



◀ **NiCE PowerHA MP** ▶

Reference Guide

NiCE PowerHA Management Pack
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For use with System Center Operations Manager

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Monitors with Metrics

Metric Number	Name	Description	Target	Enabled	Interval (sec)	Health Type	Unit	Warning Threshold	Critical Threshold	Threshold Type
1000	Cluster Availability	This monitor provides the status of the PowerHA Cluster. Information is based on the 'clshowsrv' PowerHA utility.	NiCE.PowerHA.Unix.ClusterNode	Enabled	300	Availability	number	8.9	0.9	MIN
2000	Cluster Process (clstrmgr)	This Monitor checks if the clstrmgr is running.	NiCE.PowerHA.Unix.ClusterNode	Enabled	300	Availability				N/A
3000	Resource Group Availability	This Monitors checks if a Resource Group is Online.	NiCE.PowerHA.Unix.ResourceGroup	Enabled	300	Availability	number		0.9	MIN
3010	Resource Group Affinity	This monitor checks if the resource group is online on the primary node. Monitor values: 0 = Online on Primary (Healthy), 1 = Online on Standby OFAN+NFB (Healthy), 2 = Online on Standby (Warning), 3 = Online nowhere (Error)	NiCE.PowerHA.Unix.ResourceGroup	Enabled	300	Availability	number	0,9	2.9	MAX
4000	Volume Group Availability	This monitor provides the concurrent status of the volume group. This information is based on 'lspv' command. Monitor values: 0 = Everything ok (Healthy), 1 = non-concurrent + no standby node (Warning), 2 = non-concurrent + standby node (Error)	NiCE.PowerHA.Unix.Resource.VolumeGroup	Enabled	300	Availability	number	0,9	1.9	MAX
4010	Volume Group Active State Monitor	This monitor checks with the command 'lsvg -o' if the volume group is active.	NiCE.PowerHA.Unix.Resource.VolumeGroup	Enabled	300	Availability		0.9		MAX
4020	Volume Group Logical Volume State Monitor	This monitor checks with the command 'lsvg -l' if all logical volume within the volume group are synchronized.	NiCE.PowerHA.Unix.Resource.VolumeGroup	Enabled	300	Availability		0.9		MAX



Monitors with Metrics

Metric Number	Name	Description	Target	Enabled	Interval (sec)	Health Type	Unit	Warning Threshold	Critical Threshold	Threshold Type
4030	Volume Group Physical Volume State Monitor	This monitor checks with the command 'lsvg -p' if all physical volumes within the volume group are active.	NiCE.PowerHA.Unix.Resource.VolumeGroup	Enabled	300	Availability		0.9		MAX
4040	Volume Group Quorum Monitor	This monitor checks with the command 'lsvg' if Quorum for Volume Group is	NiCE.PowerHA.Unix.Resource.VolumeGroup	Enabled	300	Availability		0.9		MAX
4500	Volume Group Availability -	This monitor returns the number of Volume Groups with non-concurrent disks.	NiCE.PowerHA.Unix.ResourceGroup	Enabled	300	Availability		0.9	1.9	MAX
5000	Logical Disk Health	This monitor provides the status of the cluster file system. Information is based on the 'df -k' utility.	NiCE.PowerHA.Unix.FileSystem	Enabled	300	Availability			0.9	MAX
5010	Logical Disc % Free Inodes	This monitor returns the percentage of free inodes.	NiCE.PowerHA.Unix.FileSystem	Enabled	300	Availability	%	10	5	MIN
5020	Logical Disk % Free Space	This monitor returns the percentage of free space.	NiCE.PowerHA.Unix.FileSystem	Enabled	300	Availability	%	10	5	MIN
5030	Logical Disk Free Space (MB)	This monitor returns the free space size in megabytes.	NiCE.PowerHA.Unix.FileSystem	Enabled	300	Availability	Megabytes	2000	1000	MIN
5070	Logical Disk Read Write Status	This monitor provides the status of read/write test.	NiCE.PowerHA.Unix.FileSystem	Enabled	300	Availability	status code	0.9		MAX
5500	Logical Disk Health - Summary	This monitor provides the status of the cluster file system. Information is based on the 'df -k' utility.	NiCE.PowerHA.Unix.ResourceGroup	Enabled	300	Availability			0.9	MAX
5510	Logical Disc % Free Inodes - Summary	This monitor returns the percentage of free inodes.	NiCE.PowerHA.Unix.ResourceGroup	Enabled	300	Availability		10	5	MIN
5520	Logical Disk % Free Space - Summary	This monitor returns the percentage of free space.	NiCE.PowerHA.Unix.ResourceGroup	Enabled	300	Availability		10	5	MIN
5530	Logical Disk Free Space (MB) - Summary	This monitor returns the free space size in megabytes.	NiCE.PowerHA.Unix.ResourceGroup	Enabled	300	Availability		2000	1000	MIN



Monitors with Metrics

Metric Number	Name	Description	Target	Enabled	Interval (sec)	Health Type	Unit	Warning Threshold	Critical Threshold	Threshold Type
5570	Logical Disk Read Write Status - Summary	This monitor provides the status of read/write test for all file systems in a resource group.	NiCE.PowerHA.Unix.ResourceGroup	Enabled	300	Availability	number of fs	0.9		MAX



Dependency Monitors

Name	Description	Target	Enabled	Health Type	Member Monitor	Roll-up Algorithm	Metric
PowerHA Cluster Availability Rollup Monitor	Rolls up the Worst Health State of PowerHA Cluster Node to PowerHA Cluster	NiCE.PowerHA.Unix.ClusterNode	Enabled	Availability	System.Health.AvailabilityState	BestOf	1000
Resource Group Availability	Rolls up the worst health state of PowerHA Cluster Resource Group (Metric 3000)	NiCE.PowerHA.Cluster.ResourceGroup	Enabled	Availability	NiCE.PowerHA.Cluster.Metric.3000.ResourceGroup.Availability.Monitor	WorstOf	3000
Resource Group Affinity	Rolls up the worst health state of PowerHA Cluster Resource Group (Metric 3010)	NiCE.PowerHA.Cluster.ResourceGroup	Enabled	Availability	NiCE.PowerHA.Cluster.Metric.3010.ResourceGroup.Affinity.Monitor	WorstOf	3010
Volume Group Availability	Rolls up the worst health state of PowerHA Cluster Resource (Metric 4000)	NiCE.PowerHA.Cluster.Resource.VolumeGroup	Enabled	Availability	NiCE.PowerHA.Cluster.Metric.4000.VolumeGroup.Availability.Monitor	WorstOf	4000
Volume Group Availability - Summary	Rolls up the worst health state of PowerHA Cluster Resource Group (Metric 4500)	NiCE.PowerHA.Cluster.ResourceGroup	Enabled	Availability	NiCE.PowerHA.Cluster.ResourceGroup	WorstOf	4500
Logical Disk Health Rollup Monitor	Rolls up the best health state of PowerHA Cluster File System (Metric 5000)	NiCE.PowerHA.Cluster.FileSystem	Enabled	Availability	NiCE.PowerHA.Cluster.Metric.5000.FileSystem.Availability.Monitor	BestOf	5000
Logical Disc % Free Inodes	Rolls up the worst health state of PowerHA Cluster File System (Metric 5010)	NiCE.PowerHA.Cluster.FileSystem	Enabled	Availability	NiCE.PowerHA.Cluster.Metric.5010.FileSystem.FreeInodesPct.Monitor	WorstOf	5010
Logical Disk % Free Space	Rolls up the worst health state of PowerHA Cluster File System (Metric 5020)	NiCE.PowerHA.Cluster.FileSystem	Enabled	Availability	NiCE.PowerHA.Cluster.Metric.5020.FileSystem.FreeSpacePct.Monitor	WorstOf	5020



Dependency Monitors

Name	Description	Target	Enabled	Health Type	Member Monitor	Roll-up Algorithm	Metric
Logical Disk Free Space (MB)	Rolls up the worst health state of PowerHA Cluster File System (Metric 5030)	NiCE.PowerHA.Cluster.FileSystem	Enabled	Availability	NiCE.PowerHA.Cluster.Metric.5030.FileSystem.FreeSpaceMB.Monitor	WorstOf	5030
Logical Disk Health Rollup Monitor - Summary	Rolls up the best health state of PowerHA Cluster Resource Group (Metric 5500)	NiCE.PowerHA.Cluster.ResourceGroup	Enabled	Availability	NiCE.PowerHA.Cluster.Metric.5500.FileSystem.Availability.Summary.Monitor	BestOf	5500
Logical Disc % Free Inodes - Summary	Rolls up the worst health state of PowerHA Cluster Resource Group (Metric 5510)	NiCE.PowerHA.Cluster.ResourceGroup	Enabled	Availability	NiCE.PowerHA.Cluster.Metric.5510.FileSystem.FreeInodesPct.Summary.Monitor	WorstOf	5510
Logical Disk % Free Space - Summary	Rolls up the worst health state of PowerHA Cluster Resource Group (Metric 5520)	NiCE.PowerHA.Cluster.ResourceGroup	Enabled	Availability	NiCE.PowerHA.Cluster.Metric.5520.FileSystem.FreeSpacePct.Summary.Monitor	WorstOf	5520
Logical Disk Free Space (MB) - Summary	Rolls up the worst health state of PowerHA Cluster Resource Group (Metric 5530)	NiCE.PowerHA.Cluster.ResourceGroup	Enabled	Availability	NiCE.PowerHA.Cluster.Metric.5530.FileSystem.FreeSpaceMB.Summary.Monitor	WorstOf	5530



Other Monitors

Name	Description	Target	Enabled	Health Type	Interval (sec)	Warning Threshold
Self-Monitoring: clmp_cim.log Filesize	Monitor to check if the clmp_cim.log reached a specific filesize.	NiCE.Cluster.X.Computer (Cluster UNIX/Linux Computer)	Enabled	System.Health.Availability State	3600	5000000
Self-Monitoring: clmp_spi.log Filesize	Monitor to check if the clmp_spi.log reached a specific filesize.	NiCE.Cluster.X.Computer (Cluster UNIX/Linux Computer)	Enabled	System.Health.Availability State	3600	5000000
License Expired (PowerHA)	This monitor checks if the license is expired.	NiCE.PowerHA.Unix.ClusterNode	Enabled	Availability	3600	30



Performance Rules

Metric Number	Name	Description	Target	Enabled	DW Storage	Interval (sec)
1000	Cluster Availability	This Performance rule shows the status of the cluster. 0 - ST_INIT 1 - ST_JOINING 2 - ST_VOTING 3 - ST_RP_RUNNING 4 - ST_BARRIER 5 - ST_CBARRIER 6 - ST_UNSTABLE 7 - NOT_CONFIGURED 8 - RP_FAILED 9 - ST_STABLE	NiCE.PowerHA.Unix.ClusterNode	Enabled	FALSE	300
3000	Resource Group Availability	This Performance rule shows the number of nodes with Online Status of a resource group.	NiCE.PowerHA.Unix.ResourceGroup	Enabled	FALSE	300
5010	Free Inodes Percentage	This rule collects free inodes percentage of a file system.	NiCE.PowerHA.Unix.FileSystem	Enabled	FALSE	300
5020	Free Space Percentage	This rule collects free space percentage of a file system.	NiCE.PowerHA.Unix.FileSystem	Enabled	FALSE	300
5030	Free Space Megabytes	This rule collects free space in megabytes of a file system.	NiCE.PowerHA.Unix.FileSystem	Enabled	FALSE	300
5040	Used Space Percentage	This rule collects used space percentage of a file system.	NiCE.PowerHA.Unix.FileSystem	Enabled	FALSE	300
5050	Used Space Megabytes	This rule collects used space in megabytes of a file system.	NiCE.PowerHA.Unix.FileSystem	Enabled	FALSE	300
5060	Used Inodes Percentage	This rule collects used inodes percentage of a file system.	NiCE.PowerHA.Unix.FileSystem	Enabled	FALSE	300



Alert Rules

Name	Description	Enabled	Interval (sec)	Alert Name	Target	Metric Number	Log File
Self Monitoring: clmp_cim.log Monitoring	Monitors the clmp_cim.log file.	Enabled		Self-Monitoring: clmp_cim.log Alert	NiCE.Cluster.X.Computer		/var/opt/NiCE/Log/clmp/clmp_cim.log
Self Monitoring: clmp_spi.log Monitoring	Monitors the clmp_spi.log file.	Enabled		Self-Monitoring: clmp_spi.log Alert	NiCE.Cluster.X.Computer		/var/opt/NiCE/Log/clmp/clmp_spi.log
Self-Monitoring: Workflow Error	This Rule check if errors for the workflows exists.	Enabled		Self-Monitoring: Workflow Error	NiCE.Cluster.X.Computer		Operations Manager Event Log
Self-Monitoring: Workflow Warning	This Rule check if warnings for the workflows exists.	Enabled		Self-Monitoring: Workflow Warning	NiCE.Cluster.X.Computer		Operations Manager Event Log
Failover Detection	This Alert Rule analyses the Cluster Log file (/var/hacmp/log/cluster.log). If an entry matching rg_move_completed or rg_move_release is matched, an alert is triggered.	Enabled	300	Failover detected	NiCE.PowerHA.Unix.ResourceGroup	3020	
RG Move started	This Alert Rule analyses the Cluster Log file (/var/hacmp/log/cluster.log). If an entry matching rg_move_completed or rg_move_release is matched, an alert is triggered.	Enabled	300	Resource Group move has been started	NiCE.PowerHA.Unix.ClusterNode		Cluster Log from Cluster Node
RG Move complete	This Alert Rule analyses the Cluster Log file (/var/hacmp/log/cluster.log). If an entry matching rg_move_completed or rg_move_release is matched, an alert is triggered.	Enabled	300	Resource Group moved to another node	NiCE.PowerHA.Unix.ClusterNode		Cluster Log from Cluster Node



Action Rules

Name	Description	Enabled	Target	Interval (sec)
Install License (PowerHA MP)	Install the NiCE PowerHA MP License.	Enabled	NiCE.Cluster.X.Computer	86400



Tasks

Name	Description	State View
Check License	This task checks for a valid license on the selected System and prints information about all licenses available on the system.	Cluster Computers
Disable Tracing	This tasks disables tracing of the Cluster MP instrumentation. Traces files are typically written to the <code>/var/opt/NiCE/log/clmp/</code> directory.	Cluster Computers
Enable Tracing	This task enables tracing of the Cluster MP Instrumentation. Traces are typically written to <code>/var/opt/NiCE/log/clmp</code> . WARNING: This can produce large amount of data!	Cluster Computers
Set Configuration Parameter	This task sets parameters in <code>clmp_spi.cfg</code> on a cluster node.	Cluster Computers
Test Data Collection	This task verifies the functionality to the Cluster Data Collection. The output returns availability and performance data used in SCOM rules and monitors. The task is using the Microsoft UNIX/Linux Action Account Run-As Profile.	Cluster Computers
Trigger Cluster Computer Discovery	This task runs an on-demand discovery for the selected node.	Configuration
Uninstall Cluster MP Instrumentation	WARNING: This task will remove the Cluster MP Instrumentation from the system.	Cluster Computers
Deploy Cluster MP Instrumentation	Monitoring Cluster solutions requires a number of predeployed scripts. The scripts are packaged to an 'Instrumentation' package. The pre-deployed scripts prevent the SCOM script probe action module to deliver scripts to the nodes each time they are executed and decrease network traffic and load significantly. The Instrumentation tarball is packaged with the MPB. As this task copies files to the system additional privileges are required. Please see the Quick Start Guide for details.	AIX Server State
Test PowerHA Cluster Discovery	This task verifies the functionality of the PowerHA Cluster Discovery. The task is using the Microsoft UNIX/Linux Action Account Run-As Profile.	Cluster Computers
Trigger PowerHA Cluster Discovery	This task runs an on-demand discovery for the cluster UNIX/Linux computer. The IBM PowerHA Instrumentation must be installed. If discovery fails, troubleshoot by running the task "Test PowerHA Cluster Discovery".	Cluster Computers