

Agent for VMware Host

The Agent monitors VMware Hosts

Information relating to this Agent

Link and statistic levels correct and upto date as of publication:

http://pubs.vmware.com/vsphere-50/index.jsp#com.vmware.wssdk.apiref.doc_50/vim.PerformanceManager.html

CPU > Overall

CPU > Overall > CPUs (no)

Source: vSphere Documentation Center

Managed Object - HostSystem: hardware > cpuInfo > numCpuCores

Description: Number of physical CPU cores on the host.

Comments: No stat level required.

Code API: 'CPU-Overall-CPUs'
or 'S5 J2'

CPU > Overall > CPU speed (MHz)

Source: vSphere Documentation Center

Managed Object - HostSystem: > hardware > cpuInfo > hz

Description: CPU speed per core. This might be an averaged value if the speed is not uniform across all cores. The total CPU speed of the box is defined as $hz * numCpuCores$.

Comments: No stat level required.

Code API: 'CPU-Overall-CPUspeed'
or 'S5 J3'

CPU > Overall > CPU capacity (MHz)

Source: vSphere Documentation Center

Managed Object - Performance Manager: HostSystem_cpu > totalCapacity (average)

Description: The maximum value is equal to the frequency of the processors multiplied by the number of cores. $totalmhz = CPU \text{ frequency} \times \text{number of cores}$.

Comments: Requires stat level 2 in vCenter.

Code API: 'CPU-Overall-CPUcapacity'
or 'S5 J4'

CPU > Overall > CPU used (MHz)

Source: vSphere Documentation Center

Managed Object - Performance Manager: HostSystem_cpu > usagemhz (average)

Description: The CPU utilization. The maximum possible value here is the frequency of the processors times the number of cores. As an example, a VM using 4000 MHz on a system with four 2 GHz processors is using 50% of the CPU ($4000 / (4 * 2000) = 0.5$).

Comments: Requires stat level 1 in vCenter.

Code API: 'CPU-Overall-CPUused'
or 'S5 J5'

CPU > Overall > CPU free (MHz)

Source: vSphere Documentation Center

For CPU Capacity - PerformanceManager: HostSystem_cpu > totalCapacity (average)
megaHertz

For CPU Used - PerformanceManager: HostSystem_cpu > usagemhz (average)

Description: The current free CPU space. "CPU capacity" - "CPU used".

Comments: Requires stat level 2 in vCenter.

Code API: 'CPU-Overall-CPUfree'
or 'S5 J6'

CPU > Overall > CPU % used (%)

Source: vSphere Documentation Center

Managed Object - Performance Manager: HostSystem_cpu > usage (average)

Description: The CPU utilization. This value is reported with 100% representing all processor cores on the system. As an example, a 2-way VM using 50% of a four-core system is completely using two cores.

Comments: Requires stat level 1 in vCenter.

Code API: 'CPU-Overall-CPUpc_used'
or 'S5 J7'

CPU > Overall > CPU % free (%)

Source: This metric is calculated by Sysload.

100 - "CPU % used"

Description: Percentage of free CPU.

Code API: 'CPU-Overall-CPUpc_free'
or 'S5 J8'

CPU > Overall > CPU reserved (MHz)

Source: vSphere Documentation Center

Managed Object - Performance Manager: HostSystem_cpu > reservedCapacity (average)

Description: CPU Reserved Capacity.

Comments: Requires stat level 2 in vCenter.

Code API: 'CPU-Overall-CPUreserved'
or 'S5 J9'

CPU > Overall > CPU provisioned (MHz)

Source: This metric is calculated by Sysload.

Description: CPU provisioned.

Code API: 'CPU-Overall-CPUprovisioned'
or 'S5 JA'

CPU > Overall > CPU % overcommitment (%)

Source: This metric is calculated by Sysload.

Description: CPU overcommitment.

Code API: 'CPU-Overall-CPUpc_overcommitment'
or 'S5 JB'

CPU > Specific

CPU > Specific > CPU % used (%)

Source: vSphere Documentation Center

Managed Object - Performance Manager: HostSystem_cpu > usage (average)

Description: The CPU utilization. This value is reported with 100% representing all processor cores on the system. As an example, a 2-way VM using 50% of a four-core system is completely using two cores.

Comments: Requires stat level 1 in vCenter.

Code API: 'CPU-Specific-CPUpc_used'
or 'EFFFF K3'

Memory > Overall

Memory > Overall > memory capacity (MB)

Source: vSphere Documentation Center

Managed Object - HostSystem: hardware > memorySize

Description: Total amount of physical memory on the host in bytes.

Comments: No stat level required.

Code API: 'Memory-Overall-memorycapacity'
or 'S6 L2'

Memory > Overall > memory consumed (MB)

Source: vSphere Documentation Center

Managed Object - Performance Manager: memory > consumed (average)

Description: The amount of machine memory that is in use by the VM. While a VM may have been configured to use 4 GB of RAM, as an example, it might have only touched half of that. Of the 2 GB left, half of that might be saved from memory sharing. That would result in 1 GB of consumed memory.

Comments: Requires stat level 1 in vCenter.

Code API: 'Memory-Overall-memoryconsumed'
or 'S6 L3'

Memory > Overall > memory active (MB)

Source: vSphere Documentation Center

Managed Object - Performance Manager: memory > active (average)

Description: The amount of memory used by the VM in the past small window of time. This is the "true" number of how much memory the VM currently has need of. Additional, unused memory may be swapped out or ballooned with no impact to the guest's performance.

Comments: Requires stat level 2 in vCenter.

Code API: 'Memory-Overall-memoryactive'
or 'S6 LC'

Memory > Overall > memory free (MB)

Source: This metric is calculated by Sysload.

memory capacity - memory consumed

Description: Overall memory free.

Code API: 'Memory-Overall-memoryfree'
or 'S6 L4'

Memory > Overall > memory % consumed (%)

Source: This metric is calculated by Sysload.

Description: Memory consumed.

Code API: 'Memory-Overall-memorypc_consumed'
or 'S6 L5'

Memory > Overall > memory % free (%)

Source: This metric is calculated by Sysload.

Description: Free memory.

Code API: 'Memory-Overall-memorypc_free'
or 'S6 L6'

Memory > Overall > memory overhead (MB)

Source: This metric is calculated by Sysload.

Description: Memory overhead.

Code API: 'Memory-Overall-memoryoverhead'
or 'S6 L7'

Memory > Overall > memory shared (MB)

Source: vSphere Documentation Center

Managed Object - Performance Manager: memory > overhead (average)

Description: The average amount of shared memory. Shared memory represents the entire pool of memory from which sharing savings are possible. The amount of memory that this has been condensed to is reported in shared common memory. So, total saving due to memory sharing equals shared memory minus shared common memory.

Comments: Requires stat level 1 in vCenter.

Code API: 'Memory-Overall-memoryshared'
or 'S6 L8'

Memory > Overall > memory shared common (MB)

Source: vSphere Documentation Center

Managed Object - Performance Manager: memory > sharedcommon (average)

Description: The average amount of shared common memory. Shared memory represents the entire pool of memory from which sharing savings are possible. The amount of memory that this has been condensed to is reported in shared common memory. So, total saving due to memory sharing equals shared memory minus shared common memory.

Comments: Requires stat level 2 in vCenter.

Code API: 'Memory-Overall-memorysharedcommon'
or 'S6 L9'

Memory > Overall > memory reserved (MB)

Source: vSphere Documentation Center

Managed Object - Performance Manager: memory > reservedCapacity (average)

Description: Memory Reserved Capacity.

Comments: Requires stat level 2 in vCenter.

Code API: 'Memory-Overall-memoryreserved'
or 'S6 LA'

Memory > Overall > memory provisioned (MB)

Source: This metric is calculated by Sysload.

Description: Provisioned memory.

Code API: 'Memory-Overall-memoryprovisioned'
or 'S6 LB'

Memory > Overall > memory % overcommitment (%)

Source: This metric is calculated by Sysload.

Description: Percentage of memory overcommitment.

Code API: 'Memory-Overall-memorypc_overcommitment'
or 'S6 LD'

Device > Specific

Device > Specific > commands issued (no)

Source: vSphere Documentation Center

Managed Object - Performance Manager: disk > commands (summation)

Description: Disk Commands Issued.

Comments: Requires stat level 2 in vCenter.

Code API: 'Device-Specific-commandsissued'
or 'GFFFF M2'

Device > Specific > read requests (no)

Source: vSphere Documentation Center

Managed Object - Performance Manager: disk > numberRead (summation)

Description: The number of IO read operations in the previous sample period. Note that these operations may be variable sized up to 64 KB.

Comments: Requires stat level 3 in vCenter.

Code API: 'Device-Specific-readrequests'
or 'GFFFF M3'

Device > Specific > write requests (no)

Source: vSphere Documentation Center

Managed Object - Performance Manager: disk > numberWrite (summation)

Description: The number of IO write operations in the previous sample period. Note that these operations may be variable sized up to 64 KB.

Comments: Requires stat level 3 in vCenter.

Code API: 'Device-Specific-writerequests'
or 'GFFFF M4'

Device > Specific > bus resets (no)

Source: vSphere Documentation Center

Managed Object - Performance Manager: disk > busResets (summation)

Description: Disk Bus Resets.

Comments: Requires stat level 2 in vCenter.

Code API: 'Device-Specific-busresets'
or 'GFFFF M5'

Device > Specific > read throughput (kB/s)

Source: vSphere Documentation Center

Managed Object - Performance Manager: disk > read (average)

Description: Average disk throughput due to read operations.

Comments: Requires stat level 2 in vCenter.

Code API: 'Device-Specific-readthroughput'
or 'GFFFF M6'

Device > Specific > write throughput (kB/s)

Source: vSphere Documentation Center

Managed Object - Performance Manager: disk > write (average)

Description: Average disk throughput due to write operations.

Comments: Requires stat level 2 in vCenter.

Code API: 'Device-Specific-writethroughput'
or 'GFFFF M7'

Device > Specific > throughput (kB/s)

Source: vSphere Documentation Center

Managed Object - Performance Manager: disk > usage (average)

Description: Average disk throughput over the sample period.

Comments: Requires stat level 1 in vCenter.

Code API: 'Device-Specific-throughput'
or 'GFFFF ML'

Device > Specific > disk command latency (ms)

Source: vSphere Documentation Center

Managed Object - Performance Manager: disk > totalLatency (average)

Description: Average total latency over the sample window. Total latency is the sum of kernel and device latency for both read and write commands.

Comments: Requires stat level 3 in vCenter.

Code API: 'Device-Specific-diskcommandlatency'
or 'GFFFF M8'

Device > Specific > disk read latency (ms)

Source: vSphere Documentation Center

Managed Object - Performance Manager: disk > deviceReadLatency (average)

Description: Device read latency. This is the time the physical device from the HBA to the platter takes to service an IO request.

Comments: Requires stat level 2 in vCenter.

Code API: 'Device-Specific-diskreadlatency'
or 'GFFFF M9'

Device > Specific > disk write latency (ms)

Source: vSphere Documentation Center

Managed Object - Performance Manager: disk > deviceWriteLatency (average)

Description: Disk write latency.

Comments: Requires stat level 2 in vCenter.

Code API: 'Device-Specific-diskwritelatency'
or 'GFFFF MA'

Device > Specific > disk command aborts (no)

Source: vSphere Documentation Center

Managed Object - Performance Manager: disk > commandsAborted (summation)

Description: The number of aborts that have occurred in the last window of time. Abort commands are issued by the guest when the storage system has not responded within an acceptable amount of time (as defined by the guest OS or application.)

Comments: Requires stat level 2 in vCenter.

Code API: 'Device-Specific-diskcommandaborts'
or 'GFFFF MB'

Device > Specific > physical device latency (ms)

Source: vSphere Documentation Center

Managed Object - Performance Manager: disk > deviceLatency (average)

Description: Physical Device Command Latency.

Comments: Requires stat level 1 in vCenter.

Code API: 'Device-Specific-physicaldevicelatency'
or 'GFFFF MC'

Device > Specific > physical device read latency (ms)

Source: vSphere Documentation Center

Managed Object - Performance Manager: disk > deviceReadLatency (average)

Description: Device read latency. This is the time the physical device from the HBA to the platter takes to service an IO request.

Comments: Requires stat level 2 in vCenter.

Code API: 'Device-Specific-physicaldevicereadlatency'
or 'GFFFF MD'

Device > Specific > physical device write latency (ms)

Source: vSphere Documentation Center

Managed Object - Performance Manager: disk > deviceWriteLatency (average)

Description: Device write latency. This is the time the physical device from the HBA to the platter takes to service an IO request.

Comments: Requires stat level 2 in vCenter.

Code API: 'Device-Specific-physicaldevicewritelatency'
or 'GFFFF ME'

Device > Specific > kernel latency (ms)

Source: vSphere Documentation Center

Managed Object - Performance Manager: disk > kernelLatency (average)

Description: Kernel Disk Command Latency.

Comments: Requires stat level 2 in vCenter.

Code API: 'Device-Specific-kernellatency'
or 'GFFFF MF'

Device > Specific > kernel disk read latency (ms)

Source: vSphere Documentation Center

Managed Object - Performance Manager: disk > kernelReadLatency (average)

Description: Kernel read latency. This is the time the VMkernel takes to service an IO. This is the time between the guest OS and the device.

Comments: Requires stat level 2 in vCenter.

Code API: 'Device-Specific-kerneldiskreadlatency'
or 'GFFFF MG'

Device > Specific > kernel disk write latency (ms)

Source: vSphere Documentation Center

Managed Object - Performance Manager: disk > kernelWriteLatency (average)

Description: Kernel write latency. This is the time the VMkernel takes to service an IO. This is the time between the guest OS and the device.

Comments: Requires stat level 2 in vCenter.

Code API: 'Device-Specific-kerneldiskwritelatency'
or 'GFFFF MH'

Device > Specific > queue command latency (ms)

Source: vSphere Documentation Center

Managed Object - Performance Manager: disk > queueLatency (average)

Description: Queue Latency.

Comments: Requires stat level 1 in vCenter.

Code API: 'Device-Specific-queuecommandlatency'
or 'GFFFF MI'

Device > Specific > queue read latency (ms)

Source: vSphere Documentation Center

Managed Object - Performance Manager: disk > queueReadLatency (average)

Description: Queue Read Latency.

Comments: Requires stat level 2 in vCenter.

Code API: 'Device-Specific-queureadlatency'
or 'GFFFF MJ'

Device > Specific > queue write latency (ms)

Source: vSphere Documentation Center

Managed Object - Performance Manager: disk > queueWriteLatency (average)

Description: Queue Write Latency.

Comments: Requires stat level 2 in vCenter.

Code API: 'Device-Specific-queuewritelatency'
or 'GFFFF MK'

Datstore > Overall

Datstore > Overall > storage capacity (GB)

Source: This metric is calculated by Sysload.

Description: Configured size of the datstore.

Code API: 'Datstore-Overall-storagecapacity'
or 'S4 I2'

Datstore > Overall > storage used (GB)

Source: This metric is calculated by Sysload.

Description: Amount of space actually used by the datstore.

Code API: 'Datstore-Overall-storageused'
or 'S4 I3'

Datstore > Overall > storage free (GB)

Source: This metric is calculated by Sysload.

Description: Amount of space actually free by the datstore.

Code API: 'Datstore-Overall-storagefree'
or 'S4 I4'

Datstore > Overall > storage provisioned (GB)

Source: This metric is calculated by Sysload.

Description: Amount of storage set-aside for use by a datstore or virtual machine. Files on the datstore and the virtual machine can expand to this size, but not beyond it.

Code API: 'Datstore-Overall-storageprovisioned'
or 'S4 I5'

Datstore > Overall > storage % used (%)

Source: This metric is calculated by Sysload.

Description: Storage used in percentage.

Code API: 'Datstore-Overall-storagepc_used'
or 'S4 I6'

Datstore > Overall > storage % free (%)

Source: This metric is calculated by Sysload.

Description: Storage free in percentage.

Code API: 'Datstore-Overall-storagepc_free'
or 'S4 I7'

Datstore > Specific

Datstore > Specific > storage capacity (GB)

Source:

Managed Object - Performance Manager: Datstore > disk > capacity > latest

Code API: 'Datstore-Specific-storagecapacity'
or 'BFFFF E3'

Datastore > Specific > storage used (GB)

Source: Managed Object - Performance Manager: Datastore > disk > used > latest

Code API: 'Datastore-Specific-storageused'
or 'BFFFF E4'

Datastore > Specific > storage free (GB)

Source: vSphere Documentation Center

Managed Object - Datastore: summary > freeSpace

Description: Available space of this datastore, in bytes. The server periodically updates this value. It can be explicitly refreshed with the Refresh operation. This property is guaranteed to be valid only if accessible is true.

Comments: No stat level required.

Code API: 'Datastore-Specific-storagefree'
or 'BFFFF E2'

Datastore > Specific > storage % used (%)

Source: This metric is calculated by Sysload.

Description: Storage used in percentage.

Code API: 'Datastore-Specific-storageepc_used'
or 'BFFFF E7'

Datastore > Specific > storage % free (%)

Source: This metric is calculated by Sysload.

Description: Storage free in percentage.

Code API: 'Datastore-Specific-storageepc_free'
or 'BFFFF E8'

Datastore > Specific > storage provisioned (GB)

Source: PerfManager: Datastore > disk > provisioned > latest

Code API: 'Datastore-Specific-storageprovisioned'
or 'BFFFF E5'

Datastore > Specific > storage % overcommitment (%)

Source: This metric is calculated by Sysload.

100% indicates the storage provisioned equals the capacity.
200% indicates the storage provisioned is twice as big as the capacity.

Description: Storage overcommitment.

Code API: 'Datastore-Specific-storageepc_overcommitment'
or 'BFFFF E6'

Datastore > Specific > read requests rate (no/s)

Code API: 'Datastore-Specific-readrequestsrate'
or 'BFFFF E9'

Datastore > Specific > write requests rate (no/s)

Code API: 'Datastore-Specific-writerequestsrate'
or 'BFFFF EA'

Datastore > Specific > read rate (kB/s)

Source: vSphere Documentation Center

Managed Object - Performance Manager: Datastore > read

Description: Rate of reading data from the datastore.

Comments: Requires stat level 2 in vCenter.

Code API: 'Datastore-Specific-readrate'
or 'BFFFF EB'

Datastore > Specific > write rate (kB/s)

Source: vSphere Documentation Center

Managed Object - Performance Manager: Datastore > write

Description: Rate of writing data to the datastore.

Comments: Requires stat level 2 in vCenter.

Code API: 'Datastore-Specific-writerate'
or 'BFFFF EC'

Datastore > Specific > throughput (kB/s)

Source: vSphere Documentation Center

Managed Object - Performance Manager: Datastore > throughput usage

Description: Aggregated disk I/O rate. For hosts, this metric includes the rates for all virtual machines running on the host during the collection interval.

Comments: Requires stat level 3 in vCenter.

Code API: 'Datastore-Specific-throughput'
or 'BFFFF EF'

Datastore > Specific > duration of an operation (msec)

Code API: 'Datastore-Specific-durationofanoperation'
or 'BFFFF EG'

Resource pool > Specific

Resource pool > Specific > total VMs (no)

Source: This metric is calculated by Sysload.

Description: Total number of VMs.

Code API: 'Resourcepool-Specific-totalVMs'
or 'DFFFF HE'

Resource pool > Specific > CPU reserved (MHz)

Source: vSphere Documentation Center

Managed Object - ResourcePool: config > memoryAllocation > reservation

Description: Amount of resource that is guaranteed available to the virtual machine or resource pool. Reserved resources are not wasted if they are not used. If the utilization is less than the reservation, the resources can be utilized by other running virtual machines. Units are MB for memory, MHz for CPU.

Comments: No stat level is required.

Code API: 'Resourcepool-Specific-CPUreserved'
or 'DFFFF H2'

Resource pool > Specific > CPU unlimited (0/1)

Source: This metric is calculated by Sysload.

Description: CPU unlimited.

Code API: 'Resourcepool-Specific-CPUunlimited'
or 'DFFFF H3'

Resource pool > Specific > CPU shares (no)

Source: vSphere Documentation Center

Managed Object - ResourcePool: config > cpuAllocation > shares > shares

Description: The number of shares allocated. Used to determine resource allocation in case of resource contention. This value is only set if level is set to custom. If level is not set to custom, this value is ignored. Therefore, only shares with

custom values can be compared. There is no unit for this value. It is a relative measure based on the settings for other resource pools.

Comments: No stat level required.

Code API: 'Resourcepool-Specific-CPUshares'
or 'DFFFF H5'

Resource pool > Specific > CPU used (MHz)

Source: Managed Object - Performance Manager: cpu > capacity.usage (megaHertz _ average)

Description: CPU usage in megaHertz during the interval.

Comments: Stat level 3 is required in vCenter.

Code API: 'Resourcepool-Specific-CPUused'
or 'DFFFF H6'

Resource pool > Specific > memory reserved (MB)

Source: vSphere Documentation Center

Managed Object - ResourcePool: config > memoryAllocation > reservation

Description: Amount of resource that is guaranteed available to the virtual machine or resource pool. Reserved resources are not wasted if they are not used. If the utilization is less than the reservation, the resources can be utilized by other running virtual machines. Units are MB for memory, MHz for CPU.

Comments: No stat level required.

Code API: 'Resourcepool-Specific-memoryreserved'
or 'DFFFF H7'

Resource pool > Specific > memory unlimited (0/1)

Source: This metric is calculated by Sysload.

Description: Memory unlimited.

Code API: 'Resourcepool-Specific-memoryunlimited'
or 'DFFFF H8'

Resource pool > Specific > memory shares (no)

Source: vSphere Documentation Center

Managed Object - ResourcePool: config > memoryAllocation > shares > shares

Description: The number of shares allocated. Used to determine resource allocation in case of resource contention. This value is only set if level is set to custom. If level is not set to custom, this value is ignored. Therefore, only shares with custom values can be compared. There is no unit for this value. It is a relative measure based on the settings for other resource pools.

Comments: No stat level required.

Code API: 'Resourcepool-Specific-memoryshares'
or 'DFFFF HA'

Resource pool > Specific > memory active (MB)

Source: vSphere Documentation Center

Managed Object - Performance Manager: mem > active (average)

Description: The amount of memory used by the VM in the past small window of time. This is the "true" number of how much memory the VM currently has need of. Additional, unused memory may be swapped out or ballooned with no impact to the guest's performance.

Comments: Requires stat level 2 in vCenter.

Code API: 'Resourcepool-Specific-memoryactive'
or 'DFFFF HD'

Resource pool > Specific > memory granted (MB)

Source: vSphere Documentation Center

Managed Object - Performance Manager: memory > granted (average)

Description: The amount of memory that was granted to the VM by the host. Memory is not granted to the host until it is touched one time and granted memory may be swapped out or ballooned away if the VMkernel needs the memory.

Comments: Requires stat level 2 in vCenter.

Code API: 'Resourcepool-Specific-memorygranted'
or 'DFFFF HH'

Resource pool > Specific > memory consumed (MB)

Source: vSphere Documentation Center

Managed Object - Performance Manager: memory > consumed (average)

Description: The amount of machine memory that is in use by the VM. While a VM may have been configured to use 4 GB of RAM, as an example, it might have only touched half of that. Of the 2 GB left, half of that might be saved from memory sharing. That would result in 1 GB of consumed memory.

Comments: Requires stat level 1 in vCenter.

Code API: 'Resourcepool-Specific-memoryconsumed'
or 'DFFFF HG'

Resource pool > Specific > memory balloon (MB)

Source: vSphere Documentation Center

Managed Object - Performance Manager: memory > vmmemctl (average)

Description: Amount of memory allocated by the virtual machine memory control driver (vmmemctl), which is installed with VMware Tools. It is a VMware exclusive memory-management driver that controls ballooning. Virtual machine: Amount of guest physical memory that is currently reclaimed from the virtual machine through ballooning. This is the amount of guest physical memory that has been allocated and pinned by the balloon driver. Host: The sum of all vmmemctl values for all powered-on virtual machines, plus vSphere services on the host. If the balloon target value is greater than the balloon value, the Vmkernel inflates the balloon, causing more virtual machine memory to be reclaimed. If the balloon target value is less than the balloon value, the Vmkernel deflates the balloon, which allows the virtual machine to consume additional memory if needed. Virtual machines initiate memory reallocation. Therefore, it is possible to have a balloon target value of 0 and balloon value greater than 0.

Comments: Requires stat level 1 in vCenter.

Code API: 'Resourcepool-Specific-memoryballoon'
or 'DFFFF HJ'

VM > Overall

VM > Overall > total VMs (no)

Source: This metric is calculated by Sysload.

Description: Displays the total number of Virtual Machines.

Code API: 'VM-Overall-totalVMs'
or 'S3 D2'

VM > Overall > VMs on-line (no)

Source: This metric is calculated by Sysload.

Description: Displays the total number of Virtual Machines online.

Code API: 'VM-Overall-VMsonline'
or 'S3 D3'

VM > Overall > VMs off-line (no)

Source: This metric is calculated by Sysload.

Description: Displays the total number of Virtual Machines offline.

Code API: 'VM-Overall-VMsoffline'
or 'S3 D4'

VM > Overall > VM headroom (no)

Source: This metric is calculated by Sysload.

Description: VM headroom.

Code API: 'VM-Overall-VMheadroom'
or 'S3 D5'

VM > Specific

VM > Specific > virtual CPUs (no)

Source: vSphere Documentation Center

Managed Object - VirtualMachine: > config > hardware > numCPU

Description: Number of virtual CPUs present in this virtual machine.

Comments: No stat level required.

Code API: 'VM-Specific-virtualCPUs'
or 'CFFFF GD'

VM > Specific > CPU provisioned (MHz)

Source: This metric is calculated by Sysload.

Description: CPU provisioned.

Code API: 'VM-Specific-CPUprovisioned'
or 'CFFFF GW'

VM > Specific > CPU reservation (MHz)

Source: vSphere Documentation Center

Managed Object: VirtualMachine: > config > cpuAllocation > reservation

Description: Amount of resource that is guaranteed available to the virtual machine or resource pool. Reserved resources are not wasted if they are not used. If the utilization is less than the reservation, the resources can be utilized by other running virtual machines. Units are MB for memory, MHz for CPU.

Comments: No stat level is required.

Code API: 'VM-Specific-CPUreservation'
or 'CFFFF G8'

VM > Specific > CPU unlimited (0/1)

Source: This metric is calculated by Sysload.

Description: CPU unlimited.

Code API: 'VM-Specific-CPUunlimited'
or 'CFFFF GF'

VM > Specific > CPU limit (MHz)

Source: This metric is calculated by Sysload.

Description: CPU limit.

Code API: 'VM-Specific-CPUlimit'
or 'CFFFF G9'

VM > Specific > CPU shares (no)

Source: vSphere Documentation Center

Managed Object - VirtualMachine: config > cpuAllocation > shares > shares

Description: The number of shares allocated. Used to determine resource allocation in case of resource contention. This value is only set if level is set to custom. If level is not set to custom, this value is ignored. Therefore, only shares with

custom values can be compared. There is no unit for this value. It is a relative measure based on the settings for other resource pools.

Comments: No stat level required.

Code API: 'VM-Specific-CPUshares'
or 'CFFFF G7'

VM > Specific > CPU used (MHz)

Source: vSphere Documentation Center

Managed Object - Performance Manager: cpu > usagemhz (average)

Description: Amount of actively used virtual CPU. This is the host's view of the CPU usage, not the guest operating system view.

Comments: Stat level 1 is required in vCenter.

Code API: 'VM-Specific-CPUused'
or 'CFFFF G3'

VM > Specific > CPU % use (%)

Source: vSphere Documentation Center

Managed Object - Performance Manager: cpu > usage (average)

Description: Amount of actively used virtual CPU. This is the host's view of the CPU usage, not the guest operating system view.

Comments: Requires stat level 1 in vCenter.

Code API: 'VM-Specific-CPUpc_use'
or 'CFFFF G2'

VM > Specific > CPU % ready (%)

Source: vSphere Documentation Center

Managed Object - Performance Manager: cpu > ready (summation)

Description: Percentage of time that the virtual machine was ready, but could not get scheduled to run on the physical CPU. CPU ready time is dependent on the number of virtual machines on the host and their CPU loads. Ready time is the time spend waiting for CPU(s) to become available in the past update interval.

Comments: Requires stat level 1 in vCenter.

Code API: 'VM-Specific-CPUpc_ready'
or 'CFFFF GX'

VM > Specific > memory provisioned (MB)

Source: vSphere Documentation Center

Managed Object - VirtualMachine: config > hardware > memoryMB

Description: Memory size, in MB.

Comments: Stat level not required.

Code API: 'VM-Specific-memoryprovisioned'
or 'CFFFF G0'

VM > Specific > memory reservation (MB)

Source: vSphere Documentation Center

Managed Object - VirtualMachine: config > memoryAllocation > reservation

Description: Amount of resource that is guaranteed available to the virtual machine or resource pool. Reserved resources are not wasted if they are not used. If the utilization is less than the reservation, the resources can be utilized by other running virtual machines. Units are MB for memory, MHz for CPU.

Comments: No stat level required.

Code API: 'VM-Specific-memoryreservation'
or 'CFFFF GB'

VM > Specific > memory unlimited (0/1)

Source: This metric is calculated by Sysload.

Description: Memory unlimited.

Code API: 'VM-Specific-memoryunlimited'
or 'CFFFF GE'

VM > Specific > memory limit (MB)

Source: This metric is calculated by Sysload.

Description: Memory limit.

Code API: 'VM-Specific-memorylimit'
or 'CFFFF GC'

VM > Specific > memory shares (no)

Source: vSphere Documentation Center

Managed Object - VirtualMachine: config > memoryAllocation > shares > shares

Description: The number of shares allocated. Used to determine resource allocation in case of resource contention. This value is only set if level is set to custom. If level is not set to custom, this value is ignored. Therefore, only shares with custom values can be compared. There is no unit for this value. It is a relative measure based on the settings for other resource pools.

Comments: No stat level required.

Code API: 'VM-Specific-memoryshares'
or 'CFFFF GA'

VM > Specific > memory active (MB)

Source: vSphere Documentation Center

Managed Object - Performance Manager: memory > active (average)

Description: The amount of memory used by the VM in the past small window of time. This is the "true" number of how much memory the VM currently has need of. Additional, unused memory may be swapped out or ballooned with no impact to the guest's performance.

Comments: Requires stat level 2 in vCenter.

Code API: 'VM-Specific-memoryactive'
or 'CFFFF GL'

VM > Specific > memory % usage (%)

Source: vSphere Documentation Center

Managed Object - Performance Manager: memory > usage (average)

Description: The percentage of memory used as a percent of all available machine memory.

Comments: Requires stat level 1 in vCenter.

Code API: 'VM-Specific-memorypc_usage'
or 'CFFFF G4'

VM > Specific > memory granted (MB)

Source: vSphere Documentation Center

Managed Object - Performance Manager: memory > granted (average)

Description: The amount of memory that was granted to the VM by the host. Memory is not granted to the host until it is touched one time and granted memory may be swapped out or ballooned away if the VMkernel needs the memory.

Comments: Requires stat level 2 in vCenter.

Code API: 'VM-Specific-memorygranted'
or 'CFFFF GG'

VM > Specific > memory consumed (MB)

Source: vSphere Documentation Center

Managed Object - Performance Manager: memory > consumed (average)

Description: The amount of machine memory that is in use by the VM. While a VM may have been configured to use 4 GB of RAM, as an example, it might have only touched half of that. Of the 2 GB left, half of that might be saved from memory sharing. That would result in 1 GB of consumed memory.

Comments: Requires stat level 1 in vCenter.

Code API: 'VM-Specific-memoryconsumed'
or 'CFFFF GH'

VM > Specific > memory overhead (MB)

Source: vSphere Documentation Center

Managed Object - Performance Manager: memory > overhead (average)

Description: The memory used by the VMkernel to maintain and execute the VM.

Comments: Requires stat level 1 in vCenter.

Code API: 'VM-Specific-memoryoverhead'
or 'CFFFF GM'

VM > Specific > memory shared (MB)

Source: vSphere Documentation Center

Managed Object - Performance Manager: memory > shared (average)

Description: The average amount of shared memory. Shared memory represents the entire pool of memory from which sharing savings are possible. The amount of memory that this has been condensed to is reported in shared common memory. So, total saving due to memory sharing equals shared memory minus shared common memory.

Comments: Requires stat level 2 in vCenter.

Code API: 'VM-Specific-memoryshared'
or 'CFFFF GN'

VM > Specific > memory swapped (MB)

Source: vSphere Documentation Center

Managed Object - Performance Manager: memory > swapped (average)

Description: The amount of swap memory currently in use. A large amount of swap memory is not a performance problem. This could be memory that the guest doesn't need. Check the swap rates (swpin, swapout) to see if the guest is actively in need of more memory than is available.

Comments: Requires stat level 2 in vCenter.

Code API: 'VM-Specific-memoryswapped'
or 'CFFFF GP'

VM > Specific > memory swapped in (MB)

Source: vSphere Documentation Center

Managed Object - Performance Manager: memory > swpin (average)

Description: The swap in rate reports the rate at which a VM's memory is being "swapped in" from disk.

Comments: Requires stat level 2 in vCenter.

Code API: 'VM-Specific-memoryswappedin'
or 'CFFFF GQ'

VM > Specific > memory swapped out (MB)

Source: vSphere Documentation Center

Managed Object - Performance Manager: memory > swapout (average)

Description: The rate at which memory is being swapped out to disk. A large number here represents a problem with lack of memory and a clear indication that

performance is suffering as a result.

Comments: Requires stat level 2 in vCenter.

Code API: 'VM-Specific-memoryswappedout'
or 'CFFFF GR'

VM > Specific > memory balloon (MB)

Source: vSphere Documentation Center

Managed Object - Performance Manager: memory > vmmemctl (average)

Description: The amount of memory currently claimed by the balloon driver. This is not a performance problem, per se, but represents the host starting to take memory from less needful VMs for those with large amounts of active memory. But if the host is ballooning, check swap rates (swpin and swapout) which would be indicative of performance problems.

Comments: Requires stat level 1 in vCenter.

Code API: 'VM-Specific-memoryballoon'
or 'CFFFF GS'

VM > Specific > storage provisioned (GB)

Source: vSphere Documentation Center

Managed Object - Performance Manager: Storage Capacity: datastore/virtual machine > provisioned (latest)

Description: The provisioned size of all virtual disks plus snapshot files and the swap file, if the VM is running.

Comments: Requires stat level 1 in vCenter.

Code API: 'VM-Specific-storageprovisioned'
or 'CFFFF GT'

VM > Specific > storage used (GB)

Source: vSphere Documentation Center

Managed Object - Performance Manager: Storage Capacity: datastore/virtual machine > used (latest)

Description: To obtain aggregated datastore space used by the target virtual machine, set the instance property of the metric ID to an empty string (" "). To obtain aggregated space used by the virtual machine for files of a specific type, set instance property of the metric ID to a valid filetype: DISKFILE, which comprises the base disk of a virtual machine's disk and delta disks DELTAFILE, which comprises virtual machine Snapshot overhead files SWAPFILE, for virtual machine swap files OTHERFILE, for all other virtual machine files

Comments: Requires stat level 1 in vCenter.

Code API: 'VM-Specific-storageused'
or 'CFFFF GI'

VM > Specific > disk commands issued (no)

Source: vSphere Documentation Center

Managed Object - Performance Manager: Storage I/O - disk > commands (summation)

Description: Number of SCSI commands issued during the collection interval.

Comments: Requires stat level 2 in vCenter.

Code API: 'VM-Specific-diskcommandsissued'
or 'CFFFF GU'

VM > Specific > disk commands aborted (no)

Source: vSphere Documentation Center

Managed Object - Performance Manager: Storage I/O - disk > commandsAborted (summation)

Description: Number of SCSI commands aborted during the collection interval.

Comments: Requires stat level 2 in vCenter.

Code API: 'VM-Specific-diskcommandsaborted'
or 'CFFFF GV'

VM > Specific > disk read throughput (kB/s)

Source: vSphere Documentation Center

Managed Object - Performance Manager: Storage I/O - disk > read (average)

Description: Rate at which data is read from each virtual disk on the virtual machine.
read rate = # blocksRead per second x blockSize.

Comments: Requires stat level 2 in vCenter.

Code API: 'VM-Specific-diskreadthroughput'
or 'CFFFF GY'

VM > Specific > disk write throughput (kB/s)

Source: vSphere Documentation Center

Managed Object - Performance Manager: Storage I/O - disk > write (average)

Description: Rate at which data is written to each virtual disk on the virtual machine.

Comments: Requires stat level 1 in vCenter.

Code API: 'VM-Specific-diskwritethroughput'
or 'CFFFF GZ'

VM > Specific > disk throughput (kB/s)

Source: vSphere Documentation Center

Managed Object - Performance Manager: Storage I/O - disk > usage (average)

Description: Aggregated disk I/O rate.

Comments: Requires stat level 1 in vCenter.

Code API: 'VM-Specific-diskthroughput'
or 'CFFFF G6'

VM > Specific > network throughput (kB/s)

Source: vSphere Documentation Center

Managed Object - Performance Manager: network > usage (average)

Description: Sum of data transmitted and received across all virtual NIC instances connected to the virtual machine.

Comments: Requires stat level 1 in vCenter.

Code API: 'VM-Specific-networkthroughput'
or 'CFFFF G5'

VM > Specific > highest datastore latency (msec)

Source: vSphere Documentation Center

Managed Object - Performance Manager: datastore > maxTotalLatency (latest)

Description: Highest latency value across all datastores used by the host.

Comments: Requires stat level 3 in vCenter.

Code API: 'VM-Specific-highestdatastorelatency'
or 'CFFFF Ga'

VM > Specific > % uptime (%)

Source: This metric is calculated by Sysload.

Description: Percentage uptime.

Code API: 'VM-Specific-pc_uptime'
or 'CFFFF GJ'

VM > Specific > % downtime (%)

Source: This metric is calculated by Sysload.

Description: Percentage downtime.

Code API: 'VM-Specific-pc_downtime'
or 'CFFFF GK'

Host > Overall

Host > Overall > % uptime (%)

Source: This metric is calculated by Sysload.

Description: Percentage uptime.

Code API: 'Host-Overall-pc_uptime'
or 'S7 N2'

Host > Overall > % downtime (%)

Source: This metric is calculated by Sysload.

Description: Percentage downtime.

Code API: 'Host-Overall-pc_downtime'
or 'S7 N3'

Host > Overall > % maintenance mode (%)

Source: vSphere Documentation Center

Managed Object - HostSystem: runtime > inMaintenanceMode

Description: The flag to indicate whether or not the host is in maintenance mode. This flag is set when the host has entered the maintenance mode. It is not set during the entering phase of maintenance mode.

Comments: No stat level required.

Code API: 'Host-Overall-pc_maintenancemode'
or 'S7 N4'

Host > Overall > power usage (watt)

Source: vSphere Documentation Center

Managed Object - Performance Manager: power > power (average)

Description: Current power usage.

Comments: Requires stat level 2 in vCenter.

Code API: 'Host-Overall-powerusage'
or 'S7 N5'

Host > Overall > highest datastore latency (msec)

Source: vSphere Documentation Center

Managed Object - Performance Manager: datastore > maxTotalLatency (latest)

Description: Highest latency value across all datastores used by the host.

Comments: Requires stat level 3 in vCenter.

Code API: 'Host-Overall-highestdatastorelatency'
or 'S7 N6'

Network > Specific

Network > Specific > usage (kB/s)

Source: vSphere Documentation Center

Managed Object - Performance Manager: network > usage (average)

Description: Network utilization (combined transmit- and receive-rates) during the interval.

Comments: Requires stat level 1 in vCenter.

Code API: 'Network-Specific-usage'
or 'AFFFF A2'

Network > Specific > packets received (no)

Source: vSphere Documentation Center

Managed Object - Performance Manager: network > received (average)

Description: Average rate at which data was received during the interval. This represents the bandwidth of the network.

Comments: Requires stat level 2 in vCenter.

Code API: 'Network-Specific-packetsreceived'
or 'AFFFF A3'

Network > Specific > packets transmitted (no)

Source: vSphere Documentation Center

Managed Object - Performance Manager: network > transmitted (average)

Description: Average rate at which data was transmitted during the interval. This represents the bandwidth of the network.

Comments: Requires stat level 2 in vCenter.

Code API: 'Network-Specific-packetstransmitted'
or 'AFFFF A4'

Network > Specific > receive packets dropped (no)

Source: vSphere Documentation Center

Managed Object - Performance Manager: network > droppedRx (summation)

Description: Number of receive packets dropped during the collection interval.

Comments: Requires stat level 2 in vCenter.

Code API: 'Network-Specific-receivepacketsdropped'
or 'AFFFF A5'

Network > Specific > transmit packets dropped (no)

Source: vSphere Documentation Center

Managed Object - Performance Manager: network > droppedTx (summation)

Description: Number of transmit packets dropped during the collection interval.

Comments: Requires stat level 2 in vCenter.

Code API: 'Network-Specific-transmitpacketsdropped'
or 'AFFFF A6'

Network > Specific > packet receive errors (no)

Source: vSphere Documentation Center

Managed Object - Performance Manager: network > errorsRx (summation)

Description: Number of packets with errors received during the sampling interval.

Comments: Requires stat level 2 in vCenter.

Code API: 'Network-Specific-packetreceiveerrors'
or 'AFFFF A7'

Network > Specific > packet transmit errors (no)

Source: vSphere Documentation Center

Managed Object - Performance Manager: network > errorsTx (summation)

Description: Number of packets with errors transmitted during the sampling interval.

Comments: Requires stat level 2 in vCenter.

Code API: 'Network-Specific-packettransmiterrors'
or 'AFFFF A8'

Network > Specific > unknown protocol frames (no)

Source: vSphere Documentation Center

Managed Object - Performance Manager: network > unknownprotos (summation)

Description: Number of frames with unknown protocol received during the sampling interval.

Comments: Requires stat level 2 in vCenter.

Code API: 'Network-Specific-unknownprotocolframes'
or 'AFFFF A9'

Network > Specific > data receive rate (kB/s)

Source: vSphere Documentation Center

Managed Object - Performance Manager: network > received (summation)

Description: Average rate at which data was received during the interval. This represents the bandwidth of the network.

Comments: Requires stat level 2 in vCenter.

Code API: 'Network-Specific-datareceiverate'
or 'AFFFF AA'

Network > Specific > data transmit rate (kB/s)

Source: vSphere Documentation Center

Managed Object - Performance Manager: network > transmitted (summation)

Description: Average rate at which data was transmitted during the interval. This represents the bandwidth of the network.

Comments: Requires stat level 2 in vCenter.

Code API: 'Network-Specific-datatransmitrate'
or 'AFFFF AB'

Storage adapter > Specific

Storage adapter > Specific > commands issued (no/s)

Source: vSphere Documentation Center

Managed Object - Performance Manager: storage adapter > commandsAveraged (average)

Description: Average number of commands issued per second by the storage adapter during the collection interval.

Comments: Requires stat level 2 in vCenter.

Code API: 'Storageadapter-Specific-commandsissued'
or 'FFFFF B5'

Storage adapter > Specific > read requests (no/s)

Source: vSphere Documentation Center

Managed Object - Performance Manager: storage adapter > numberReadAveraged (average)

Description: Average number of read commands issued per second by the storage adapter during the collection interval.

Comments: Requires stat level 2 in vCenter.

Code API: 'Storageadapter-Specific-readrequests'
or 'FFFFF B6'

Storage adapter > Specific > write requests (no/s)

Source: vSphere Documentation Center

Managed Object - Performance Manager: storage adapter > numberWriteAveraged (average)

Description: Average number of write commands issued per second by the storage adapter during the collection interval.

Comments: Requires stat level 2 in vCenter.

Code API: 'Storageadapter-Specific-writerequests'
or 'FFFFF B7'

Storage adapter > Specific > read rate (kB/s)

Source: vSphere Documentation Center

Managed Object - Performance Manager: storage adapter > read (average)

Description: Rate of reading data by the storage adapter.

Comments: Requires stat level 2 in vCenter.

Code API: 'Storageadapter-Specific-readrate'
or 'FFFFF B8'

Storage adapter > Specific > write rate (kB/s)

Source: vSphere Documentation Center

Managed Object - Performance Manager: storage adapter > write (average)

Description: Rate of writing data by the storage adapter.

Comments: Requires stat level 2 in vCenter.

Code API: 'Storageadapter-Specific-writerate'
or 'FFFFF B9'

Storage adapter > Specific > number of outstanding I/Os (no)

Source: vSphere Documentation Center

Managed Object - Performance Manager: storage adapter > outstandingIOs (average)

Description: The number of I/Os that have been issued but have not yet completed.

Comments: Requires stat level 2 in vCenter.

Code API: 'Storageadapter-Specific-numberofoutstandingIOs'
or 'FFFFF BA'

Storage adapter > Specific > number of queued I/Os (no)

Source: vSphere Documentation Center

Managed Object - Performance Manager: storage adapter > queued (average)

Description: The current number of I/Os that are waiting to be issued.

Comments: Requires stat level 2 in vCenter.

Code API: 'Storageadapter-Specific-numberofqueuedIOs'
or 'FFFFF BB'

Storage adapter > Specific > read latency (msec)

Source: vSphere Documentation Center

Managed Object - Performance Manager: storage adapter > totalReadLatency (average)

Description: Average amount of time for a read operation by the storage adapter. Total latency = kernel latency + device latency.

Comments: Requires stat level 2 in vCenter.

Code API: 'Storageadapter-Specific-readlatency'
or 'FFFFF BC'

Storage adapter > Specific > write latency (msec)

Source: vSphere Documentation Center

Managed Object - Performance Manager: storage adapter > totalwriteLatency (average)

Description: Average amount of time for a write operation by the storage adapter.
Total latency = kernel latency + device latency.

Comments: Requires stat level 2 in vCenter.

Code API: 'Storageadapter-Specific-writelatency'
or 'FFFF BD'

Storage adapter > Specific > queue command latency (msec)

Source: vSphere Documentation Center

Managed Object - Performance Manager: storage adapter > queueLatency (average)

Description: Average amount of time spent in the VMkernel queue, per SCSI command, during the collection interval.

Comments: Requires stat level 2 in vCenter.

Code API: 'Storageadapter-Specific-queuecommandlatency'
or 'FFFF BE'