauge) with two 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: VM_CPU_FIT_ESTIMATE or CPU_FIT (warehouse name), VM CPU Fit Estimate (caption), VM_CPU_Fit_Estimate (attribute name), and CPU_FIT (column name).

VM CPU GHz Consumed attribute
The number of CPU GHz consumed by the Virtual Machines.The source of this attribute is RHEVM and KVM Hypervisor. The type is real number (64-bit gauge) with two 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: VM_CPU_GHZ_CONSUMED or GHZ_CNSMD (warehouse name), VM CPU GHz Consumed (caption), VM_CPU_GHz_Consumed (attribute name), and GHZ_CNSMD (column name).

VM CPUs Consumed attribute
The number of CPUs consumed by the Virtual Machines.The source of this attribute is RHEVM and KVM Hypervisor. The type is real number (64-bit gauge) with two 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: VM_CPUS_CONSUMED or CPU_CNSMD (warehouse name), VM CPUs Consumed (caption), VM_CPUs_Consumed (attribute name), and CPU_CNSMD (column name).

Host Memory attribute group

The Host Memory attribute group contains information about host memory capacity and virtual machine memory consumption. This attribute group is eligible for use with Tivoli Data Warehouse.

This attribute group contains the following attributes:

Host Name attribute

The name of the host.The source of this attribute is RHEVM and KVM Hypervisor. 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).

Memory Allocated Per VM Deprecated attribute

The memory allocated to an average virtual machine.This attribute is deprecated. The type is real number (64-bit gauge) with two 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_ALLOCATED_PER_VM or ALC_PER_VM (warehouse name), Memory Allocated Per VM Deprecated (caption), Memory_Allocated_Per_VM (attribute name), and ALC_PER_VM (column name).

Memory Buffers (GB) attribute

I/O buffers in GB.The source of this attribute is RHEVM. The type is real number (64-bit gauge) with two 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_BUFFERS or MEM_BUFF (warehouse name), Memory Buffers (GB) (caption), Memory_Buffers (attribute name), and MEM_BUFF (column name).

Memory cached (GB) attribute

OS caches in GB.The source of this attribute is RHEVM. The type is real number (64-bit gauge) with two 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_CACHED or MEM_CACHE (warehouse name), Memory cached (GB) (caption), Memory_Cached (attribute name), and MEM_CACHE (column name).

Memory Size attribute

The size of main memory in the host in GB.The source of this attribute is RHEVM and KVM Hypervisor. The type is real number (64-bit gauge) with two 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 MEMRY_SIZE (warehouse name), Memory Size (caption), Memory_Size (attribute name), and MEMRY_SIZE (column name).

Memory Used Per VM Deprecated attribute

The memory used by the average virtual machine.This attribute is deprecated. The type is real number (64-bit gauge) with two 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_USED_PER_VM or USD_PER_VM (warehouse name), Memory Used Per VM Deprecated (caption), Memory_Used_Per_VM (attribute name), and USD_PER_VM (column name).

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

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

Number of Active VMs attribute
The number of active virtual machines.The source of this attribute is RHEVM and KVM Hypervisor. 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: NUMBER_OF_ACTIVE_VMS or ACTV_COUNT (warehouse name), Number of Active VMs (caption), Number_of_Active_VMs (attribute name), and ACTV_COUNT (column name).

Over Under Allocated attribute
The amount of memory allocated to virtual machines over or under the amount available in GB; negative values indicate over allocation.The source of this attribute is RHEVM and KVM Hypervisor. The type is real number (64-bit gauge) with two 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: OVER_UNDER_ALLOCATED or OV_UN_ALLO (warehouse name), Over Under Allocated (caption), Over_Under_Allocated (attribute name), and OV_UN_ALLO (column name).

Over Under Used attribute
The amount of memory used by the virtual machines over or under the amount available in GB; negative values indicate over use.The source of this attribute is RHEVM and KVM Hypervisor. The type is real number (64-bit gauge) with two 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: OVER_UNDER_USED or OV_UN_USED (warehouse name), Over Under Used (caption), Over_Under_Used (attribute name), and OV_UN_USED (column name).

Percent Memory Allocated attribute
The percent of memory that is allocated to virtual machines.The source of this attribute is RHEVM and KVM Hypervisor. The type is real number (64-bit gauge) with two 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_MEMORY_ALLOCATED or M_ALLO_P (warehouse name), Percent Memory Allocated (caption), Percent_Memory_Allocated (attribute name), and M_ALLO_P (column name).

Percent Memory Unallocated attribute
The percent of memory that is unallocated to virtual machines.The source of this attribute is RHEVM and KVM Hypervisor. The type is real number (64-bit gauge) with two 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_MEMORY_UNALLOCATED or M_UNALLO_P (warehouse name), Percent Memory Unallocated (caption), Percent_Memory_Unallocated (attribute name), and M_UNALLO_P (column name).

Percent Memory Unused attribute
The percent of memory that is unused by virtual machines.The source of this attribute is RHEVM and KVM Hypervisor. The type is real number (64-bit gauge) with two 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_MEMORY_UNUSED or M_UNUSED_P (warehouse name), Percent Memory Unused (caption), Percent_Memory_Unused (attribute name), and M_UNUSED_P (column name).

Percent Memory Used attribute
The percent of memory that is used by virtual machines.The source of this attribute is RHEVM and KVM Hypervisor. The type is real number (64-bit gauge) with two 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_MEMORY_USED or M_USED_P (warehouse name), Percent Memory Used (caption), Percent_Memory_Used (attribute name), and M_USED_P (column name).

Swap Cached (GB) attribute
Cached swap memory in GB on the host.The source of this attribute is RHEVM. The type is real number (64-bit gauge) with two 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: SWAP_CACHED or SWP_CACHE (warehouse name), Swap Cached (GB) (caption), Swap_Cached (attribute name), and SWP_CACHE (column name).

Swap Free (GB) attribute
Free swap memory in GB on the host.The source of this attribute is RHEVM. The type is real number (64-bit gauge) with two 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: SWAP_FREE or SWP_FREE (warehouse name), Swap Free (GB) (caption), Swap_Free (attribute name), and SWP_FREE (column name).

Swap Total (GB) attribute
Total swap memory in GB on the host.The source of this attribute is RHEVM. The type is real number (64-bit gauge) with two 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: SWAP_TOTAL or SWP_TOTAL (warehouse name), Swap Total (GB) (caption), Swap_Total (attribute name), and SWP_TOTAL (column name).

Swap Used (GB) attribute
Used swap memory in GB on the host.The source of this attribute is RHEVM. The type is real number (64-bit gauge) with two 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: SWAP_USED or SWP_USED (warehouse name), Swap Used (GB) (caption), Swap_Used (attribute name), and SWP_USED (column name).

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

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

VM Memory Allocated attribute
The sum of the amounts of memory promised to each virtual machine in GB.The source of this attribute is RHEVM and KVM Hypervisor. The type is real number (64-bit gauge) with two 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: VM_MEMORY_ALLOCATED or MEMRY_ALLO (warehouse name), VM Memory Allocated (caption), VM_Memory_Allocated (attribute name), and MEMRY_ALLO (column name).

VM Memory Allocated Fit Estimate attribute
The very approximate number of virtual machines that fit in the unallocated memory, based on the average memory allocated per virtual machine.The source of this attribute is RHEVM and KVM Hypervisor. The type is real number (64-bit gauge) with two 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: VM_MEMORY_ALLOCATED_FIT_ESTIMATE or M_ALLO_FIT (warehouse name), VM Memory Allocated Fit Estimate (caption), VM_Memory_Allocated_Fit_Estimate (attribute name), and M_ALLO_FIT (column name).

VM Memory Used attribute
The sum of the amounts of memory used by each virtual machine in GB.The source of this attribute is RHEVM and KVM Hypervisor. The type is real number (64-bit gauge) with two 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: VM_MEMORY_USED or MEMRY_USED (warehouse name), VM Memory Used (caption), VM_Memory_Used (attribute name), and MEMRY_USED (column name).

VM Memory Used Fit Estimate attribute
The very approximate number of virtual machines that fit in the unused memory, based on the average memory used per virtual machine.The source of this attribute is RHEVM and KVM Hypervisor. The type is real number (64-bit gauge) with two 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: VM_MEMORY_USED_FIT_ESTIMATE or M_USED_FIT (warehouse name), VM Memory Used Fit Estimate (caption), VM_Memory_Used_Fit_Estimate (attribute name), and M_USED_FIT (column name).

Host Networks attribute group

The Host Networks attribute group contains information about host network capacity and usage. This attribute group is eligible for use with Tivoli Data Warehouse.

This attribute group contains the following attributes:

Boot Protocol attribute
The boot protocol of the network interface.The source of this attribute is RHEVM. This attribute is a key attribute. The type is string with enumerated values. The following values are defined: dhcp (dhcp), static (static). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: BOOT_PROTOCOL or BOOT_PRTCL (warehouse name), Boot Protocol (caption), Boot_Protocol (attribute name), and BOOT_PRTCL (column name).

Bridged Status attribute
The bridged status of the network.The source of this attribute is RHEVM. 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: BRIDGED_STATUS or BRG_STATUS (warehouse name), Bridged Status (caption), Bridged_Status (attribute name), and BRG_STATUS (column name).

Data Receive Rate (MBps) attribute
The rate (in MB per second) at which data is received.The source of this attribute is RHEVM. The type is real number (64-bit gauge) with two 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: DATA_RECEIVE_RATE or DT_RX_RT (warehouse name), Data Receive Rate (MBps) (caption), Data_Receive_Rate (attribute name), and DT_RX_RT (column name).

Data Transmit Rate (MBps) attribute

The rate (in MB per second) at which the data is transmitted.The source of this attribute is RHEVM. The type is real number (64-bit gauge) with two 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: DATA_TRANSMIT_RATE or DT_TX_RT (warehouse name), Data Transmit Rate (MBps) (caption), Data_Transmit_Rate (attribute name), and DT_TX_RT (column name).

Errors Receiving Data attribute

The total number of errors that occurred while receiving data.The source of this attribute is RHEVM. 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: ERRORS_RECEIVING_DATA or ERRS_RX_DT (warehouse name), Errors Receiving Data (caption), Errors_Receiving_Data (attribute name), and ERRS_RX_DT (column name).

Errors Transmitting Data attribute

The total number of errors that occurred while transmitting data.The source of this attribute is RHEVM. 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: ERRORS_TRANSMITTING_DATA or ERRS_TX_DT (warehouse name), Errors Transmitting Data (caption), Errors_Transmitting_Data (attribute name), and ERRS_TX_DT (column name).

Host Name attribute

The name of the host.The source of this attribute is RHEVM. 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).

IP Address attribute

The IP address of the NIC.The source of this attribute is RHEVM. 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: IP_ADDRESS or IP_ADDR (warehouse name), IP Address (caption), IP_Address (attribute name), and IP_ADDR (column name).

IP Gateway attribute

The IP gateway of the NIC.The source of this attribute is RHEVM. 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: IP_GATEWAY (warehouse name), IP Gateway (caption), IP_Gateway (attribute name), and IP_GATEWAY (column name).

IP Netmask attribute

The IP netmask of the NIC.The source of this attribute is RHEVM. 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: IP_NETMASK (warehouse name), IP Netmask (caption), IP_Netmask (attribute name), and IP_NETMASK (column name).

Mac Address attribute
The MAC address of the network interface.The source of this attribute is RHEVM. 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: MAC_ADDRESS or MAC_ADDR (warehouse name), Mac Address (caption), Mac_Address (attribute name), and MAC_ADDR (column name).

Mtu attribute
The maximum transmission unit for the interface.The source of this attribute is RHEVM. The type is real number (64-bit gauge) with two 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: MTU (warehouse name), Mtu (caption), Mtu (attribute name), and MTU (column name).

Network attribute
The reference of the attached network.The source of this attribute is RHEVM. 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: NETWORK or HOST_NW (warehouse name), Network (caption), Network (attribute name), and HOST_NW (column name).

NIC Name attribute
The name of the host network interface.The source of this attribute is RHEVM. 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: NIC_NAME or HOST_NIC (warehouse name), NIC Name (caption), NIC_Name (attribute name), and HOST_NIC (column name).

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

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

Speed (Mbps) attribute
The speed of the NIC (in mega bits per second).The source of this attribute is RHEVM. The type is real number (64-bit gauge) with two 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: SPEED (warehouse name), Speed (Mbps) (caption), Speed (attribute name), and SPEED (column name).

Status attribute
The link status of the network.The source of this attribute is RHEVM. This attribute is a key attribute. The type is string with enumerated values. The following values are defined: down (down), up (up). Any value that does not have a definition here is displayed in the User Interface.

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

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

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

VLan Id attribute
The VLAN that represents this interface.The source of this attribute is RHEVM. 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: VLAN_ID (warehouse name), VLan Id (caption), VLan_Id (attribute name), and VLAN_ID (column name).

Hosts attribute group

The host attribute group contains information about the host: name and address, hypervisor URI and protocol, number and configuration of CPUs, size of memory, and number of virtual machines. This attribute group is eligible for use with Tivoli Data Warehouse.

This attribute group contains the following attributes:

Cluster Name attribute

The Cluster that includes this host.The source of this attribute is RHEVM and KVM Hypervisor. 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).

Compatibility Major version attribute

The major compatibility version of the host.The source of this attribute is RHEVM and KVM Hypervisor. 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: COMPATIBILITY_MAJOR_VERSION or COM_MJVR (warehouse name), Compatibility Major version (caption), Compatibility_Major_Version (attribute name), and COM_MJVR (column name).

Compatibility Minor version attribute

The minor compatibility version of the host.The source of this attribute is RHEVM and KVM Hypervisor. 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: COMPATIBILITY_MINOR_VERSION or COM_MIVR (warehouse name), Compatibility Minor version (caption), Compatibility_Minor_Version (attribute name), and COM_MIVR (column name).

Cores Per Socket attribute

The number of cores per socket in this host.The source of this attribute is RHEVM and KVM Hypervisor. 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: CORES_PER_SOCKET or CORES_PER (warehouse name), Cores Per Socket (caption), Cores_Per_Socket (attribute name), and CORES_PER (column name).

CPU Frequency (GHz) attribute

The frequency of the CPUs in the host in GHz.The source of this attribute is RHEVM and KVM Hypervisor. The type is real number (64-bit gauge) with two 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_FREQUENCY or CPU_FREQ (warehouse name), CPU Frequency (GHz) (caption), CPU_Frequency (attribute name), and CPU_FREQ (column name).

CPU Model attribute

The model of the CPUs in the host.The source of this attribute is RHEVM and KVM Hypervisor. 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: CPU_MODEL (warehouse name), CPU Model (caption), CPU_Model (attribute name), and CPU_MODEL (column name).

Hardware Family attribute
The name of the family to which the hardware belongs.The source of this attribute is RHEVM. 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: HARDWARE_FAMILY or HRD_FMLY (warehouse name), Hardware Family (caption), Hardware_Family (attribute name), and HRD_FMLY (column name).

Host Name attribute
The name of the host.The source of this attribute is RHEVM and KVM Hypervisor. 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).

Hypervisor URI attribute
The URI used for the connection to the hypervisor.The source of this attribute is KVM Hypervisor. 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: HYPERVISOR_URI or HYPER_URI (warehouse name), Hypervisor URI (caption), Hypervisor_URI (attribute name), and HYPER_URI (column name).

IP Address attribute
The IP address used to create the Hypervisor URI.The source of this attribute is RHEVM and KVM Hypervisor. 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_ADDR (warehouse name), IP Address (caption), IP_Address (attribute name), and IP_ADDR (column name).

Libvirt Compatibility version attribute
The libvirt compatibility level of the host.The source of this attribute is RHEVM and KVM Hypervisor. 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: LIBVIRT_COMPATIBILITY_VERSION or LIBVT_VER (warehouse name), Libvirt Compatibility version (caption), Libvirt_Compatibility_Version (attribute name), and LIBVT_VER (column name).

Live Snapshot Support Deprecated attribute
As underlying SDK has upgraded to latest version, it doesn't expose any API call to get the data for the attribute, hence this attribute is deprecated since agent version 72FP5.A Boolean value that indicates whether the data source on RHEVM supports live snapshot.For Hypervisor, the value is displayed as False. 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: LIVE_SNAPSHOT_SUPPORT or LIVE_SNAP (warehouse name), Live Snapshot Support Deprecated (caption), Live_Snapshot_Support (attribute name), and LIVE_SNAP (column name).

Max Scheduling Memory (GB) attribute
The maximum memory (in GB) that is allocated for resource scheduling.For Hypervisor, the value is displayed as zero.The source of this attribute is RHEVM and KVM Hypervisor. The type is real number (64-bit gauge) with two 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_SCHEDULING_MEMORY or MAX_SCH_MM (warehouse name), Max Scheduling Memory (GB) (caption), Max_Scheduling_Memory (attribute name), and MAX_SCH_MM (column name).

Memory Size (GB) attribute

The size of main memory in the host in GB.The source of this attribute is RHEVM and KVM Hypervisor. The type is real number (64-bit gauge) with two 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 MEMRY_SIZE (warehouse name), Memory Size (GB) (caption), Memory_Size (attribute name), and MEMRY_SIZE (column name).

Node attribute

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

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

Number of Active VMs attribute

The number of active virtual machines in the host.The source of this attribute is RHEVM and KVM Hypervisor. 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: NUMBER_OF_ACTIVE_VMS or ACTV_COUNT (warehouse name), Number of Active VMs (caption), Number_Of_Active_VMs (attribute name), and ACTV_COUNT (column name).

Number of CPU GHz attribute

The number of CPU GHz in the host.The source of this attribute is RHEVM and KVM Hypervisor. The type is real number (64-bit gauge) with two 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: NUMBER_OF_CPU_GHZ or GHZ_COUNT (warehouse name), Number of CPU GHz (caption), Number_Of_CPU_GHz (attribute name), and GHZ_COUNT (column name).

Number of CPUs attribute

The number of CPUs in the host.The source of this attribute is RHEVM and KVM Hypervisor. 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: NUMBER_OF_CPUS or CPU_COUNT (warehouse name), Number of CPUs (caption), Number_of_CPUs (attribute name), and CPU_COUNT (column name).

Number of Migrating VMs attribute

The number of virtual machines that are migrating in the host.The source of this attribute is RHEVM. 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: NUMBER_OF_MIGRATING_VMS or MIGR_COUNT (warehouse name), Number of Migrating VMs (caption), Number_of_Migrating_VMs (attribute name), and MIGR_COUNT (column name).

Number of Nodes attribute

The number of NUMA cells in the host; 1 means uniform memory access.The source of this attribute is KVM Hypervisor. 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: NUMBER_OF_NODES or NODE_COUNT (warehouse name), Number of Nodes (caption), Number_Of_Nodes (attribute name), and NODE_COUNT (column name).

Number of VMs attribute
The number of defined virtual machines in the host.The source of this attribute is RHEVM and KVM Hypervisor. 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: NUMBER_OF_VMS or VM_COUNT (warehouse name), Number of VMs (caption), Number_Of_VMs (attribute name), and VM_COUNT (column name).

OS Full Version attribute
The full version of the operating system.The source of this attribute is RHEVM. 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: OS_FULL_VERSION or OS_VER (warehouse name), OS Full Version (caption), OS_Full_Version (attribute name), and OS_VER (column name).

OS Type attribute
The type of the operating system that runs on the host.The source of this attribute is RHEVM. 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: OS_TYPE (warehouse name), OS Type (caption), OS_Type (attribute name), and OS_TYPE (column name).

Protocol attribute
The communications protocol used by the connection to the hypervisor.The source of this attribute is RHEVM and KVM Hypervisor. 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: PROTOCOL (warehouse name), Protocol (caption), Protocol (attribute name), and PROTOCOL (column name).

SCSI Initiator attribute
The SCSI initiator for the host.The source of this attribute is RHEVM and KVM Hypervisor. 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: SCSI_INITIATOR or SCSI_VER (warehouse name), SCSI Initiator (caption), SCSI_Initiator (attribute name), and SCSI_VER (column name).

Serial Number attribute
The serial number of the hardware of the host system.The source of this attribute is RHEVM. 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 SRL_NUM (warehouse name), Serial Number (caption), Serial_Number (attribute name), and SRL_NUM (column name).

Sockets Per Node attribute
The number of CPU sockets per node in the host.The source of this attribute is RHEVM and KVM Hypervisor. 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: SOCKETS_PER_NODE or SKTS_PER (warehouse name), Sockets Per Node (caption), Sockets_Per_Node (attribute name), and SKTS_PER (column name).

Status attribute
The Host Status String.The source of this attribute is RHEVM and KVM Hypervisor. The type is string with enumerated values. The following values are defined: Initializing (initializing), Down (down), Maintenance (maintenance), Not operational (not_operational), Error (error), Installing (installing), Install failed (install_failed), Non responsive (non_responsive), Pending approval (pending_approval), Preparing for maintenance (preparing_for_maintenance), Connecting (connecting), Unassigned (unassigned), Reboot (reboot), Up (up). Any value that does not have a definition here is displayed in the User Interface.

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

Storage Manager attribute
The storage pool manager of the host.The source of this attribute is RHEVM and KVM Hypervisor. 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: STORAGE_MANAGER or ISTG_MGR (warehouse name), Storage Manager (caption), Storage_Manager (attribute name), and ISTG_MGR (column name).

System Manufacturer attribute
The name of the system manufacturer of the hardware of the host system.The source of this attribute is RHEVM. 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: MANUFACTURER or SYS_MNFR (warehouse name), System Manufacturer (caption), Manufacturer (attribute name), and SYS_MNFR (column name).

Threads Per Core attribute
The number of threads per core in the host.The source of this attribute is RHEVM and KVM Hypervisor. 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: THREADS_PER_CORE or THRDS_PER (warehouse name), Threads Per Core (caption), Threads_Per_Core (attribute name), and THRDS_PER (column name).

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

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 host.The source of this attribute is RHEVM and KVM Hypervisor. 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: TYPE (warehouse name), Type (caption), Type (attribute name), and TYPE (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:

Average Collection Duration attribute
The average duration of all data collections of this group in seconds. The type is real number (32-bit counter) with two decimal places of precision with enumerated values. The following values are defined: NO DATA (-100). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: AVERAGE_COLLECTION_DURATION or COLAVGD (warehouse name), Average Collection Duration (caption), Average_Collection_Duration (attribute name), and COLAVGD (column name).

Cache Hit Percent attribute
The percentage of external data requests for this group that were satisfied from the cache. The type is real number (32-bit counter) with two decimal places of precision.

The following names are defined for this attribute: CACHE_HIT_PERCENT or CACHPCT (warehouse name), Cache Hit Percent (caption), Cache_Hit_Percent (attribute name), and CACHPCT (column name).

Cache Hits attribute
The number of times an external data request for this group was satisfied from the cache. The type is integer (32-bit counter).

The following names are defined for this attribute: CACHE_HITS or CACHEHT (warehouse name), Cache Hits (caption), Cache_Hits (attribute name), and CACHEHT (column name).

Cache Misses attribute
The number of times an external data request for this group was not available in the cache. The type is integer (32-bit counter).

The following names are defined for this attribute: CACHE_MISSES or CACHEMS (warehouse name), Cache Misses (caption), Cache_Misses (attribute name), and CACHEMS (column name).

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).

Intervals Skipped attribute

The number of times a background data collection for this group was skipped because the previous collection was still running when the next one was due to start. The type is integer (32-bit counter).

The following names are defined for this attribute: INTERVALS_SKIPPED or INTSKIP (warehouse name), Intervals Skipped (caption), Intervals_Skipped (attribute name), and INTSKIP (column name).

Last Collection Duration attribute

The duration of the most recently completed data collection of this group in seconds. The type is real number (32-bit counter) with two decimal places of precision.

The following names are defined for this attribute: LAST_COLLECTION_DURATION or COLDURA (warehouse name), Last Collection Duration (caption), Last_Collection_Duration (attribute name), and COLDURA (column name).

Last Collection Finished attribute

The most recent time a data collection of this group finished. The type is timestamp with enumerated values. The following values are defined: NOT COLLECTED (0691231190000000), NOT COLLECTED (0000000000000001). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: LAST_COLLECTION_FINISHED or COLFINI (warehouse name), Last Collection Finished (caption), Last_Collection_Finished (attribute name), and COLFINI (column name).

Last Collection Start attribute

The most recent time a data collection of this group started. The type is timestamp with enumerated values. The following values are defined: NOT COLLECTED (0691231190000000), NOT COLLECTED (0000000000000001). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: LAST_COLLECTION_START or COLSTRT (warehouse name), Last Collection Start (caption), Last_Collection_Start (attribute name), and COLSTRT (column name).

Node attribute

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

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

Number of Collections attribute

The number of data collections for this group since the agent started. The type is integer (32-bit counter).

The following names are defined for this attribute: NUMBER_OF_COLLECTIONS or NUMCOLL (warehouse name), Number of Collections (caption), Number_of_Collections (attribute name), and NUMCOLL (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).

Refresh Interval attribute
The interval at which this group is refreshed in seconds. The type is integer (32-bit counter).

The following names are defined for this attribute: REFRESH_INTERVAL or REFRINT (warehouse name), Refresh Interval (caption), Refresh_Interval (attribute name), and REFRINT (column name).

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

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

Scheduler Parameters attribute group

The scheduler parameters attribute group contains the scheduler information for a virtual machine, including host name, virtual machine name, scheduler parameter name, scheduler parameter value, and scheduler parameter type. This attribute group is eligible for use with Tivoli Data Warehouse.

This attribute group contains the following attributes:

Host Name attribute
The name of the host.The source of this attribute is KVM Hypervisor. 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).

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

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

Scheduler Parameter Name attribute
The name of the scheduler parameter.The source of this attribute is KVM Hypervisor. 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: SCHEDULER_PARAMETER_NAME or SCHP_NAME (warehouse name), Scheduler Parameter Name (caption), Scheduler_Parameter_Name (attribute name), and SCHP_NAME (column name).

Scheduler Parameter Type attribute
The original type of the value of the scheduler parameter, before conversion to a string, for example, integer, string, Boolean.The source of this attribute is KVM Hypervisor. 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: SCHEDULER_PARAMETER_TYPE or SCHP_TYPE (warehouse name), Scheduler Parameter Type (caption), Scheduler_Parameter_Type (attribute name), and SCHP_TYPE (column name).

Scheduler Parameter Value attribute
The value of the scheduler parameter as a string.The source of this attribute is KVM Hypervisor. 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: SCHEDULER_PARAMETER_VALUE or SCHP_VALUE (warehouse name), Scheduler Parameter Value (caption), Scheduler_Parameter_Value (attribute name), and SCHP_VALUE (column name).

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

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

Virtual Machine Name attribute
The name of the virtual machine.The source of this attribute is KVM Hypervisor. 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: VIRTUAL_MACHINE_NAME or VM_NAME (warehouse name), Virtual Machine Name (caption), Virtual_Machine_Name (attribute name), and VM_NAME (column name).

Storage Pools attribute group

The storage pool attribute group contains information about storage pools, including storage pool name, containing host name, UUID, state, type, capacity, used, available, and percent used. This attribute group is eligible for use with Tivoli Data Warehouse.

This attribute group contains the following attributes:

Datacenter Name attribute
The name of associated data center.The source of this attribute is RHEVM. 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: DATACENTER_NAME or DC_NAME (warehouse name), Datacenter Name (caption), Datacenter_Name (attribute name), and DC_NAME (column name).

Host Name attribute
The name of the host.The source of this attribute is KVM Hypervisor. 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).

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

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

Percent Used (%) attribute
The amount of storage used from the storage pool as a percent of the total capacity.The source of this attribute is RHEVM and KVM Hypervisor. The type is real number (64-bit gauge) with two 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).

Storage Pool Available (GB) attribute
The amount of storage available in the storage pool in GB.The source of this attribute is RHEVM and KVM Hypervisor. The type is real number (64-bit gauge) with two 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: STORAGE_POOL_AVAILABLE or STG_AVAIL (warehouse name), Storage Pool Available (GB) (caption), Storage_Pool_Available (attribute name), and STG_AVAIL (column name).

Storage Pool Capacity (GB) attribute
The storage capacity of the storage pool in GB.The source of this attribute is RHEVM and KVM Hypervisor. The type is real number (64-bit gauge) with two 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: STORAGE_POOL_CAPACITY or STG_CAPCTY (warehouse name), Storage Pool Capacity (GB) (caption), Storage_Pool_Capacity (attribute name), and STG_CAPCTY (column name).

Storage Pool Name attribute
The name of the storage pool.The source of this attribute is RHEVM and KVM Hypervisor. 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: STORAGE_POOL_NAME or STGPL_NAME (warehouse name), Storage Pool Name (caption), Storage_Pool_Name (attribute name), and STGPL_NAME (column name).

Storage Pool State attribute
The run state of the storage pool.The source of this attribute is KVM Hypervisor. The type is string with enumerated values. The following values are defined: Unavailable (unavailable), Initializing (VIR_STORAGE_POOL_BUILDING), Degraded (VIR_STORAGE_POOL_DEGRADED), Inactive (VIR_STORAGE_POOL_INACTIVE), Running (VIR_STORAGE_POOL_RUNNING). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: STORAGE_POOL_STATE or STGPL_STAT (warehouse name), Storage Pool State (caption), Storage_Pool_State (attribute name), and STGPL_STAT (column name).

Storage Pool Type attribute
The type of the storage pool, which is one of 'dir', 'fs', 'netfs', 'disk', 'iscsi', or 'logical'.The source of this attribute is RHEVM and KVM Hypervisor. 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: STORAGE_POOL_TYPE or STGPL_TYPE (warehouse name), Storage Pool Type (caption), Storage_Pool_Type (attribute name), and STGPL_TYPE (column name).

Storage Pool Used (GB) attribute
The amount of storage used from the storage pool in GB.The source of this attribute is RHEVM and KVM Hypervisor. The type is real number (64-bit gauge) with two 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: STORAGE_POOL_USED or STG_USED (warehouse name), Storage Pool Used (GB) (caption), Storage_Pool_Used (attribute name), and STG_USED (column name).

Storage Pool UUID attribute
The UUID of the storage pool.The source of this attribute is RHEVM and KVM Hypervisor. 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: STORAGE_POOL_UUID or STGPL_UUID (warehouse name), Storage Pool UUID (caption), Storage_Pool_UUID (attribute name), and STGPL_UUID (column name).

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

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

Virtual Machine Disk Perf attribute group

The Virtual Machine Disks Performance attribute group contains information about VM disk performance. This attribute group is eligible for use with Tivoli Data Warehouse.

This attribute group contains the following attributes:

Data Read Rate (MBps) attribute
The data transfer rate in MB per second when the data is read from the disk.The source of this attribute is RHEVM. The type is real number (64-bit gauge) with two 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: DATA_READ_RATE or DISK_RD_RT (warehouse name), Data Read Rate (MBps) (caption), Data_Read_Rate (attribute name), and DISK_RD_RT (column name).

Data Write Rate (MBps) attribute
The data transfer rate in MB per second when data is written to the disk.The source of this attribute is RHEVM. The type is real number (64-bit gauge) with two 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: DATA_WRITE_RATE or DISK_WR_RT (warehouse name), Data Write Rate (MBps) (caption), Data_Write_Rate (attribute name), and DISK_WR_RT (column name).

Disk Flush Latency (sec) attribute
The flush latency (in seconds) of the disk.The source of this attribute is RHEVM. The type is real number (64-bit gauge) with two 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: FLUSH_LATENCY or DISK_FL_LT (warehouse name), Disk Flush Latency (sec) (caption), Flush_Latency (attribute name), and DISK_FL_LT (column name).

Disk Name attribute
The name of the disk.The source of this attribute is RHEVM. 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 Read Latency (sec) attribute
The read latency (in seconds) of the disk.The source of this attribute is RHEVM. The type is real number (64-bit gauge) with two 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 DISK_RD_LT (warehouse name), Disk Read Latency (sec) (caption), Read_Latency (attribute name), and DISK_RD_LT (column name).

Disk Write Latency (sec) attribute
The write latency (in seconds) of the disk.The source of this attribute is RHEVM. The type is real number (64-bit gauge) with two 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 DISK_WR_LT (warehouse name), Disk Write Latency (sec) (caption), Write_Latency (attribute name), and DISK_WR_LT (column name).

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

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

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

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

VM Name attribute
The name of the virtual machine that contains the disk.The source of this attribute is RHEVM. 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: VM_NAME (warehouse name), VM Name (caption), VM_Name (attribute name), and VM_NAME (column name).

Virtual Machine Networks attribute group

The Virtual Machine Networks attribute group contains information about VM network capacity and usage. This attribute group is eligible for use with Tivoli Data Warehouse.

This attribute group contains the following attributes:

Data Receive Rate (MBps) attribute
The rate (in MB per second) at which data is received.The source of this attribute is RHEVM. The type is real number (64-bit gauge) with two 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: DATA_RECEIVE_RATE or DATA_RX_RT (warehouse name), Data Receive Rate (MBps) (caption), Data_Receive_Rate (attribute name), and DATA_RX_RT (column name).

Data Transmit Rate (MBps) attribute
The rate (in MB per second) at which data is transmitted.The source of this attribute is RHEVM. The type is real number (64-bit gauge) with two 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: DATA_TRANSMIT_RATE or DATA_TX_RT (warehouse name), Data Transmit Rate (MBps) (caption), Data_Transmit_Rate (attribute name), and DATA_TX_RT (column name).

Driver attribute
The type of driver that is used for the NIC.The source of this attribute is RHEVM. This attribute is a key attribute. The type is string with enumerated values. The following values are defined: e1000 (e1000), virtio (virtio), rtl8139 (rtl8139), rtl8139 virtio (rtl8139_virtio). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: DRIVER or NW_DRIVER (warehouse name), Driver (caption), Driver (attribute name), and NW_DRIVER (column name).

Errors Receiving Data attribute
Total number of errors occurred while receiving data.The source of this attribute is RHEVM. 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: ERRORS_RECEIVING_DATA or ERRS_RX_DT (warehouse name), Errors Receiving Data (caption), Errors_Receiving_Data (attribute name), and ERRS_RX_DT (column name).

Errors Transmitting Data attribute
Total number of errors occurred while transmitting data.The source of this attribute is RHEVM. 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: ERRORS_TRANSMITTING_DATA or ERRS_TX_DT (warehouse name), Errors Transmitting Data (caption), Errors_Transmitting_Data (attribute name), and ERRS_TX_DT (column name).

Is Linked To VM attribute
Indicates if the NIC is linked to the virtual machine.The source of this attribute is RHEVM. 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: IS_LINKED_TO_VM or NW_IS_LNKD (warehouse name), Is Linked To VM (caption), Is_Linked_To_VM (attribute name), and NW_IS_LNKD (column name).

Is Plugged Into VM attribute
Indicates if the NIC is plugged in to the virtual machine.The source of this attribute is RHEVM. 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: IS_PLUGGED_INTO_VM or NW_IS_PLGD (warehouse name), Is Plugged Into VM (caption), Is_Plugged_Into_VM (attribute name), and NW_IS_PLGD (column name).

Mac Address attribute
The MAC address of the interface.The source of this attribute is RHEVM. 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: MAC_ADDRESS or MAC_ADDR (warehouse name), Mac Address (caption), Mac_Address (attribute name), and MAC_ADDR (column name).

Network attribute
A reference to the network to which the interface should be connected.The source of this attribute is RHEVM. 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: NETWORK or VM_NW (warehouse name), Network (caption), Network (attribute name), and VM_NW (column name).

NIC Name attribute
The name of the host network interface.The source of this attribute is RHEVM. 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: NIC_NAME or HOST_NIC (warehouse name), NIC Name (caption), NIC_Name (attribute name), and HOST_NIC (column name).

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

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

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

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

VM Name attribute
The VM that that the NIC belongs to.The source of this attribute is RHEVM. 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: VM_NAME (warehouse name), VM Name (caption), VM_Name (attribute name), and VM_NAME (column name).

Virtual Machines attribute group

The virtual machine attribute group contains information about virtual machines, including virtual machine name, containing host name, UUID, state, number of CPUs, CPU time, memory used, life-cycle control, and CPU requirements. This attribute group is eligible for use with Tivoli Data Warehouse.

This attribute group contains the following attributes:

Action On Crash attribute
The action to take when the virtual machine crashes.The source of this attribute is KVM Hypervisor. 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: ACTION_ON_CRASH or ACTN_CRASH (warehouse name), Action On Crash (caption), Action_On_Crash (attribute name), and ACTN_CRASH (column name).

Action On PowerOff attribute

The action to take when the virtual machine requests a power-off.The source of this attribute is KVM Hypervisor. 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: ACTION_ON_POWEROFF or ACTN_PWROF (warehouse name), Action On PowerOff (caption), Action_On_PowerOff (attribute name), and ACTN_PWROF (column name).

Action On Reboot attribute

The action to take when the virtual machine requests a restart.The source of this attribute is KVM Hypervisor. 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: ACTION_ON_REBOOT or ACTN_RBOOT (warehouse name), Action On Reboot (caption), Action_On_Reboot (attribute name), and ACTN_RBOOT (column name).

Cluster Name attribute

Cluster to which the VM belongs.The source of this attribute is RHEVM and KVM Hypervisor. 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).

Cores Per Socket attribute

The requested number of cores per socket for the virtual machine.The source of this attribute is RHEVM and KVM Hypervisor. 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: CORES_PER_SOCKET or CORES_PER (warehouse name), Cores Per Socket (caption), Cores_Per_Socket (attribute name), and CORES_PER (column name).

CPU Match attribute

How strictly the virtual CPU provided to the virtual machine must match these requirements.The source of this attribute is KVM Hypervisor. The type is string with enumerated values. The following values are defined: Unavailable (unavailable), Minimum (minimum), Exact (exact), Strict (strict). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: CPU_MATCH (warehouse name), CPU Match (caption), CPU_Match (attribute name), and CPU_MATCH (column name).

CPU Model attribute

The CPU model requested for the virtual machine.The source of this attribute is RHEVM. 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: CPU_MODEL_N or CPU_MODL_N (warehouse name), CPU Model (caption), CPU_Model_N (attribute name), and CPU_MODL_N (column name).

CPU Model Deprecated attribute

The CPU model requested for the virtual machine.This attribute is deprecated.The source of this attribute is RHEVM and KVM Hypervisor. 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: CPU_MODEL (warehouse name), CPU Model Deprecated (caption), CPU_Model (attribute name), and CPU_MODEL (column name).

CPU Percent attribute

The composite CPU percent of this virtual machine across all virtual CPUs.The source of this attribute is RHEVM and KVM Hypervisor. The type is real number (64-bit gauge) with two 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_PERCENT or CPU_PCT (warehouse name), CPU Percent (caption), CPU_Percent (attribute name), and CPU_PCT (column name).

CPU Shares attribute
The scheduler parameter, cpu_shares, for the virtual machine.The source of this attribute is RHEVM and KVM Hypervisor. 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: CPU_SHARES (warehouse name), CPU Shares (caption), CPU_Shares (attribute name), and CPU_SHARES (column name).

CPU Time Delta (sec) attribute
The CPU time used during the most recent measurement period in seconds.The source of this attribute is KVM Hypervisor. The type is real number (64-bit gauge) with two 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_TIME_DELTA or CPU_DELTA (warehouse name), CPU Time Delta (sec) (caption), CPU_Time_Delta (attribute name), and CPU_DELTA (column name).

CPUs Consumed attribute
The equivalent number of real CPUs consumed by this virtual machine.The source of this attribute is RHEVM and KVM Hypervisor. The type is real number (64-bit gauge) with two 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: CPUS_CONSUMED or CPU_CNSMD (warehouse name), CPUs Consumed (caption), CPUs_Consumed (attribute name), and CPU_CNSMD (column name).

Creation Time attribute
The date and time at which this virtual machine was created.The source of this attribute is RHEVM and KVM Hypervisor. 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: CREATION_TIME or CRT_TIME (warehouse name), Creation Time (caption), Creation_Time (attribute name), and CRT_TIME (column name).

Domain attribute
Reference to the VMs domain.The source of this attribute is RHEVM and KVM Hypervisor. 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: DOMAIN (warehouse name), Domain (caption), Domain (attribute name), and DOMAIN (column name).

Guest OS MSN attribute
The managed system name of the guest operating system.The source of this attribute is RHEVM and KVM Hypervisor. 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: GUEST_OS_MSN or G_OS_MSN (warehouse name), Guest OS MSN (caption), GUEST_OS_MSN (attribute name), and G_OS_MSN (column name).

Guranteed Host Memory (GB) attribute
The minimum amount of guaranteed memory in GB on a host that the virtual machine requires to run.The source of this attribute is RHEVM and KVM Hypervisor. The type is real number (64-bit gauge)

with two 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: GURANTEED_HOST_MEMORY or GRT_MEM (warehouse name), Guranteed Host Memory (GB) (caption), Guranteed_Host_Memory (attribute name), and GRT_MEM (column name).

HA Enabled attribute
Indicates whether the High Availability feature is enabled for this virtual machine. Set this attribute to true if the virtual machine should automatically restart if the virtual machine or the host crashes.The source of this attribute is RHEVM and KVM Hypervisor. The type is string with enumerated values. The following values are defined: Unavailable (unavailable), true (true), false (false). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: HA_ENABLED or HA_ENABLE (warehouse name), HA Enabled (caption), HA_Enabled (attribute name), and HA_ENABLE (column name).

HA Priority attribute
Priority to control the order in which the virtual machines are restarted.The source of this attribute is RHEVM and KVM Hypervisor. 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: HA_PRIORITY or HA_PRITY (warehouse name), HA Priority (caption), HA_Priority (attribute name), and HA_PRITY (column name).

Host Name attribute
The name of the host.The source of this attribute is RHEVM and KVM Hypervisor. 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).

IP Address attribute
IP Address of the virtual machine.The source of this attribute is RHEVM and KVM Hypervisor. 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_ADDR (warehouse name), IP Address (caption), IP_Address (attribute name), and IP_ADDR (column name).

Memory Allocated (GB) attribute
The maximum memory allocated and available for the virtual machine in GB.The source of this attribute is RHEVM and KVM Hypervisor. The type is real number (64-bit gauge) with two 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_ALLOCATED or MEMRY_ALLO (warehouse name), Memory Allocated (GB) (caption), Memory_Allocated (attribute name), and MEMRY_ALLO (column name).

Memory Percent attribute
The percent of allocated memory that is used by this virtual machine.The source of this attribute is RHEVM and KVM Hypervisor. The type is real number (64-bit gauge) with two 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_PERCENT or MEMRY_PCT (warehouse name), Memory Percent (caption), Memory_Percent (attribute name), and MEMRY_PCT (column name).

Memory Used (GB) attribute
The memory used by the virtual machine in GB.The source of this attribute is KVM Hypervisor. The type is real number (64-bit gauge) with two 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_USED or MEMRY_USED (warehouse name), Memory Used (GB) (caption), Memory_Used (attribute name), and MEMRY_USED (column name).

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

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

Number of Sockets attribute
The requested number of CPU sockets for the virtual machine.The source of this attribute is RHEVM and KVM Hypervisor. 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: NUMBER_OF_SOCKETS or SKTS_COUNT (warehouse name), Number of Sockets (caption), Number_Of_Sockets (attribute name), and SKTS_COUNT (column name).

Number Of Virtual CPUs attribute
The number of virtual CPUs in the virtual machine.The source of this attribute is RHEVM and KVM Hypervisor. 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: NUMBER_OF_VIRTUAL_CPUS or VCPU_COUNT (warehouse name), Number Of Virtual CPUs (caption), Number_Of_Virtual_CPUs (attribute name), and VCPU_COUNT (column name).

Origin attribute
The system from which this virtual machine originated.The source of this attribute is RHEVM and KVM Hypervisor. 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: ORIGIN (warehouse name), Origin (caption), Origin (attribute name), and ORIGIN (column name).

OS Type attribute
The type of the guest operating system.The source of this attribute is RHEVM and KVM Hypervisor. 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: OS_TYPE (warehouse name), OS Type (caption), OS_Type (attribute name), and OS_TYPE (column name).

Placement Policy Affinity attribute
The placement policy affinity for migrating VM.The source of this attribute is RHEVM and KVM Hypervisor. 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: PLACEMENT_POLICY_AFFINITY or PP_AFF (warehouse name), Placement Policy Affinity (caption), Placement_Policy_Affinity (attribute name), and PP_AFF (column name).

Placement Policy Host attribute
The placement policy host for migrating the VM.The source of this attribute is RHEVM and KVM Hypervisor. 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: PLACEMENT_POLICY_HOST or PP_HOST (warehouse name), Placement Policy Host (caption), Placement_Policy_Host (attribute name), and PP_HOST (column name).

Sample Time Delta (sec) attribute
The time duration of the most recent measurement period in seconds.This attribute is derived as a utility metric and does not have any source. The type is real number (64-bit gauge) with two 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: SAMPLE_TIME_DELTA or SAMP_DELTA (warehouse name), Sample Time Delta (sec) (caption), Sample_Time_Delta (attribute name), and SAMP_DELTA (column name).

Sample Timestamp attribute
The date and time UTC of the most recent CPU measurement.This attribute is derived as a utility metric and does not have any source. The type is string with enumerated values. The following values are defined: Unavailable (0000-00-00 00:00:00). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: SAMPLE_TIMESTAMP or SAMP_TS (warehouse name), Sample Timestamp (caption), Sample_Timestamp (attribute name), and SAMP_TS (column name).

Start Time attribute
The date and time at which this virtual machine was started.The source of this attribute is RHEVM and KVM Hypervisor. 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: START_TIME or ST_TIME (warehouse name), Start Time (caption), Start_Time (attribute name), and ST_TIME (column name).

Stateless attribute
Indicates whether the VM is stateless.The source of this attribute is RHEVM and KVM Hypervisor. The type is string with enumerated values. The following values are defined: Unavailable (unavailable), true (true), false (false). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: STATELESS or STTLESS (warehouse name), Stateless (caption), Stateless (attribute name), and STTLESS (column name).

Template attribute
Reference to template on which the VM is based.The source of this attribute is RHEVM and KVM Hypervisor. 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: TEMPLATE (warehouse name), Template (caption), Template (attribute name), and TEMPLATE (column name).

Threads Per Core attribute
The requested number of threads per core for the virtual machine.The source of this attribute is RHEVM and KVM Hypervisor. 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: THREADS_PER_CORE or THRDS_PER (warehouse name), Threads Per Core (caption), Threads_Per_Core (attribute name), and THRDS_PER (column name).

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

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

Timezone attribute
The Sysprep timezone setting for a Windows virtual machine template.The source of this attribute is RHEVM and KVM Hypervisor. 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: TIMEZONE or TM_ZONE (warehouse name), Timezone (caption), Timezone (attribute name), and TM_ZONE (column name).

Total CPU Time (sec) attribute
The CPU time used in seconds.The source of this attribute is KVM Hypervisor. The type is real number (64-bit gauge) with two 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_TIME (warehouse name), Total CPU Time (sec) (caption), CPU_Time (attribute name), and CPU_TIME (column name).

Virtual Machine Name attribute
The name of the virtual machine.The source of this attribute is RHEVM and KVM Hypervisor. 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: VIRTUAL_MACHINE_NAME or VM_NAME (warehouse name), Virtual Machine Name (caption), Virtual_Machine_Name (attribute name), and VM_NAME (column name).

Virtual Machine State attribute
The running state of the virtual machine.The source of this attribute is RHEVM and KVM Hypervisor. The type is string with enumerated values. The following values are defined: Unavailable (unavailable), Blocked (VIR_DOMAIN_BLOCKED), Crashed (VIR_DOMAIN_CRASHED), No State (VIR_DOMAIN_NOSTATE), Paused (VIR_DOMAIN_PAUSED), Running (VIR_DOMAIN_RUNNING), Shutting Down (VIR_DOMAIN_SHUTDOWN), Shut Off (VIR_DOMAIN_SHUTOFF). Any value that does not have a definition here is displayed in the User Interface.

The following names are defined for this attribute: VIRTUAL_MACHINE_STATE or VM_STATE (warehouse name), Virtual Machine State (caption), Virtual_Machine_State (attribute name), and VM_STATE (column name).

Virtual Machine Type attribute
The type of the virtual machine.The source of this attribute is RHEVM and KVM Hypervisor. 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: VIRTUAL_MACHINE_TYPE or VM_TYPE (warehouse name), Virtual Machine Type (caption), Virtual_Machine_Type (attribute name), and VM_TYPE (column name).

Virtual Machine UUID attribute
The UUID of the virtual machine.The source of this attribute is RHEVM and KVM Hypervisor. 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: VIRTUAL_MACHINE_UUID or VM_UUID (warehouse name), Virtual Machine UUID (caption), Virtual_Machine_UUID (attribute name), and VM_UUID (column name).

Virtualization Type attribute
The type of virtualization used by this virtual machine.'hvm' means full virtualization, which is used by KVM; 'linux' means para virtualization, which is used by XEN.The source of this attribute is KVM Hypervisor. 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: VIRTUALIZATION_TYPE or VIRT_TYPE (warehouse name), Virtualization Type (caption), Virtualization_Type (attribute name), and VIRT_TYPE (column name).

VM Pool Name attribute
The name of the pool that the VM belongs to.The source of this attribute is KVM Hypervisor. 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: VM_POOL_NAME or POOL_NAME (warehouse name), VM Pool Name (caption), VM_Pool_Name (attribute name), and POOL_NAME (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 Linux Kernel-based Virtual Machines agent

Table	Attribute group	Bytes per row (agent)	Database bytes per row (warehouse)	Aggregate bytes per row (warehouse)
KV1CLUSTER	KV1_CLUSTERS	2164	2174	2469

Table 1. Capacity planning for historical data logged by the Linux Kernel-based Virtual Machines agent (continued)

Table	Attribute group	Bytes per row (agent)	Database bytes per row (warehouse)	Aggregate bytes per row (warehouse)
KV1DCENTER	KV1_DATA_CENTER	666	668	791
KV1DCSTGAG	KV1_DATA_CENTER_STORAGE	993	1023	1213
KV1DISKS	KV1_DISKS	2754	2833	3278
KV1DSNAP	KV1_DISKS_SNAPSHOT	2969	3004	3194
KV1HOSTAG	KV1_HOSTS	3488	3547	4218
KV1HOSTCG	KV1_HOST_CPU	714	824	1645
KV1HOSTMG	KV1_HOST_MEMORY	491	660	1709
KV1HOSTNWG	KV1_HOST_NETWORKS	2236	2281	2651
KV1POBJST	KV1_PERFORMANCE_OBJECT_STATUS	352	399	664
KV1SCHPAG	KV1_SCHEDULER_PARAMETERS	969	970	1007
KV1STGPLAG	KV1_STORAGE_POOLS	730	767	1008
KV1VMACHAG	KV1_VIRTUAL_MACHINES	4671	4782	5536
KV1VMDPAG	KV1_VIRTUAL_MACHINE_DISK_PERF	626	669	961
KV1VMNWG	KV1_VIRTUAL_MACHINE_NETWORKS	1670	1693	1918

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 Linux Kernel-based Virtual Machines. 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 Linux Kernel-based Virtual Machines 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 53.

Predefined situations

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

- Linux Kernel-based Virtual Machines
  - Not applicable
- Cluster
  - Not applicable

- Data Center
  - Not applicable
- Host
  - KV1_Host_CPU_Over_Commit_Crit
  - KV1_Host_CPU_Over_Commit_Info
  - KV1_Host_CPU_Over_Commit_Warn
  - KV1_Host_CPU_Pct_High_Crit
  - KV1_Host_CPU_Pct_High_Warn
  - KV1_Host_Mem_Pct_High_Crit
  - KV1_Host_Mem_Pct_High_Warn
- Storage Pool
  - Not applicable
- Virtual Machine
  - KV1_VM_CPU_Pct_High_Crit
  - KV1_VM_CPU_Pct_High_Warn
  - KV1_VM_Mem_Pct_High_Crit
  - KV1_VM_Mem_Pct_High_Warn

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.

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.

Linux Kernel-based Virtual Machines navigator item

No predefined situations are included for this navigator item.

Cluster navigator item

No predefined situations are included for this navigator item.

Data Center navigator item

No predefined situations are included for this navigator item.

Host navigator item

The situation descriptions are organized by the navigator item to which the situations are relevant.

KV1_Host_CPU_Over_Commit_Crit situation

Description
The CPU of your host is highly over committed.

The situation is evaluated for each distinct value of the Host_Name attribute.

Formula
```
*IF *VALUE KV1_HOST_CPU.Percent_CPU_Allocated *GE 150
```

See "Attributes in each attribute group" on page 10 for descriptions of the attributes in this formula.

Distribution
This situation is available for distribution.

Run at startup
No

Sampling interval
15 minutes

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.

KV1_Host_CPU_Over_Commit_Info situation

Description
The CPU of your host is over committed.

The situation is evaluated for each distinct value of the Host_Name attribute.

Formula
```
*IF *VALUE KV1_HOST_CPU.Percent_CPU_Allocated *GE 100 *AND *VALUE
KV1_HOST_CPU.Percent_CPU_Allocated *LT 125
```

See "Attributes in each attribute group" on page 10 for descriptions of the attributes in this formula.

Distribution
This situation is available for distribution.

Run at startup
No

Sampling interval
15 minutes

Situation persistence
The number of times the condition specified by the situation must occur for the situation to be true is 1.

Error conditions
Informational

Clearing conditions
The situation clears when the condition becomes false.

KV1_Host_CPU_Over_Commit_Warn situation

Description
The CPU of your host is moderately over committed.

The situation is evaluated for each distinct value of the Host_Name attribute.

Formula
```
*IF *VALUE KV1_HOST_CPU.Percent_CPU_Allocated *GE 125 *AND *VALUE
KV1_HOST_CPU.Percent_CPU_Allocated *LT 150
```

See "Attributes in each attribute group" on page 10 for descriptions of the attributes in this formula.

Distribution
This situation is available for distribution.

Run at startup
No

Sampling interval
15 minutes

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.

KV1_Host_CPU_Pct_High_Crit situation

Description
Your host has persistently low available CPU capacity.

The situation is evaluated for each distinct value of the Host_Name attribute.

Formula
```
*IF *VALUE KV1_HOST_CPU.CPU_Percent_Consumed *GE 85
```

See "Attributes in each attribute group" on page 10 for descriptions of the attributes in this formula.

Distribution
This situation is available for distribution.

Run at startup
No

Sampling interval
15 minutes

Situation persistence
The number of times the condition specified by the situation must occur for the situation to be true is 4.

Error conditions
Critical

Clearing conditions
The situation clears when the condition becomes false.

KV1_Host_CPU_Pct_High_Warn situation

Description
Your host has chronically low available CPU capacity.

The situation is evaluated for each distinct value of the Host_Name attribute.

Formula
```
*IF *VALUE KV1_HOST_CPU.CPU_Percent_Consumed *GE 85 *UNTIL ( *SIT
KV1_Host_CPU_Pct_High_Crit )
```

See "Attributes in each attribute group" on page 10 for descriptions of the attributes in this formula.

Distribution
This situation is available for distribution.

Run at startup
No

Sampling interval
15 minutes

Situation persistence
The number of times the condition specified by the situation must occur for the situation to be true is 3.

Error conditions
Warning

Clearing conditions
The situation clears when the condition becomes false.

KV1_Host_Mem_Pct_High_Crit situation

Description
The memory utilization of the host is chronically high.

The situation is evaluated for each distinct value of the Host_Name attribute.

Formula
```
*IF *VALUE KV1_HOST_MEMORY.Percent_Memory_Used *GE 95
```

See "Attributes in each attribute group" on page 10 for descriptions of the attributes in this formula.

Distribution
This situation is available for distribution.

Run at startup
No

Sampling interval
15 minutes

Situation persistence
The number of times the condition specified by the situation must occur for the situation to be true is 3.

Error conditions
Critical

Clearing conditions
The situation clears when the condition becomes false.

KV1_Host_Mem_Pct_High_Warn situation

Description
The memory utilization of the host is persistently high.

The situation is evaluated for each distinct value of the Host_Name attribute.

Formula
```
*IF *VALUE KV1_HOST_MEMORY.Percent_Memory_Used *GE 95 *UNTIL ( *SIT
KV1_Host_Mem_Pct_High_Crit )
```

See "Attributes in each attribute group" on page 10 for descriptions of the attributes in this formula.

Distribution
This situation is available for distribution.

Run at startup
No

Sampling interval
15 minutes

Situation persistence
The number of times the condition specified by the situation must occur for the situation to be true is 2.

Error conditions
Warning

Clearing conditions
The situation clears when the condition becomes false.

Storage Pool navigator item

No predefined situations are included for this navigator item.

Virtual Machine navigator item

The situation descriptions are organized by the navigator item to which the situations are relevant.

KV1_VM_CPU_Pct_High_Crit situation

Description
The CPU utilization of the virtual machine is chronically high.

The situation is evaluated for each distinct value of the Host_Name attribute.

Formula
```
*IF *VALUE KV1_VIRTUAL_MACHINES.CPU_Percent *GE 95
```

See "Attributes in each attribute group" on page 10 for descriptions of the attributes in this formula.

Distribution
This situation is available for distribution.

Run at startup
No

Sampling interval
15 minutes

Situation persistence
The number of times the condition specified by the situation must occur for the situation to be true is 3.

Error conditions
Critical

Clearing conditions
The situation clears when the condition becomes false.

KV1_VM_CPU_Pct_High_Warn situation

Description
The CPU utilization of the virtual machine is persistently high.

The situation is evaluated for each distinct value of the Host_Name attribute.

Formula
```
*IF *VALUE KV1_VIRTUAL_MACHINES.CPU_Percent *GE 95 *UNTIL ( *SIT
KV1_VM_CPU_Pct_High_Crit )
```

See "Attributes in each attribute group" on page 10 for descriptions of the attributes in this formula.

Distribution
This situation is available for distribution.

Run at startup
No

Sampling interval
15 minutes

Situation persistence
The number of times the condition specified by the situation must occur for the situation to be true is 2.

Error conditions
Warning

Clearing conditions
The situation clears when the condition becomes false.

KV1_VM_Mem_Pct_High_Crit situation

Description
The memory utilization of the VM is chronically high.

The situation is evaluated for each distinct value of the Host_Name attribute.

Formula
```
*IF *VALUE KV1_VIRTUAL_MACHINES.Memory_Percent *GE 95
```

See "Attributes in each attribute group" on page 10 for descriptions of the attributes in this formula.

Distribution
This situation is available for distribution.

Run at startup
No

Sampling interval
15 minutes

Situation persistence
The number of times the condition specified by the situation must occur for the situation to be true is 3.

Error conditions
Critical

Clearing conditions
The situation clears when the condition becomes false.

KV1_VM_Mem_Pct_High_Warn situation

Description
The memory utilization of the VM is persistently high.

The situation is evaluated for each distinct value of the Host_Name attribute.

Formula
```
*IF *VALUE KV1_VIRTUAL_MACHINES.Memory_Percent *GE 95 *UNTIL ( *SIT
KV1_VM_Mem_Pct_High_Crit )
```

See "Attributes in each attribute group" on page 10 for descriptions of the attributes in this formula.

Distribution
This situation is available for distribution.

Run at startup
No

Sampling interval
15 minutes

Situation persistence
The number of times the condition specified by the situation must occur for the situation to be true is 2.

Error conditions
Warning

Clearing conditions
The situation clears when the condition becomes false.

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*.

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 Linux Kernel-based Virtual Machines does not provide predefined Take Action commands.

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 Linux Kernel-based Virtual Machines 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 Linux Kernel-based Virtual Machines 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 KV1_Base and is defined in the `kv1.baroc` (version 07.20.06) file. The KV1_Base event class can be used for generic rules processing for any event from the IBM Tivoli Monitoring for Virtual Environments Agent for Linux Kernel-based Virtual Machines.

For events that are generated by situations in the Clusters attribute group, events are sent by using the ITM_KV1_CLUSTERS event class. This event class contains the following slots:

- cluster_name: STRING
- cluster_name_enum: STRING
- compatibility_major_version: REAL
- compatibility_major_version_enum: STRING
- compatibility_minor_version: REAL
- compatibility_minor_version_enum: STRING
- cpu_family: STRING
- cpu_family_enum: STRING
- data_center: STRING
- data_center_enum: STRING
- enable_transparent_hugepages: STRING
- enable_transparent_hugepages_enum: STRING
- error_handling: STRING
- error_handling_enum: STRING
- gluster_service: STRING
- gluster_service_enum: STRING
- host_cpu_high_limit: REAL
- host_cpu_high_limit_enum: STRING

- host_cpu_low_limit: REAL
- host_cpu_low_limit_enum: STRING
- memory_overcommit_percent: REAL
- memory_overcommit_percent_enum: STRING
- node: STRING
- timestamp: STRING
- virt_service: STRING
- virt_service_enum: STRING
- vm_scheduling_mode: STRING
- vm_scheduling_mode_enum: STRING
- wait_period: REAL
- wait_period_enum: STRING

For events that are generated by situations in the Data Center attribute group, events are sent by using the ITM_KV1_DATA_CENTER event class. This event class contains the following slots:

- compatibility_major_version: REAL
- compatibility_major_version_enum: STRING
- compatibility_minor_version: REAL
- compatibility_minor_version_enum: STRING
- data_center: STRING
- data_center_enum: STRING
- kv1_status: STRING
- kv1_status_enum: STRING
- node: STRING
- storage_format: STRING
- storage_format_enum: STRING
- storage_type: STRING
- storage_type_enum: STRING
- timestamp: STRING

For events that are generated by situations in the Data Center Storage attribute group, events are sent by using the ITM_KV1_DATA_CENTER_STORAGE event class. This event class contains the following slots:

- data_center: STRING
- data_center_enum: STRING
- kv1_status: STRING
- kv1_status_enum: STRING
- master_domain: STRING
- master_domain_enum: STRING
- name: STRING
- name_enum: STRING
- node: STRING

- space_available_gb: REAL
- space_available_gb_enum: STRING
- space_committed_gb: REAL
- space_committed_gb_enum: STRING
- space_used_gb: REAL
- space_used_gb_enum: STRING
- storage_format: STRING
- storage_format_enum: STRING
- storage_type: STRING
- storage_type_enum: STRING
- timestamp: STRING
- type: STRING
- type_enum: STRING

For events that are generated by situations in the Disks attribute group, events are sent by using the ITM_KV1_DISKS event class. This event class contains the following slots:

- actual_size: REAL
- actual_size_enum: STRING
- alias: STRING
- alias_enum: STRING
- bootable: STRING
- bootable_enum: STRING
- data_read_rate: REAL
- data_read_rate_enum: STRING
- data_write_rate: REAL
- data_write_rate_enum: STRING
- disk_flush_latency: REAL
- disk_flush_latency_enum: STRING
- disk_name: STRING
- disk_name_enum: STRING
- disk_read_latency: REAL
- disk_read_latency_enum: STRING
- disk_write_latency: REAL
- disk_write_latency_enum: STRING
- image_id: STRING
- image_id_enum: STRING
- interface: STRING
- interface_enum: STRING
- node: STRING
- propagate_errors: STRING

- propagate_errors_enum: STRING
- provisioned_size: REAL
- provisioned_size_enum: STRING
- shareable: STRING
- shareable_enum: STRING
- size: REAL
- size_enum: STRING
- state: STRING
- state_enum: STRING
- storage_pool_uuid: STRING
- storage_pool_uuid_enum: STRING
- storage_type: STRING
- storage_type_enum: STRING
- timestamp: STRING
- wipe_after_delete: STRING
- wipe_after_delete_enum: STRING

For events that are generated by situations in the Disks Snapshot attribute group, events are sent by using the ITM_KV1_DISKS_SNAPSHOT event class. This event class contains the following slots:

- actual_size: REAL
- actual_size_enum: STRING
- alias: STRING
- alias_enum: STRING
- bootable: STRING
- bootable_enum: STRING
- format: STRING
- format_enum: STRING
- interface: STRING
- interface_enum: STRING
- name: STRING
- name_enum: STRING
- node: STRING
- propagate_errors: STRING
- propagate_errors_enum: STRING
- provisioned_size: REAL
- provisioned_size_enum: STRING
- shareable: STRING
- shareable_enum: STRING
- size: REAL
- size_enum: STRING

- snapshot_id: STRING
- snapshot_id_enum: STRING
- sparse: STRING
- sparse_enum: STRING
- state: STRING
- state_enum: STRING
- storage_pool_uuid: STRING
- storage_pool_uuid_enum: STRING
- timestamp: STRING
- wipe_after_delete: STRING
- wipe_after_delete_enum: STRING

For events that are generated by situations in the Host CPU attribute group, events are sent by using the ITM_KV1_HOST_CPU event class. This event class contains the following slots:

- cpus_consumed_per_vm: REAL
- cpus_consumed_per_vm_enum: STRING
- cpus_unaccounted_for: REAL
- cpus_unaccounted_for_enum: STRING
- cpu_ghz_consumed_per_vm: REAL
- cpu_ghz_consumed_per_vm_enum: STRING
- cpu_ghz_unaccounted_for: REAL
- cpu_ghz_unaccounted_for_enum: STRING
- cpu_name: STRING
- cpu_name_enum: STRING
- cpu_percent_consumed: REAL
- cpu_percent_consumed_enum: STRING
- cpu_percent_unaccounted: REAL
- cpu_percent_unaccounted_enum: STRING
- host_name: STRING
- host_name_enum: STRING
- node: STRING
- number_of_active_vms: REAL
- number_of_active_vms_enum: STRING
- number_of_cpus: REAL
- number_of_cpus_enum: STRING
- number_of_cpu_ghz: REAL
- number_of_cpu_ghz_enum: STRING
- over_under_allocated_cpu: REAL
- over_under_allocated_cpu_enum: STRING
- over_under_allocated_cpu_ghz: REAL

- over_under_allocated_cpu_ghz_enum: STRING
- percent_cpu_allocated: REAL
- percent_cpu_allocated_enum: STRING
- timestamp: STRING
- virtual_cpus_allocated: REAL
- virtual_cpus_allocated_enum: STRING
- vm_cpus_consumed: REAL
- vm_cpus_consumed_enum: STRING
- vm_cpu_fit_estimate: REAL
- vm_cpu_fit_estimate_enum: STRING
- vm_cpu_ghz_consumed: REAL
- vm_cpu_ghz_consumed_enum: STRING

For events that are generated by situations in the Host Memory attribute group, events are sent by using the ITM_KV1_HOST_MEMORY event class. This event class contains the following slots:

- host_name: STRING
- host_name_enum: STRING
- memory_allocated_per_vm: REAL
- memory_allocated_per_vm_enum: STRING
- memory_buffers: REAL
- memory_buffers_enum: STRING
- memory_cached: REAL
- memory_cached_enum: STRING
- memory_size: REAL
- memory_size_enum: STRING
- memory_used_per_vm: REAL
- memory_used_per_vm_enum: STRING
- node: STRING
- number_of_active_vms: REAL
- number_of_active_vms_enum: STRING
- over_under_allocated: REAL
- over_under_allocated_enum: STRING
- over_under_used: REAL
- over_under_used_enum: STRING
- percent_memory_allocated: REAL
- percent_memory_allocated_enum: STRING
- percent_memory_unallocated: REAL
- percent_memory_unallocated_enum: STRING
- percent_memory_unused: REAL
- percent_memory_unused_enum: STRING

- percent_memory_used: REAL
- percent_memory_used_enum: STRING
- swap_cached: REAL
- swap_cached_enum: STRING
- swap_free: REAL
- swap_free_enum: STRING
- swap_total: REAL
- swap_total_enum: STRING
- swap_used: REAL
- swap_used_enum: STRING
- timestamp: STRING
- vm_memory_allocated: REAL
- vm_memory_allocated_enum: STRING
- vm_memory_allocated_fit_estimate: REAL
- vm_memory_allocated_fit_estimate_enum: STRING
- vm_memory_used: REAL
- vm_memory_used_enum: STRING
- vm_memory_used_fit_estimate: REAL
- vm_memory_used_fit_estimate_enum: STRING

For events that are generated by situations in the Host Networks attribute group, events are sent by using the ITM_KV1_HOST_NETWORKS event class. This event class contains the following slots:

- boot_protocol: STRING
- boot_protocol_enum: STRING
- bridged_status: STRING
- bridged_status_enum: STRING
- data_receive_rate: REAL
- data_receive_rate_enum: STRING
- data_transmit_rate: REAL
- data_transmit_rate_enum: STRING
- errors_receiving_data: REAL
- errors_receiving_data_enum: STRING
- errors_transmitting_data: REAL
- errors_transmitting_data_enum: STRING
- host_name: STRING
- host_name_enum: STRING
- ip_address: STRING
- ip_address_enum: STRING
- ip_gateway: STRING
- ip_gateway_enum: STRING

- ip_netmask: STRING
- ip_netmask_enum: STRING
- kv1_status: STRING
- kv1_status_enum: STRING
- mac_address: STRING
- mac_address_enum: STRING
- mtu: REAL
- mtu_enum: STRING
- network: STRING
- network_enum: STRING
- nic_name: STRING
- nic_name_enum: STRING
- node: STRING
- speed: REAL
- speed_enum: STRING
- timestamp: STRING
- vlan_id: REAL
- vlan_id_enum: STRING

For events that are generated by situations in the Hosts attribute group, events are sent by using the ITM_KV1_HOSTS event class. This event class contains the following slots:

- cluster_name: STRING
- cluster_name_enum: STRING
- compatibility_major_version: REAL
- compatibility_major_version_enum: STRING
- compatibility_minor_version: REAL
- compatibility_minor_version_enum: STRING
- cores_per_socket: REAL
- cores_per_socket_enum: STRING
- cpu_frequency: REAL
- cpu_frequency_enum: STRING
- cpu_model: STRING
- cpu_model_enum: STRING
- hardware_family: STRING
- hardware_family_enum: STRING
- host_name: STRING
- host_name_enum: STRING
- hypervisor_uri: STRING
- hypervisor_uri_enum: STRING
- ip_address: STRING

- ip_address_enum: STRING
- kv1_status: STRING
- kv1_status_enum: STRING
- libvirt_compatibility_version: STRING
- libvirt_compatibility_version_enum: STRING
- live_snapshot_support: STRING
- live_snapshot_support_enum: STRING
- manufacturer: STRING
- manufacturer_enum: STRING
- max_scheduling_memory: REAL
- max_scheduling_memory_enum: STRING
- memory_size: REAL
- memory_size_enum: STRING
- node: STRING
- number_of_active_vms: REAL
- number_of_active_vms_enum: STRING
- number_of_cpus: REAL
- number_of_cpus_enum: STRING
- number_of_cpu_ghz: REAL
- number_of_cpu_ghz_enum: STRING
- number_of_migrating_vms: REAL
- number_of_migrating_vms_enum: STRING
- number_of_nodes: REAL
- number_of_nodes_enum: STRING
- number_of_vms: REAL
- number_of_vms_enum: STRING
- os_full_version: STRING
- os_full_version_enum: STRING
- os_type: STRING
- os_type_enum: STRING
- protocol: STRING
- protocol_enum: STRING
- scsi_initiator: STRING
- scsi_initiator_enum: STRING
- serial_number: STRING
- serial_number_enum: STRING
- sockets_per_node: REAL
- sockets_per_node_enum: STRING
- storage_manager: STRING

- storage_manager_enum: STRING
- threads_per_core: REAL
- threads_per_core_enum: STRING
- timestamp: STRING
- type: STRING
- type_enum: STRING

For events that are generated by situations in the Performance Object Status attribute group, events are sent by using the ITM_KV1_PERFORMANCE_OBJECT_STATUS event class. This event class contains the following slots:

- average_collection_duration: REAL
- average_collection_duration_enum: STRING
- cache_hits: INTEGER
- cache_hit_percent: REAL
- cache_misses: INTEGER
- error_code: INTEGER
- error_code_enum: STRING
- intervals_skipped: INTEGER
- last_collection_duration: REAL
- last_collection_finished: STRING
- last_collection_finished_enum: STRING
- last_collection_start: STRING
- last_collection_start_enum: STRING
- node: STRING
- number_of_collections: INTEGER
- object_name: STRING
- object_status: INTEGER
- object_status_enum: STRING
- object_type: INTEGER
- object_type_enum: STRING
- query_name: STRING
- refresh_interval: INTEGER
- timestamp: STRING

For events that are generated by situations in the Scheduler Parameters attribute group, events are sent by using the ITM_KV1_SCHEDULER_PARAMETERS event class. This event class contains the following slots:

- host_name: STRING
- host_name_enum: STRING
- node: STRING
- scheduler_parameter_name: STRING
- scheduler_parameter_name_enum: STRING

- scheduler_parameter_type: STRING
- scheduler_parameter_type_enum: STRING
- scheduler_parameter_value: STRING
- scheduler_parameter_value_enum: STRING
- timestamp: STRING
- virtual_machine_name: STRING
- virtual_machine_name_enum: STRING

For events that are generated by situations in the Storage Pools attribute group, events are sent by using the ITM_KV1_STORAGE_POOLS event class. This event class contains the following slots:

- host_name: STRING
- host_name_enum: STRING
- node: STRING
- percent_used: REAL
- percent_used_enum: STRING
- storage_pool_available: REAL
- storage_pool_available_enum: STRING
- storage_pool_capacity: REAL
- storage_pool_capacity_enum: STRING
- storage_pool_name: STRING
- storage_pool_name_enum: STRING
- storage_pool_state: STRING
- storage_pool_state_enum: STRING
- storage_pool_type: STRING
- storage_pool_type_enum: STRING
- storage_pool_used: REAL
- storage_pool_used_enum: STRING
- storage_pool_uuid: STRING
- storage_pool_uuid_enum: STRING
- timestamp: STRING

For events that are generated by situations in the Virtual Machine Disk Perf attribute group, events are sent by using the ITM_KV1_VIRTUAL_MACHINE_DISK_PERF event class. This event class contains the following slots:

- data_read_rate: REAL
- data_read_rate_enum: STRING
- data_write_rate: REAL
- data_write_rate_enum: STRING
- disk_name: STRING
- disk_name_enum: STRING
- flush_latency: REAL
- flush_latency_enum: STRING

- node: STRING
- read_latency: REAL
- read_latency_enum: STRING
- timestamp: STRING
- vm_name: STRING
- vm_name_enum: STRING
- write_latency: REAL
- write_latency_enum: STRING

For events that are generated by situations in the Virtual Machine Networks attribute group, events are sent by using the ITM_KV1_VIRTUAL_MACHINE_NETWORKS event class. This event class contains the following slots:

- data_receive_rate: REAL
- data_receive_rate_enum: STRING
- data_transmit_rate: REAL
- data_transmit_rate_enum: STRING
- driver: STRING
- driver_enum: STRING
- errors_receiving_data: REAL
- errors_receiving_data_enum: STRING
- errors_transmitting_data: REAL
- errors_transmitting_data_enum: STRING
- is_linked_to_vm: STRING
- is_linked_to_vm_enum: STRING
- is_plugged_into_vm: STRING
- is_plugged_into_vm_enum: STRING
- mac_address: STRING
- mac_address_enum: STRING
- network: STRING
- network_enum: STRING
- nic_name: STRING
- nic_name_enum: STRING
- node: STRING
- timestamp: STRING
- vm_name: STRING
- vm_name_enum: STRING

For events that are generated by situations in the Virtual Machines attribute group, events are sent by using the ITM_KV1_VIRTUAL_MACHINES event class. This event class contains the following slots:

- action_on_crash: STRING
- action_on_crash_enum: STRING
- action_on_poweroff: STRING

- action_on_poweroff_enum: STRING
- action_on_reboot: STRING
- action_on_reboot_enum: STRING
- cluster_name: STRING
- cluster_name_enum: STRING
- cores_per_socket: REAL
- cores_per_socket_enum: STRING
- cpus_consumed: REAL
- cpus_consumed_enum: STRING
- cpu_match: STRING
- cpu_match_enum: STRING
- cpu_model: STRING
- cpu_model_enum: STRING
- cpu_model_n: STRING
- cpu_model_n_enum: STRING
- cpu_percent: REAL
- cpu_percent_enum: STRING
- cpu_shares: REAL
- cpu_shares_enum: STRING
- cpu_time: REAL
- cpu_time_delta: REAL
- cpu_time_delta_enum: STRING
- cpu_time_enum: STRING
- creation_time: STRING
- creation_time_enum: STRING
- domain: STRING
- domain_enum: STRING
- guest_os_msn: STRING
- guest_os_msn_enum: STRING
- guranteed_host_memory: REAL
- guranteed_host_memory_enum: STRING
- ha_enabled: STRING
- ha_enabled_enum: STRING
- ha_priority: REAL
- ha_priority_enum: STRING
- host_name: STRING
- host_name_enum: STRING
- ip_address: STRING
- ip_address_enum: STRING

- kv1_origin: STRING
- kv1_origin_enum: STRING
- memory_allocated: REAL
- memory_allocated_enum: STRING
- memory_percent: REAL
- memory_percent_enum: STRING
- memory_used: REAL
- memory_used_enum: STRING
- node: STRING
- number_of_sockets: REAL
- number_of_sockets_enum: STRING
- number_of_virtual_cpus: REAL
- number_of_virtual_cpus_enum: STRING
- os_type: STRING
- os_type_enum: STRING
- placement_policy_affinity: STRING
- placement_policy_affinity_enum: STRING
- placement_policy_host: STRING
- placement_policy_host_enum: STRING
- sample_timestamp: STRING
- sample_timestamp_enum: STRING
- sample_time_delta: REAL
- sample_time_delta_enum: STRING
- start_time: STRING
- start_time_enum: STRING
- stateless: STRING
- stateless_enum: STRING
- template: STRING
- template_enum: STRING
- threads_per_core: REAL
- threads_per_core_enum: STRING
- timestamp: STRING
- timezone: STRING
- timezone_enum: STRING
- virtualization_type: STRING
- virtualization_type_enum: STRING
- virtual_machine_name: STRING
- virtual_machine_name_enum: STRING
- virtual_machine_state: STRING

- virtual_machine_state_enum: STRING
- virtual_machine_type: STRING
- virtual_machine_type_enum: STRING
- virtual_machine_uuid: STRING
- virtual_machine_uuid_enum: STRING
- vm_pool_name: STRING
- vm_pool_name_enum: STRING

Appendix A. Documentation library

A variety of documentation is available for IBM Tivoli Monitoring for Virtual Environments Agent for Linux Kernel-based Virtual Machines.

Three documents are specific to the Linux Kernel-based Virtual Machines agent. The IBM Tivoli Monitoring for Virtual Environments Agent for Linux Kernel-based Virtual Machines *Reference Guide*, *Installation and Configuration Guide* and *Troubleshooting Guide* provides agent-specific information for configuring, using, and troubleshooting the Linux Kernel-based Virtual Machines agent.

The Prerequisites topic in the information center contains information about the prerequisites for each component.

Prerequisite documentation

To use the information about the components effectively, you must have some prerequisite knowledge.

The following information for Tivoli Monitoring is available in the IBM Knowledge Center (http://www.ibm.com/support/knowledgecenter) to gain prerequisite knowledge:

- *IBM Tivoli Monitoring Administrator's Guide*
- *IBM Tivoli Monitoring Installation and Setup Guide*
- *IBM Tivoli Monitoring High Availability Guide for Distributed Systems*
- IBM Tivoli Monitoring: Installation and Configuration Guides for the following agents: Operating System agents and Warehouse agents
- IBM Tivoli Monitoring: User's Guides for the following agents: Agentless OS monitors, Log File agent, System p agents, Systems Director base agent
- *IBM Tivoli Monitoring Agent Builder User's Guide*
- *IBM Tivoli Monitoring Command Reference*
- *IBM Tivoli Monitoring: Messages*
- *IBM Tivoli Monitoring Troubleshooting Guide*
- IBM Tivoli Monitoring: References for the following agents: Operating System agents and Warehouse agents
- IBM Tivoli Monitoring: Troubleshooting Guides for the following agents: Operating System agents and Warehouse agents
- *Tivoli Enterprise Portal User's Guide*

Related documentation

The documentation for related products provides useful information.

See the following products in IBM Knowledge Center (http://www.ibm.com/support/knowledgecenter/):

- Tivoli Monitoring
- Tivoli Application Dependency Discovery Manager
- Tivoli Business Service Manager
- Tivoli Common Reporting
- Tivoli Enterprise Console
- Tivoli Netcool/OMNIbus

Terminology that is relevant to IBM products is consolidated in one convenient locations at the IBM Terminology website (http://www.ibm.com/software/globalization/terminology).

Other sources of documentation

You can obtain additional technical documentation about monitoring products from other sources.

See the following sources of technical documentation about monitoring products:

- IBM Integrated Service Management Library (http://www.ibm.com/software/brandcatalog/ismlibrary/) is an online catalog that contains integration documentation as well as other downloadable product extensions.
- IBM Redbook publications (http://www.redbooks.ibm.com/) include Redbooks® publications, Redpapers, and Redbooks technotes that provide information about products from platform and solution perspectives.
- Technotes (http://www.ibm.com/support/entry/portal/software), which are found through the IBM Software Support website, provide the latest information about known product limitations and workarounds.

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