

Using Database Views

VirtualCenter 2.x

This document describes the relationships of the provided database views in your VMware VirtualCenter database. This document does not describe how to create or use database views. This document describes the database views for VirtualCenter 2.x. Some of the views are common to all releases of VirtualCenter 2.x, while others are pertinent to only some releases. This document is organized to clearly identify whether a view is common to all releases or release-specific.

NOTE The procedures are intended for database administrators. Do not attempt to perform the tasks outlined in this document if you do not have database administrator experience.

The database views are used to view VMware VirtualCenter data stored in the VirtualCenter database. The following views are supported by VMware VirtualCenter:

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Database Views for all VirtualCenter 2.x Releases

The following provides a brief description of the the database elements common to all VirtualCenter 2.x releases and their relationship in VMware VirtualCenter.

vpxv_FarmGroups

This view describes the farm groups in VirtualCenter. One and only one farm group is the root farm group. The root farm group does not have a parent.

Object	Object Description	Type
FarmGroupID	The ID of the FarmGroup.	INT
Name	The name of the FarmGroup.	VARCHAR (255)
ParentID	The ID of the parent FarmGroup. A foreign key to vpxv_FarmGroups. FarmGroupID.	INT

vpxv_VMGroups

This view describes the virtual machine groups in VirtualCenter.

Object	Object Description	Type
VMGroupID	The ID of the VMGroup.	INT
Name	The name of the VMGroup.	VARCHAR (255)
ParentID	The ID of the parent VMGroup. A foreign key to vpxv_VMGroups.VMGroupID. It is null when current VMGroup is the root.	INT

vpxv_Entity

This view describes all the entities in VirtualCenter.

Object	Object Description	Type
ID	The ID of the entity.	INT
Name	The name of the entity.	VARCHAR (255)
Type_ID	The ID of the entity type.	INT
Parent_ID	The ID of the entity parent.	INT
Parent_Type_ID	The type of entity represented by the Parent_ID	INT

vpxv_Hosts

This view describes the hosts in VirtualCenter.

Object	Object Description	Type
HostID	The ID of the host.	INT
Name	The name of the host.	VARCHAR 255)
FarmID	The ID of the farm. A foreign key to vpxv_Farms.FarmID.	INT
Port	The port number used to connect to the host.	INT
UserName	The user name used to connect to the host.	VARCHAR (255)
Enabled	An indication of whether VirtualCenter will connect to the host upon VirtualCenter start-up. The flag values are 1 if VirtualCenter should connect to the host or 0 if it should not.	INT

vpxv_VMs

This view describes the virtual machines in VirtualCenter.

Object	Object Description	Type
VMID	The ID of the virtual machine.	INT
Name	The name of the virtual machine.	VARCHAR (255)
VMGroupID	The ID of the virtual machine group. A foreign key to vpxv_VMGroups.VMGroupID.	INT
HostID	The ID of the host. A foreign key to vpxv_Hosts.HostID.	INT
ConfigFileName	The path of the virtual machine configuration file.	VARCHAR (255)
VMUniqueID	The UUID of the virtual machine.	VARCHAR (255)

vpxv_Templates

This view describes the templates in VirtualCenter.

Object	Object Description	Type
TemplateID	The ID of the template.	INT
Name	The name of the template.	VARCHAR (255)
Description	The description of the template.	VARCHAR (255)

vpxv_Tasks

This view describes the tasks in VirtualCenter.

Object	Object Description	Type	Value
TaskID	The ID of the task.	INT	
Name	The name of the task.	VARCHAR (255)	
Enabled	If the task needs to be run.	INT	
Frequency	The frequency with which a task needs to be run.	VARCHAR (255)	This object can have any of six values: <ul style="list-style-type: none"> ■ afterStartup – The scheduled task runs whenever VirtualCenter is restarted. ■ once – The scheduled task runs once at specified intervals. ■ hourly – The scheduled task runs every hour. ■ daily – The scheduled task runs every day. ■ weekly – The scheduled task runs every week. ■ monthly – The scheduled task runs every month.
Status	The run status of the task.	VARCHAR (255)	This object can have any of three values: <ul style="list-style-type: none"> ■ done – The scheduled task completed successfully. ■ error – The scheduled task failed. ■ inProgress – The scheduled task is running.
SendTo	The e-mail address that VirtualCenter sends a notice to when the task finishes.	VARCHAR (255)	

vpxv_Alarms

This view describes the Alarms in VirtualCenter.

Object	Object Description	Type
AlarmID	The ID of the alarm.	INT
Name	The name of the alarm.	VARCHAR (255)
Enabled	An indication of whether the alarm is enabled. The flag values are 1 if the alarm is enabled or 0 if it is not.	INT

vpxv_Host_Datastore

This view describes the datastores for each host in VirtualCenter.

Object	Object Description	Type
Host_ID	The ID of the host.	INT
DS_ID	The ID of the datastore.	INT
Accessible	Indicates whether the datastore is accessible.	INT
Mount_Path	The mount path of the datastore.	VARCHAR (255)
Mount_ID	The mount id of the datastore.	VARCHAR (255)
Mount_Mode	The mode in which the datastore is mounted.	VARCHAR (255)

vpxv_VM_Datastore

This view describes the datastores for each virtual machine in VirtualCenter.

Object	Object Description	Type
VM_ID	The ID of the virtual machine.	INT
DS_ID	The ID of the datastore.	INT

vpxv_Host_Network

This view describes the networks for each host in VirtualCenter.

Object	Object Description	Type
Host_ID	The ID of the host.	INT
Network_ID	The ID of the network.	INT

vpxv_VM_Network

This view describes the networks for each virtual machine in VirtualCenter.

Object	Object Description	Type
VM_ID	The ID of the virtual machine.	INT
Network_ID	The ID of the network.	INT

vpxv_Compute_Resource_Network

This view describes the networks associated with each compute resource in VirtualCenter.

Object	Object Description	Type
Compute_Resource_ID	The ID of the compute resource.	INT
Network_ID	The ID of the network.	INT

vpxv_Fields

This view describes the user defined fields for hosts or virtual machines in VirtualCenter.

Object	Object Description	Type	Values
FieldID	The ID of the user defined field.	INT	
Name	The name of the field.	VARCHAR (255)	Name of additional attribute names defined by user for Host or virtual machine, such as the Location of the host or the OS of the virtual machine.

vpxv_Host_Fields

This view describes the value for host fields.

Object	Object Description	Type	Values
FieldID	The ID of the field. A foreign key to vpxv_Fields.FieldID.	INT	
HostID	The ID of the host. A foreign key to vpxv_Hosts.HostID.	INT	
FieldValue	The value of the field.	VARCHAR (255)	Description of a user defined attribute declared in vpxv_Fields, such as VMware building A Room 11002 for the Location of a host.

vpxv_VM_Fields

This view describes the value for virtual machine fields.

Object	Object Description	Type	Values
FieldID	The ID for the field. A foreign key to vpxv_Fields.FieldID.	INT	
VMID	The ID of the virtual machine. A foreign key to vpxv_VMs.VMID.	INT	
FieldValue	The value of the field.		Description of a user defined attribute declared in vpxv_Fields, such as No OS installed for the OS of a virtual machine.

Database Views for VirtualCenter 2.0.x Releases

The following provides a brief description of the the database elements exclusive to VirtualCenter 2.0.x releases and their relationship in VMware VirtualCenter. These views are deprecated in VirtualCenter 2.5 and above.

vpxv_Perf_Intervals

This view describes the intervals for performance data.

Object	Object Description	Type
IntervalID	The ID of the interval.	INT
Name	The name of the interval.	VARCHAR (255)
MaxSamples	The maximum number of samples taken in the interval.	INT
Interval	The period of the interval in seconds.	INT

vpvx_Perf_Host_Counters

This view describes the devices on hosts.

Object	Object Description	Type
HostID	The host for which the counter is defined. A foreign key to vpxv_Hosts.HostID.	INT
CounterID	The ID of the counter.	INT
Name	The name of the device on the host.	VARCHAR (255)
Instance	The sequence number of the device. Note: This column is included in the view for compatibility with earlier versions of VirtualCenter. In VirtualCenter 2.x, the value is always NULL.	VARCHAR (255)
Description	The description of the device.	VARCHAR (255)

vpvx_Perf_Host_Data

This view describes the host performance data.

Object	Object Description	Type
HostID	The ID of the host. A foreign key to vpxv_Hosts.HostID.	INT
CounterID	The ID of the counter. With the HostID, this object is the foreign key of vpxv_Perf_Host_Counters.HostID	INT
IntervalID	The ID of the interval. A foreign key to vpxv_Perf_Intervals.IntervalID.	INT
SampleDepth	The sample depth. Range: 0 to -interval.MaxSamples+1. 0 is the most recent (latest) sample. -(interval.MaxSamples) + (1) is the oldest sample.	INT
SampleTime	The time at which the performance sample is collected, expressed in UTC time.	DATE TIME
SampleValue	The value of the sample.	INT

vpvx_Hist_Stat

This view describes the performance data for all entities.

Object	Object Description	Type
Sample_Time	The time at which the performance sample is collected, expressed in UTC time.	DATE TIME
Sample_Interval	The ID of the interval. A foreign key to vpxv_Perf_Intervals.IntervalID.	INT
Stat_Name	The name of the performance statistic.	VARCHAR (30)
Stat_Group	The group name of the performance statistic.	VARCHAR (30)
Stat_Rollup	The rollup type of the performance statistic.	VARCHAR (9)
Entity_ID	The ID of the entity.	INT
Device_ID	The device instance to which the statistical value applies.	VARCHAR (255)
Stat_Value	The value of the performance statistic sample.	INT

vpxv_Perf_VM_Counters

This view describes the devices on virtual machines.

Object	Object Description	Type	Value
VMID	The ID of the virtual machine. A foreign key to vpxv_VMs.VMID.	INT	
CounterID	The ID of the counter.	INT	
Name	The name of the device on the virtual machine.	VARCHAR (255)	
Instance	The sequence number of the device. Note: This column is included in the view for compatibility with earlier versions of VirtualCenter. In VirtualCenter 2.x, the value is always NULL.	VARCHAR (255)	The sequence number of the device. For example, if there are 4 CPUs, their instance numbers would be 0, 1, 2 and 3.
Description	The description of the device.	VARCHAR (255)	

vpxv_Perf_VM_Data

This view describes the virtual machine performance data.

Object	Object Description	Type	Value
VMID	The ID of the virtual machine. A foreign key to vpxv_Perf_VM_Data.	INT	
CounterID	The ID of the counter. With the VMID, this object is the foreign key of vpxv_Perf_VM_Counters.VMID/CounterID	INT	
IntervalID	The ID of the interval. A foreign key to vpxv_Perf_Intervals.IntervalID.	INT	
SampleDepth	The sample depth. Range: 0 to -interval.MaxSamples+1. 0 is the most recent (latest) sample. -(interval.MaxSamples) + (1) is the oldest sample.	INT	The total number of samples is different for each interval. You can configure the total samples for each interval through VI Client by selecting VMware VirtualCenter Settings > Statistics . A SampleDepth of 0 means the most recent sample. -1 means the second most recent sample and so on.
SampleTime	The time at which the sample is collected, expressed in UTC time.	DATE TIME	
SampleValue	The value of the sample.	INT	

Database Views for VirtualCenter 2.5 and Above

The following provides a brief description of the the database elements exclusive to VirtualCenter 2.5 release and all later updates to VirtualCenter 2.5. The tables indicated the relationship between the views and VMware VirtualCenter.

vpvx_Stat_Historical_Intervals

This view describes the intervals for performance data.

Object	Object Description	Type
ID	The ID of the interval.	NUMBER (2)
Name	The name of the interval.	VARCHAR (30)
Sample_Period	The period of the collection interval in seconds.	NUMBER (10)
Interval_Length	The time in seconds for which collection interval data is stored. For example, if the interval period is 60 seconds and the interval length is 360 seconds, the first collection interval will be dropped from storage at the end of 360 seconds. The data will still exist, but only as part of the roll-up.	NUMBER (10)
Stats_Leve	The level of the statistical data you want to be rolled up.	NUMBER (10)
Rollup_Enabled_Flg	A flag indicating whether you want to enable statistical data roll up. The flag values are 1 if roll-ups are enabled roll-ups or 0 if they are disabled.	NUMBER (1)

vpvx_Stat_Counters

This view describes the statistics collection counter across all entities.

Object	Object Description	Type
ID	The ID of the performance statistic.	INT
Rollup_Type	The rollup type of the performance statistic. This object specifies one of following rolup types: <ul style="list-style-type: none"> ■ average – The average of the statistic calculated over time. ■ maximum – The maximum value of the statistic. ■ minimum – The minimum value of the statistic over time. ■ latest – The most recent value for the statistic. ■ summation – The sum of the statistic values. ■ none – No rollup occurs. 	VARCHAR (30)
Name	The name of the performance statistic.	VARCHAR (30)
Group_Name	The group name of the performance statistic.	VARCHAR (30)
Type	The type of the performance statistics counter. This object specifies one of following: <ul style="list-style-type: none"> ■ absolute – Tracks an absolute value for the performance statistic over the collection interval. For example, if the counter were tracking the uptime of a virtual machine, the value recorded would be the number of seconds that the virtual machine has been operating since it was started. ■ delta – Tracks the change in the performance statistic between the start and end of the collection interval. ■ rate – Tracks a normalized amount of change that can be compared regardless of the the sampling interval over which the performance statistic is collected. An example of a rate value is counting the number of reads per second. 	VARCHAR (30)
Unit	The unit of the performance statistic.	VARCHAR (30)
Associate_IDs	The associated IDs for the performance statistic.	VARCHAR (128)
Stat_Level	The statistics collection level which this statistics counter is be collected.	NUMBER (2)

vpxv_Hist_Stat_Daily

This view describe the performance statistics for the past day.

Object	Object Description	Type
Sample_Time	The time at which the performance statistic sample is collected, expressed in UTC time.	DATE TIME
Sample_Interval	The interval of the performance statistics sample.	NUMBER (10)
Stat_Name	The name of the performance statistic.	VARCHAR (30)
Stat_Group	The group name of the performance statistic.	VARCHAR (30)
Stat_Rollup_Type	The rollup type of the performance statistic.	VARCHAR (9)
Entity	The ManagedObject ID of the entity.	VARCHAR (255)
Device_Name	The name of the device.	VARCHAR (510)
Stat_Value	The value of the performance statistic sample.	INT

vpxv_Hist_Stat_Weekly

This view describe the performance statistics for the past week.

Object	Object Description	Type
Sample_Time	The time at which the performance statistic sample is collected, expressed in UTC time.	DATE TIME
Sample_Interval	The interval of the performance statistics sample.	NUMBER (10)
Stat_Name	The name of the performance statistic.	VARCHAR (30)
Stat_Group	The group name of the performance statistic.	VARCHAR (30)
Stat_Rollup_Type	The rollup type of the performance statistic.	VARCHAR (9)
Entity	The ManagedObject ID of the entity.	VARCHAR (255)
Device_Name	The name of the device.	VARCHAR (510)
Stat_Value	The value of the performance statistic sample.	INT

vpxv_Hist_Stat_Monthly

This view describe the performance statistics for the past month.

Object	Object Description	Type
Sample_Time	The time at which the performance statistic sample is collected, expressed in UTC time.	DATE TIME
Sample_Interval	The interval of the performance statistics sample.	NUMBER (10)
Stat_Name	The name of the performance statistic.	VARCHAR (30)
Stat_Group	The group name of the performance statistic.	VARCHAR (30)
Stat_Rollup_Type	The rollup type of the performance statistic.	VARCHAR (9)
Entity	The ManagedObject ID of the entity.	VARCHAR (255)
Device_Name	The name of the device.	VARCHAR (510)
Stat_Value	The value of the performance statistic sample.	INT

vpxv_Hist_Stat_Yearly

This view describe the performance statistics for the past year.

Object	Object Description	Type
Sample_Time	The time at which the performance statistic sample is collected, expressed in UTC time.	DATE TIME
Sample_Interval	The interval of the performance statistics sample.	NUMBER (10)
Stat_Name	The name of the performance statistic.	VARCHAR (30)
Stat_Group	The group name of the performance statistic.	VARCHAR (30)
Stat_Rollup_Type	The rollup type of the performance statistic.	VARCHAR (9)
Entity	The ManagedObject ID of the entity.	VARCHAR (255)
Device_Name	The name of the device.	VARCHAR (510)
Stat_Value	The value of the performance statistic sample.	INT

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