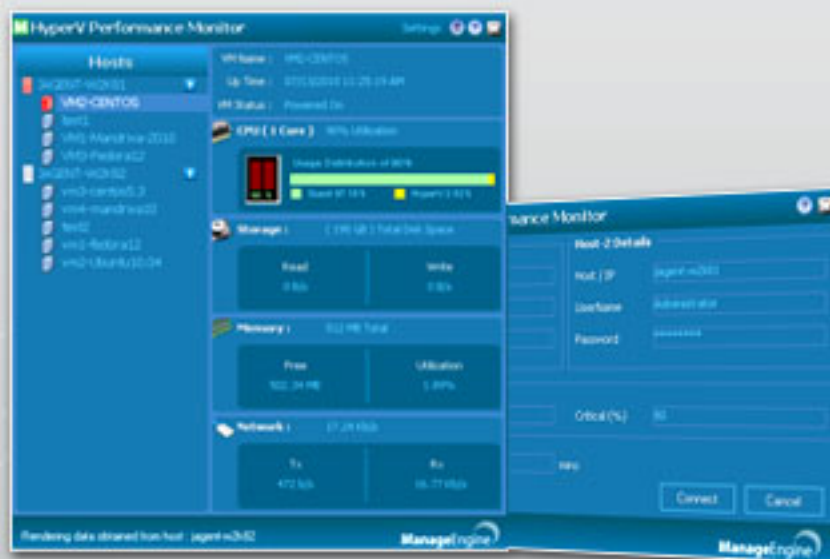


ManageEngine Free Tools User Manual



HyperV Performance Monitor Tool

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Overview

Virtual Machine's emulates all aspects of an actual computer and creates a separate environment for running operating system. Each operating system is logically isolated with host server and also multiple such VMs running simultaneously on the same host physical server. Virtual servers provide great cost benefits as opposed to real physical server. This encourages people to run many applications and services on these virtual servers. The application, that is running within the virtual servers need to be running all the time. Any outage or performance degradation in the virtual servers, will affect the applications and services running on them, resulting in a bad user-experience. Hence it becomes imperative to monitor and manage those virtual servers continuously at all times so that you know early enough about a possible problem, before it translates into substantial loss of revenue.

The "ManageEngine HyperV Performance Monitor" free tool addresses this requirement. The ManageEngine HyperV Performance Monitoring tool, monitors important parameters of Microsoft Hyper V platform. This tool fetches comprehensive data about the servers and virtual machines and presents them as visually elegant graphs and reports in a desktop tool dashboard providing wealth of information and the real-time functioning of the virtual servers.

ManageEngine HyperV Performance Monitor Tool can monitor 2 virtual servers simultaneously. The most interesting part is that the tool is made available to you absolutely FREE of cost.

Monitor Microsoft Hyper-V with Manage Engine Free HyperV performance Monitor Tool

Free ManageEngine HyperV Performance Monitoring Tool provides an exclusive monitoring solution for HyperV server, a Virtual Machine, running on Windows 2008 R2 . This tool shows the actual resource utilization of the virtual servers along with CPU usage, Memory details, Disk and Network utilization of each guest operating system on Microsoft HyperV Environment. The dashboard quickly shows how many virtual machines are present, how many are powered on/off and its severity as Critical or Warning in a elegant TreeView, and also, how much CPU are allocated to / consumed by each Virtual Machine etc., in an intuitive bar graph.

Using the free monitoring tool, the administrator can also set threshold values for CPU usage like critical and warning thresholds. If at all in a virtual server, the CPU Utilization dangerously crosses the threshold limits, alert signals are shown in the dashboard tool. The IT administrator can then effortlessly manage and prevent VM and host server crash or bring back the servers to normal functioning state.

The ManageEngine HyperV Performance Monitoring Free Tool serves as a smart desktop tool that continuously monitors HyperV, a Microsoft virtual server, across your network, giving you real-time insight into your monitoring need. The tool helps to track virtual server's health and ensures your mission-critical applications run smoothly.

Features

The ManageEngine HyperV Performance Monitor tool helps an administrator to monitor important attributes of a physical machine running in the Microsoft Windows 2008 R2 using WMI. This tool fetches important information like CPU usage, Memory usage, Disk details and Network parameters from the Windows 2008 R2 hardware.

ManageEngine HyperV Performance Monitoring Free tool helps an administrator to view the following HyperV Performance parameters.

1. CPU Utilization
2. Memory Utilization
3. Disk Read Rate / Disk Write Rate
4. Network Rx / Tx

CPU Utilization

CPU Utilization is the current percentage of the total clock cycles being consumed by the virtual system. If a processor of a single VM shows 100% utilization, and the machine has totally 2 physical processors, then we can expect the total CPU load percentage to be around 50%.

Memory Utilization

Memory Utilization is provided as a percentage of memory used to the total memory available in bytes.

Disk Read Rate

This parameter provides the number of bytes read from the disk between the previous refresh operation and the current refresh operation. This parameter will be shown in bytes/KB/MB/GB per second.

Disk Write Rate

This parameter provides the number of bytes written to the disk between the previous refresh operation and the current refresh operation. This parameter will be shown in bytes/KB/MB/GB per second.

Network Rx

Average rate at which data was received during the interval between the previous refresh cycle and the current refresh cycle. This represents the rate at which data is received across each physical NIC instance on the host. This parameter is shown in kbps (Kilo bits per second).

Network Tx

Average rate at which data was transmitted during the interval. The rate at which data is transmitted across each physical NIC instance on the host. This parameter is shown in kbps (Kilo bits per second).

List of attributes monitored in a Virtual Machine

The list of parameters monitored by this application for each VM powered on is almost the same as that of the Physical machine.

1. CPU Utilization
2. Memory Utilization
3. Network Rx / Tx

CPU Utilization

This is the host's view of the CPU usage and not the guest operating system's view. It is the average CPU utilization over all available virtual CPUs in the virtual machine. For example, if a virtual machine with one virtual CPU is running on a host that has 2 physical CPUs and the CPU Usage is in the VM is 80%, then only one of the physical CPU is getting the CPU cycles.

Memory Utilization

Percentage of memory currently in use for the VM. This active memory given as a percentage of the total memory.

Network Rx

Average rate at which data was received during the interval between the earlier refresh cycle and the current refresh cycle. This parameter is shown in kbps (Kilo bits per second).

Network Tx

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

This provides the rate at which data is transmitted across each physical NIC between the earlier refresh cycle and the current refresh cycle. This parameter is shown in kbps (Kilo bits per second).

Documents

The ManageEngine HyperV Performance Monitor tool helps an administrator to monitor the Hypervisor present in Microsoft Windows 2008 R2.

This tool connects to the Microsoft Windows 2008 R2 Server and generates easy to visualize desktop Dashboard reports. Administrator can monitor two such servers simultaneously.

Overview

The tool fetches the values of the following parameters from servers and populates them in the dashboard, after connecting to the Microsoft Windows 2008 R2 Server.

- * IpAddress/HostName
- * Operating System Name
- * System UpTime
- * CPU Utilization
- * Memory Utilization
- * Disk Read Requests
- * Disk Write Requests
- * Number of Packets (Rx) received
- * Number of Packets (Tx) sent

The number of running VMs of all the total VMs configured

It shows the following variables of each of the guest VM installed in that ESX host.

- * Name of the Virtual machine
- * Uptime of each VM
- * Power Status of each VM
- * CPU Utilization
- * Memory Utilization
- * Disk Read rate
- * Disk Write rate
- * Number of packets received
- * Number of packets sent

Settings Dialog

Using this tool, administrator can monitor two Microsoft Windows 2008 R2 servers simultaneously. Click on the settings icon to fill the following details.

- * Hostname/IP Address
- * UserName
- * Password

Click on the "Connect" button to connect to the server and close the settings windows.

Using this tool, administrator can also set threshold values for CPU usage, like critical and warning thresholds.

There are some common threshold parameters for both the hosts. They are as follows.

- * CPU Warning Threshold Value (Default is 60%)
- * CPU Critical Threshold Value (Default is 80%)

Data will be refreshed at an interval specified as the refresh interval (5mins by default). This interval has to be given in minutes. Based on the value provided each HyperV host will be polled via WMI and the details of that particular host and all the VMs installed in that host will be retrieved and updated in the GUI.

Refresh

To know the server's current status please use the Refresh icon. When the refresh icon is clicked the latest values of all the parameters are fetched and displayed in the GUI.

Retaining Settings

The following details are saved in the disk so that both the hosts parameters can be reused when the tool is restarted.

- * HostName
- * UserName
- * Password [Encrypted using Triple DES] encryption standard.

The following values are not retained and have to be provided everytime the tool is restarted.

- * CPU Warning threshold
- * CPU Critical threshold
- * Refresh Interval

FAQ

Unable to connect to the host server ?

Please check host server is running properly and check host server is behind firewall also port 445 and 135 is accessible. If the server is behind firewall and if not accessible, then open the port by configuring the firewall.

I have downloaded the tool but it is not running. What should I do?

Please check Dot Net platform is installed in your system. Run the utility available in the bin directory, Check_Dot_Net_version.exe , It will tell you the Dot Net version. If Dot Net platform is not available in the system, download the platform. Please see the software requirements page for downloading the platform.

Can I Monitor a single Hyper-V Host server alone ?

Yes a single server can be monitored.

What is the use of CPU Thresholds in the Settings screen?

Based on the Percentage CPU Utilization and CPU Threshold values, the tool will show the alert signals on the Dashboard to intimate status to the user.