HP SiteScope

for the Windows, Solaris and Linux operating systems

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SiteScope Operating System Solution Templates

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HP SiteScope Operating System Solution Templates

SiteScope's Operating System Solution Templates allow you to monitor the health, availability, and performance of any Windows, AIX, Linux, or Solaris host which runs a supported version the operating system.

This chapter includes:

About SiteScope Operating System Solution Templates

To address the needs of operating system performance monitoring, HP has built Operating System Solution Templates. A solution template is a pre-built collection of monitors that consists of default metrics, default thresholds (where applicable) and proactive tests (where applicable) all of which have been researched using best practice data and expertise from various sources including HP's operating system administrators, HP's professional services organization, technical documentation, and books from industry experts.

The purpose of a solution template is to provide easy-to-use, comprehensive operating system monitoring without requiring the SiteScope user or the IT organization to be experts on the application.

In addition, for Windows and Unix Resource Monitors, you can generate a Server Centric Report which displays data from three different metrics about the server being monitored. It is recommended to use Solution Templates when creating the Windows and Unix Resource Monitor, since the appropriate monitors and metrics are already configured. For more information on generating a Server Centric Report, see "Generating a Server-Centric Report" in the SiteScope Help.

Benefits of the Operating System Solution Templates include:

➤ Reduces the need for operating system performance domain expertise

➤ Reduces the time to configure and deploy operating system monitors

➤ Helps identify both real-time performance bottlenecks and longer term trends

➤ Adds only negligible overhead to production systems

The Operating System Solution Templates deploy monitors that target the following aspects of the operating system's performance and health:

➤ High-level CPU status and utilization details

➤ High-level Memory status and utilization details

➤ Disk utilization information

Windows Host Solution Template Settings

The following section describes the monitors in the Windows Host Solution Template, and the specific metrics included in each monitor.

Server_List

Select the Windows remote for which you want to deploy the solution. See "Configure SiteScope to Monitor a Remote Microsoft Windows Server" in the SiteScope Help for the steps you use to create a Windows connection profile for your Windows host.

CPU Status Metrics

The following metrics are collected by the CPU Status monitor which is a part of the Windows Host Solution:

Counter name in the dashboard	Metric unit	Description	Default Thresholds
utilization	% (Percent)	Average CPU utilization, in percentage (the average value among all CPUs present in the system)	Warning when >= 90% Error when 100%
utilization cpu #N	% (Percent)	CPU utilization for each CPU present in the system	Warning when >= 90% Error when 100%

CPU Utilization Metrics

The following metrics are collected by the CPU Utilization monitor which is a part of the Windows Host Solution:

Counter name in the dashboard	Metric unit	Description	Default Thresholds
Processor\N\% Idle Time	% (Percent)	Idle time for each CPU (or the average for N="_Total")	Warning when <= 10% Error when <= 5%
Processor\N\% Privileged Time	% (Percent)	Privileged time for each CPU (or the average for N="_Total")	None
Processor\N\% User Time	% (Percent)	User time for each CPU (or the average for N="_Total")	None

Counter name in the dashboard	Metric unit	Description	Default Thresholds
Processor\N\ Interrupts/sec	Units per second	Frequency of interrupts for each CPU (or the average for N="_Total")	None
Processor\N\ Queue Length	Units	Number of processes in queue for each CPU (or the average for N="_Total")	Error when >= 4
System\System Up Time	Seconds	Number of seconds that have passed after the system startup	None

Memory Status Metrics

The following metrics are collected by the Memory Status monitor which is a part of the Windows Host Solution:

Counter name in the dashboard	Metric unit	Description	Default Thresholds
percent used	% (Percent)	Total memory usage level	Error when > 90% Warning when > 80%
MB free	Megabytes	Total number of megabytes of virtual memory free	None
pages/sec	Units per second	Frequency of paging	None

Memory Utilization Metrics

The following metrics are collected by the Memory Utilization monitor which is a part of the Windows Host Solution:

Counter name in the dashboard	Metric unit	Description	Default Thresholds
Memory\Available Bytes	Bytes	Total number of virtual memory bytes free	None
Memory\Committed Bytes	Bytes	Total number of virtual memory bytes allocated by processes to which the operating system has committed a RAM frame page or a page slot in the page file (or both)	None
Memory\pages/sec	Units per second	Frequency of paging	None
Memory\Pool Nonpaged Bytes	Bytes	Number of bytes kept in the special non-paged region of memory	None

Disk Utilization metrics

The following metrics are collected by the Disk Utilization monitor which is a part of the Windows Host Solution:

Counter name in the dashboard	Metric unit	Description	Default Thresholds
Logical Disk\N\% Free Space	% (Percent)	Relative amount of the free space on each logical disk (for N="_Total", this is the average value)	Warning when <= 10% Error when <= 5%
Logical Disk\N\% Idle Time	% (Percent)	Relative amount of time when the disk is idle (for N="_Total", this is the average value)	None
Logical Disk\N\Disk read Bytes/sec	Units per second	Average number of bytes read every second from each logical disk (for N="_Total", this is the average value)	None
Logical Disk\N\Disk write Bytes/sec	Units per second	Average number of bytes written every second from each logical disk (for N="_Total", this is the average value)	None
Logical Disk\N\Free Megabytes	Megabytes	Number of megabytes free on each logical disk (for N="_Total", this is the average value)	None

AIX Host Solution Template Settings

The following section describes the monitors in the AIX Host Solution Template, and the specific metrics included in each monitor.

Server_List

Select the AIX remote for which you want to deploy the solution. See "Configure SiteScope to Monitor a Remote UNIX Server" in the SiteScope Help for the steps you use to create a UNIX connection profile for your AIX host.

CPU Utilization Metrics

The following metrics are collected by the CPU Utilization monitor which is a part of the AIX Host Solution:

Counter name in the dashboard	Metric unit	Description	Default Thresholds
Processor\N\ %idle	% (Percent)	Relative amount of time spent by each CPU as idle	Warning if <= 20% Error if <= 10%
Processor\N\ %sys	% (Percent)	Relative amount of time spent by each CPU at the kernel level	None
Processor\N\ %usr	% (Percent)	Relative amount of time spent by each CPU at the user level	None
Processor\N\ %wio	% (Percent)	Relative amount of time spent by each CPUs blocked by I/O operations	None
Queue Statistics\ runq-sz	Units	Number of processes waiting in the queue	Error if > 2

Memory Utilization Metrics

The following metrics are collected by the Memory Utilization monitor which is a part of the AIX Host Solution:

Counter name in the dashboard	Metric unit	Description	Default Thresholds
percent used	% (Percent)	Total memory usage level	Error when > 90% Warning when > 80%
MB free	Megabytes	Total number of megabytes of virtual memory free	None
pages/sec	Units per second	Frequency of paging	None

File System Status Metrics

The following metrics are collected by the File System monitor which is a part of the AIX Host Solution:

Counter name in the dashboard	Metric unit	Description	Default Thresholds
Filesystems\N\ %Used	% (Percent)	Relative amount of space used on each mounted filesystem	Warning if >= 90% Error if >= 95%
Filesystems\N\ Free	Bytes	Number of bytes free on each mounted file system	None

Linux Host Solution Template Settings

The following section describes the monitors in the Linux Host Solution Template, and the specific metrics included in each monitor.

Server_List

Select the Linux remote for which you want to deploy the solution. See "Configure SiteScope to Monitor a Remote UNIX Server" in the SiteScope Help for the steps you use to create a UNIX connection profile for your Linux host.

CPU Utilization Metrics

The following metrics are collected by the CPU Utilization monitor which is a part of the Linux Host Solution:

Counter name in the dashboard	Metric unit	Description	Default Thresholds
Processor Info\ N\model name		Processor model name for each CPU	None
Processor Info\ N\cpu MHz	MHz	Basic clock frequency of each CPU in megahertz	None
ProcessorInfo\ N\state		State of each CPU	None
Processor\N\Idle	% (Percent)	Relative amount of time spent by each CPU as idle	Warning if <= 20% Error if <= 10%
Processor\N\ Kernel	% (Percent)	Relative amount of time spent by each CPU at the kernel level	None

Counter name in the dashboard	Metric unit	Description	Default Thresholds
Processor\N\ User	% (Percent)	Relative amount of time spent by each CPU at the user level	None
Processor\N\ User low	% (Percent)	Relative amount of time spent by each CPU at the 'user low' level	None

Memory Utilization Metrics

The following metrics are collected by the Memory Utilization monitor which is a part of the Linux Host Solution:

Counter name in the dashboard	Metric unit	Description	Default Thresholds
percent used	% (Percent)	Total memory usage level	Error when > 90% Warning when > 80%
MB free	Megabytes	Total number of megabytes of virtual memory free	None
pages/sec	Units per second	Frequency of paging	None

File System Status Metrics

The following metrics are collected by the File System monitor which is a part of the Linux Host Solution:

Counter name in the dashboard	Metric unit	Description	Default Thresholds
Filesystems\N\ Use%	% (Percent)	Relative amount of space used on each mounted filesystem	Warning if >= 90% Error if >= 95%
Filesystems\N\ Available	Bytes	Number of bytes free on each mounted file system	None
Filesystems\N\ Used	Bytes	Number of bytes used on each mounted file system	None

Solaris Host Solution Template Settings

The following section describes the monitors in the Solaris Host Solution Template, and the specific metrics included in each monitor.

Server_List

Select the Solaris remote for which you want to deploy the solution. See "Configure SiteScope to Monitor a Remote UNIX Server" in the SiteScope Help for the steps you use to create a UNIX connection profile for your Solaris host.

CPU Utilization Metrics

The following metrics are collected by the CPU Utilization monitor which is a part of the Solaris Host Solution:

Counter name in the dashboard	Metric unit	Description	Default Thresholds
ProcessorInfo\N\ brand		Vendor brand name for each CPU	None
ProcessorInfo\N\ clock_MHz	MHz	Basic clock frequency of each CPU in megahertz	None
ProcessorInfo\ N\state		State of each CPU	None
Processor\N\idle	% (Percent)	Relative amount of time spent by each CPU as idle	None
Processor\N\ kernel	% (Percent)	Relative amount of time spent by each CPU at the kernel level	None
Processor\N\user	% (Percent)	Relative amount of time spent by each CPU at the user level	None
CPU Utilization\ %idle	% (Percent)	Relative amount of time spent by all CPUs on average as idle	Error when <= 10%
CPU Utilization\ %sys	% (Percent)	Relative amount of time spent by all CPUs on average at the kernel level	None
CPU Utilization\ %usr	% (Percent)	Relative amount of time spent by all CPUs on average at the user level	None

Counter name in the dashboard	Metric unit	Description	Default Thresholds
CPU Utilization\ %wio	% (Percent)	Relative amount of time spent by all CPUs in average blocked by I/O operations	None
Queue length\ runq-sz	Units	Number of processes waiting in the queue	Error if > 2

Memory Utilization Metrics

The following metrics are collected by the Memory Utilization monitor which is a part of the Solaris Host Solution:

Counter name in the dashboard	Metric unit	Description	Default Thresholds
Memory\ freemem	Bytes	Total number of virtual memory bytes free	None
Memory\ swap_avail	Bytes	Total number of virtual memory bytes available in the swap space	None
Memory\ swap_free	Bytes	Total number of virtual memory bytes free in the swap space	None

File System Status Metrics

The following metrics are collected by the File System monitor which is a part of the Solaris Host Solution:

Counter name in the dashboard	Metric unit	Description	Default Thresholds
Filesystems\N\ avail	Bytes	Number of bytes available on each mounted file system	None
Filesystems\N\ capacity	Bytes	Capacity of each mounted file system	None
Filesystems\N\ used	Bytes	Number of bytes used on each mounted file system	None