

HP Operations Smart Plug-in for Cluster Infrastructure

for HP Operations Manager for Windows®, UNIX, and Linux operating systems

Software Version: 1.00

User Guide

Document Release Date: September 2009

Software Release Date: September 2009



Legal Notices

Warranty

The only warranties for HP products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein.

The information contained herein is subject to change without notice.

Restricted Rights Legend

Confidential computer software. Valid license from HP required for possession, use or copying. Consistent with FAR 12.211 and 12.212, Commercial Computer Software, Computer Software Documentation, and Technical Data for Commercial Items are licensed to the U.S. Government under vendor's standard commercial license.

Copyright Notices

© Copyright 2009 Hewlett-Packard Development Company, L.P.

Trademark Notices

Microsoft® and Windows® are U.S. registered trademarks of Microsoft Corporation.

UNIX® is a registered trademark of The Open Group.

Adobe®, Acrobat® and PostScript® are trademarks of Adobe Systems Incorporated.

Java™ and all Java based trademarks and logos are trademarks or registered trademarks of Sun.

Documentation Updates

The title page of this document contains the following identifying information:

- Software Version number, which indicates the software version.
- Document Release Date, which changes each time the document is updated.
- Software Release Date, which indicates the release date of this version of the software.

To check for recent updates or to verify that you are using the most recent edition of a document, go to:

<http://h20230.www2.hp.com/selfsolve/manuals>

This site requires that you register for an HP Passport and sign in. To register for an HP Passport ID, go to:

<http://h20229.www2.hp.com/passport-registration.html>

Or click the **New users - please register** link on the HP Passport login page.

You will also receive updated or new editions if you subscribe to the appropriate product support service. Contact your HP sales representative for details.

Support

Visit the HP Software Support Online web site at:

www.hp.com/go/hpsoftwaresupport

This web site provides contact information and details about the products, services, and support that HP Software offers.

HP Software online support provides customer self-solve capabilities. It provides a fast and efficient way to access interactive technical support tools needed to manage your business. As a valued support customer, you can benefit by using the support web site to:

- Search for knowledge documents of interest
- Submit and track support cases and enhancement requests
- Download software patches
- Manage support contracts
- Look up HP support contacts
- Review information about available services
- Enter into discussions with other software customers
- Research and register for software training

Most of the support areas require that you register as an HP Passport user and sign in. Many also require a support contract. To register for an HP Passport ID, go to:

<http://h20229.www2.hp.com/passport-registration.html>

To find more information about access levels, go to:

http://h20230.www2.hp.com/new_access_levels.jsp

Contents

1	Introduction	7
2	Cluster Infrastructure SPI Components	9
	Map View on HPOM for Windows.	10
	Map View on HPOM for UNIX/Linux.	11
	Policies	12
	Reports	13
3	Cluster Infrastructure SPI Policies	15
	Discovery Policy	15
	Availability Policies	16
	Data Collector Policy	16
	Monitor Policies.	16
	Log Policies.	20
4	Cluster Infrastructure SPI Reports	23
5	Troubleshooting	27

1 Introduction

The HP Operations Smart Plug-in for Cluster Infrastructure (Cluster Infrastructure SPI) is a software application that integrates fully with HP Operations Manager (HPOM) and extends HPOM's management scope to include monitoring for high-availability clusters (also known as failover clusters) on Microsoft Windows and Linux systems. The Cluster Infrastructure SPI is developed on the cluster awareness of the HP Operations Agent.

You can use the Cluster Infrastructure SPI to monitor the availability and manage the functionality of the Windows and Linux cluster nodes and resource groups. For more information on the operating system versions supported by the Cluster Infrastructure SPI, see the *HP Operations Smart Plug-in for Cluster Infrastructure Release Notes*.

The Cluster Infrastructure SPI integrates with other HPOM products and their components, including HP Reporter and Embedded Performance Component (EPC) of HP Operations Agent.

The functionality of the Cluster Infrastructure SPI is configured such that it can be used by other HP Operations Smart Plug-ins. It is integrated with the Systems Infrastructure SPI to provide service discovery and impact analysis feature for single systems and cluster environments.

Like other SPIs, the Cluster Infrastructure SPI adds to the monitoring capabilities of HPOM by collecting cluster infrastructure data that is targeted and gathered according to rules and schedule specifications contained within policies. Data collection also relies on the programs contained within the HPOM and Cluster Infrastructure SPI packages.

After completing the Cluster Infrastructure SPI installation on the HPOM management server, you must configure and deploy the Cluster Infrastructure SPI to cluster servers that you want to monitor. Cluster Infrastructure SPI policies define rules for interpreting data, and schedules for collecting data.

2 Cluster Infrastructure SPI Components

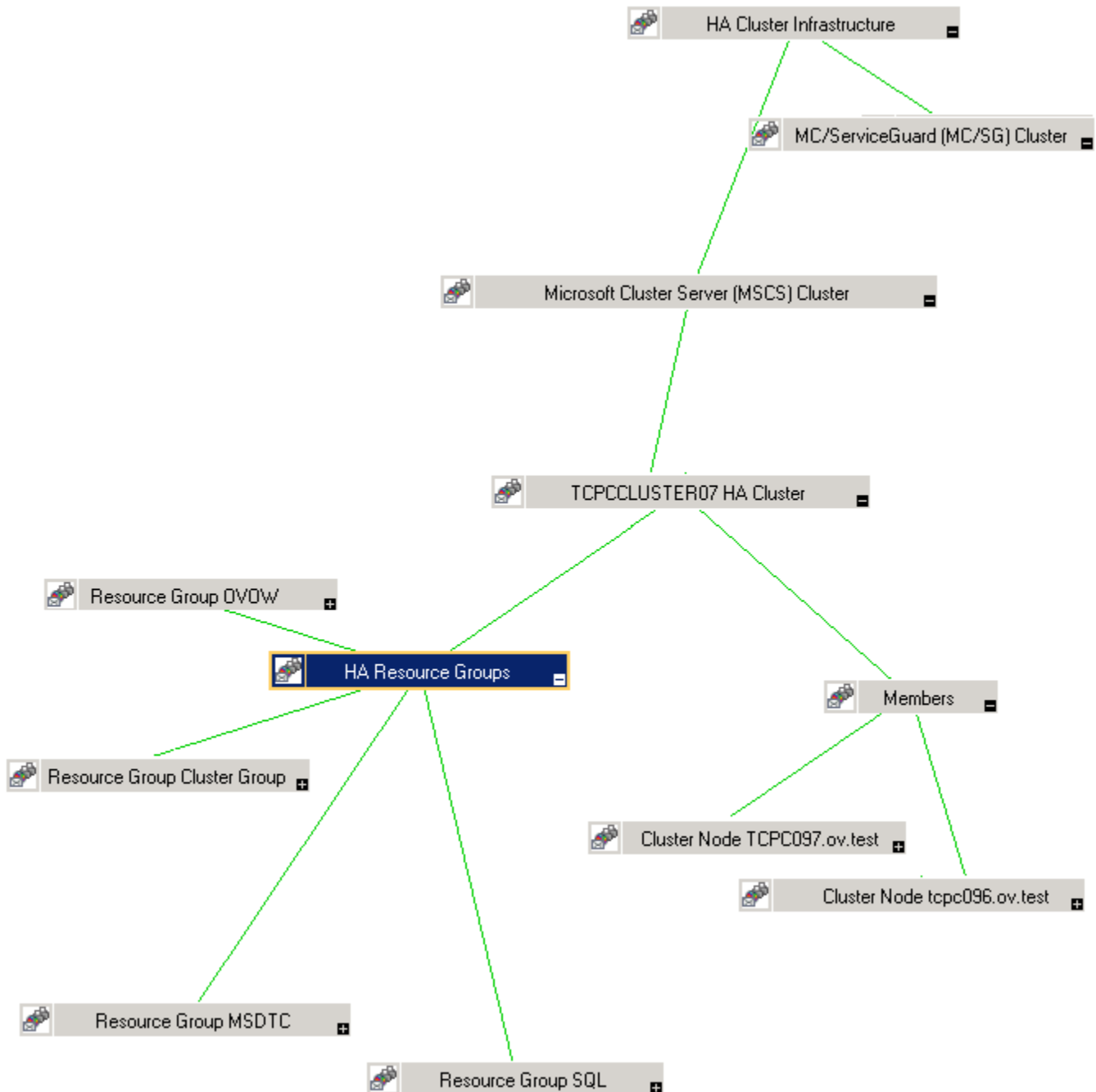
The Cluster Infrastructure SPI components include policies that enable you to configure and receive data in the form of service problem alerts, messages, and metric reports. Cluster Infrastructure SPI service map alerts are shown in the HPOM service map, while Cluster Infrastructure SPI messages and automatic action reports are available through the HPOM message browser. You can double-click an alert message in the message browser to view message details.

The Cluster Infrastructure SPI integrates with HP Reporter and HP Performance Manager to produce web-based reports and graphs that use bar charts, line graphs, and pie charts to display metric data on cluster performance levels and server availability. Cluster Infrastructure SPI reports provide information about clusters on specific cluster managed nodes, the reports and graphs provide an overview of cluster infrastructure that is helpful in determining needs for the long term.

The Cluster Infrastructure SPI installation/configuration adds the following components to the HPOM console.

Map View on HPOM for Windows

The map view displays the real-time status of your cluster infrastructure environment. To view select **Services** and click **Cluster Infrastructure**. Map view graphically represents the structural view of your entire service or node hierarchy in the cluster infrastructure environment including any resource group or cluster node.



The map view indicates severity levels for problems in the cluster infrastructure organization with the help of colors (red, yellow, blue, and green). Use the map view to drill down to the level in your node or service hierarchy where a problem is occurring.

To help you determine the root cause of a problem, HPOM provides root cause analysis to take you quickly to the service or node that is not performing. Root cause analysis starts at the level of your selected node or service, stops at the level where the cause of the problem lies, and draws a map that shows the source of the problem and the nodes or services affected.

Map View on HPOM for UNIX/Linux

The map view displays the real-time status of your virtual infrastructure environment. To ensure that the operator can view the service map in the HPOM for UNIX and HPOM for Linux Operational UI, run the following commands on the management server:

```
opcservice -assign <operator name> HAClusterInfrastructure
```

where operator name is the operator (for example, `opc_adm` or `opc_op`) to which you want to assign the service.

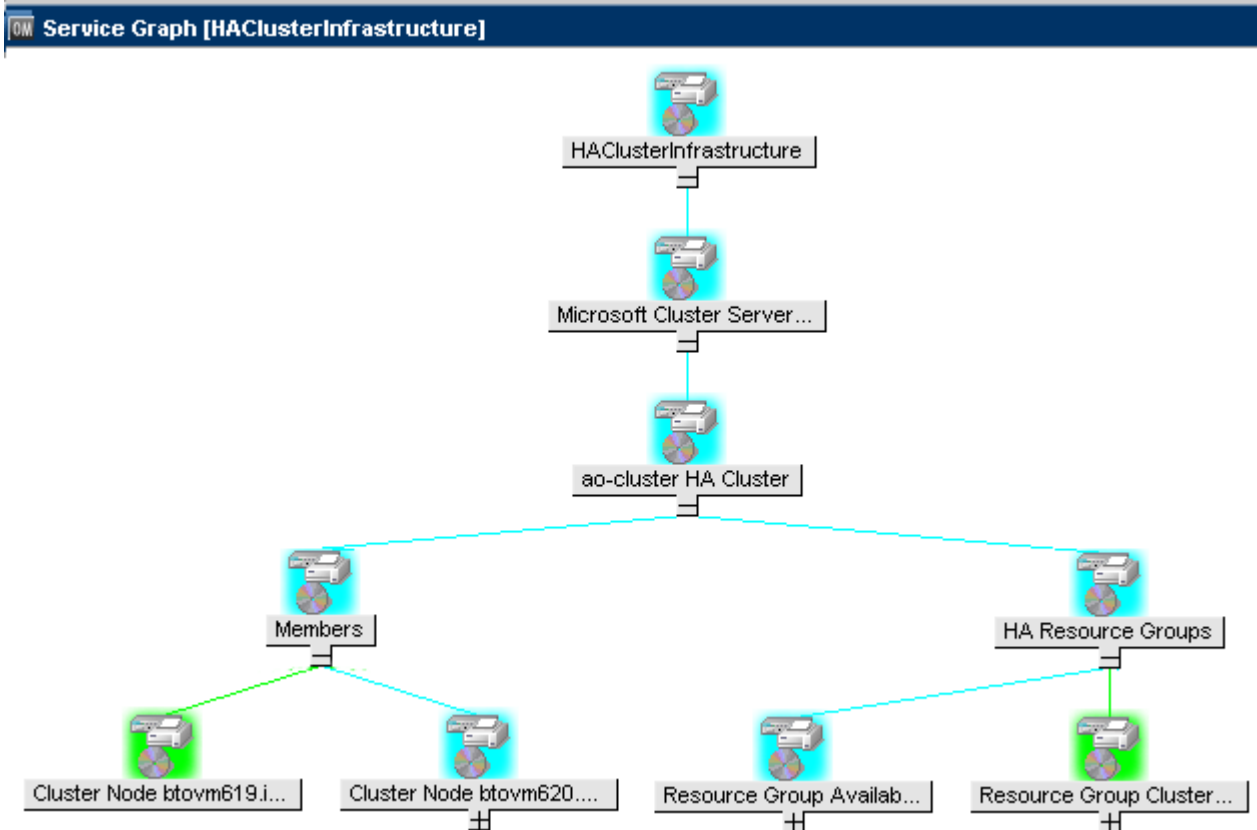
The service discovery policy does not automatically deploy policies to the nodes. You can manually deploy these.

The map view displays the real-time status of your infrastructure environment.

To view the map view:

- 1 Launch the HPOM Java console.
- 2 Log on using your user name and password.

Select **Services** → **Cluster Infrastructure** → **Show Graph**, to view the map view



The map view graphically represents the structural view of your entire service or node hierarchy in the cluster infrastructure environment including any subsystems or subservices.

Policies

You can use the Policy Groups folder to find a cluster specific policy. The Cluster Infrastructure SPI policy types are as follows:

- **Logfile Entry policies** (all begin with CI) capture status/error messages generated by the cluster nodes and resource groups application.
- **Measurement Threshold policies** (all begin with CI) define conditions for each metric so that the collected metric values can be interpreted and alerts/messages can be displayed in the message browser.

Cluster Infrastructure SPI measurement threshold policies are based on specific metrics. Each policy uses one or more metrics for data collection and compares the actual metric value against the specified threshold. A mismatch between the threshold and the actual metric value generates message and instruction text that help you resolve a situation.

- **Scheduled Task policies** (all begin with CI) determine when and what metric values to collect and define the collection interval. Collection intervals can occur at 5 minutes, 15 minutes, one hour, or one day. The collection interval indicates how often data is collected

for a specific group. The scheduled task policy has two functions: to run the collector/analyzer at each collection interval on a node and to collect data for all metrics listed within the policies' Command text box.

- **Service Discovery policy** - Discovers cluster nodes and resource group instances and builds a service map for all Cluster Infrastructure SPI discovered instances.

For more information about the policies provided by Cluster Infrastructure SPI, see [Cluster Infrastructure SPI Policies](#).

Reports

You can integrate the Cluster Infrastructure SPI with HP Reporter to generate web-based reports on metric data.

If HP Reporter is installed on the HPOM management server for Windows, you can view reports from the console. To view a report, expand **Reports** in the console tree, and then double-click individual reports.

If HP Reporter is installed on a separate system connected to the HPOM management server (for Windows, UNIX, or Linux operating system), you can view the reports on HP Reporter system. For more information on integration of HP Reporter with HPOM, see *HP Reporter Installation and Special Configuration Guide*.

For information about the reports provided by Systems Infrastructure SPI, see [Cluster Infrastructure SPI Reports](#).

3 Cluster Infrastructure SPI Policies

The Cluster Infrastructure SPI provides a wide range of policies to help manage your Windows or UNIX environment. These policies enable you to monitor the operations and performance of the services that run on your managed nodes.

At installation, several default policies are automatically deployed on the supported managed nodes. These can be used as-is to begin receiving cluster, cluster nodes, and resource group related data and messages from the cluster environment. You can manually deploy other policies according to your requirement. By modifying and saving preconfigured policies with new names, you can create custom policies for your own specialized purposes.

The folder SPI for Infrastructure group contains a subgroup *en* arranged according to the language English.

To access the policies on HPOM for Windows, select the following:

Policy management → Policy groups → SPI for Infrastructure → en → Cluster Infrastructure

To access the policies on console/ Administration UI for HPOM for UNIX/ Linux, select the following:

Policy Bank → SPI for Infrastructure → en → Cluster Infrastructure

Discovery Policy

The **CI-ClusterDiscovery** policy collects the following information from the managed nodes:

- Cluster name
- Cluster type
- Nodes
- Resource Groups
- State of nodes (offline/online)
- State of Resource Group (offline/online)
- Details of resource group's virtual IP

The CI-ClusterDiscovery policy initiates ovclusterinfo tool to collect the details about the cluster. These details are framed in a service xml file and sent to the server.

After the discovery process is completed successfully, the service view is updated with the cluster infrastructure elements. The service elements for each cluster's components are represented as child elements below the respective cluster name.

Availability Policies

The availability policies monitor and check for the state and availability of cluster nodes, resource groups, network interfaces, and cluster services. The policy under *Data Collector group* collects data about state and availability of the cluster elements from the managed cluster nodes and logs the individual instances into Embedded Performance Component. The policies under *Monitors* group monitors the availability and state of cluster elements along with the process and services running on them.

Data Collector Policy

CI-ClusterDataCollector policy

This policy is a scheduled task policy that checks for the state and availability of resource groups, network interfaces, and cluster services. It collects data from the managed cluster nodes and logs the individual instances into the Embedded Performance Component in defined time intervals. By default, the time interval is 5 minutes. The recorded information stored in the Embedded Performance Component is used by the following policies to monitor, compare, and alert:

- [Cluster Monitor Policy](#)
- [Cluster Node Monitor Policy](#)
- [Cluster Resource Group Monitor Policy](#)

The policy collects all information and metrics of a cluster using the `ovclusterinfo` tool provided by cluster awareness of the HP Operations Agent, and records the data in the Embedded Performance Component.

The default policy group for the policy is:

SPI for Infrastructure → en → Cluster Infrastructure → Availability → Data Collector

Monitor Policies

The default policy group for monitor policies is:

SPI for Infrastructure → en → Cluster Infrastructure → Availability → Monitors

Cluster Monitor Policy

CI-ClusterMonitor

Before deploying this policy, make sure you have deployed the CI-ClusterDataCollector policy for cluster data collection.

The CI-ClusterMonitor policy monitors the availability and strength of a cluster group. This is helpful to ensure high availability of services running on the cluster servers. The policy monitors following conditions:

- The cluster is down and the cluster status is offline.

- There are no redundant nodes active in the cluster group. Only a single node is active. If the single active node becomes inactive, it will bring the cluster down. This is referred to as a Single Point of Failure (SPOF) condition.
- Majority of nodes are offline. This is determined by comparing the number of active nodes against the cluster quorum. If $(\text{number of cluster nodes} / 2 + 1)$ cluster nodes are not active in a cluster, the cluster quorum is not met and the policy will send out an alert message.
- Any resource group in the cluster is offline.

Metrics Used	CLUSTER_TYPE CLUSTER_STATE CLUSTER_NUM_NODES CLUSTER_NUM_ACTIVE_NODES CLUSTER_NUM_RESGROUPS
Supported Clusters	HP MC/ServiceGuard Cluster (Linux) Microsoft Cluster Server (Microsoft Windows) RHEL Cluster Server (Linux) VERITAS Cluster (Windows/Linux)
Script-Parameter	Description
<i>MessageGroup</i>	Message group for outgoing messages.
<i>Debug</i>	Set the value to 1, to start receiving debug messages. These messages are displayed on the console with normal severity.
<i>Trace</i>	Set a non-zero value to enable tracing.



To get quicker alerts about resource groups and cluster nodes going offline, the collector and the monitor policies can be set to run every minute. If this is done, it is important to set the summarization interval as well. Data queried from EPC is normally summarized (averaged) over a 5-minute interval before EPC gives this data to the monitor agent. This can cause an issue when data collection is done more than once in a 5-minute interval. So the summarization interval must appropriately be lowered.

To set the summarization interval to 1-minute, run the following command on the cluster nodes where data collection and monitoring is happening:

```
ovconfchg -ns eaagt -set OPC_SET_CISPI_SI 1m.
```

Cluster Node Monitor Policy

CI-ClusterNodeMonitor

Before deploying this policy, make sure you have deployed the CI-ClusterDataCollector policy for cluster data collection.

This policy monitors the cluster node status.

Metrics Used	NODE_STATE NODE_ID
Supported Clusters	HP MC/ServiceGuard Cluster (Linux) Microsoft Cluster Server (Microsoft Windows) RHEL Cluster Server (Linux) VERITAS Cluster (Windows/Linux)
Script-Parameter	Description
<i>MessageGroup</i>	Message group for outgoing messages.
<i>Debug</i>	Set the value to 1 to start receiving debug messages. These messages are displayed on the console with normal severity.
<i>Trace</i>	Set a non-zero value to enable tracing.

Cluster Resource Group Monitor Policy

CI-ClusterResGroupMonitor

Before deploying this policy, make sure you have deployed the CI-ClusterDataCollector policy for cluster data collection.

This policy monitors the state and availability of resource groups in a cluster.

Metrics Used	CLUSTER_NAME CLUSTER_TYPE RESGROUP_NAME RESGROUP_NODE_LIST RESGROUP_STATE RESGROUP_LOCAL_STATE RESGROUP_ACTIVE_NODE RESGROUP_VIRTUAL_IP_ADDR
Supported Clusters	HP MC/ServiceGuard Cluster (Linux) Microsoft Cluster Server (Microsoft Windows) RHEL Cluster Server (Linux) VERITAS Cluster (Windows/Linux)
Script-Parameter	Description
<i>MessageGroup</i>	Message group for outgoing messages.
<i>Debug</i>	Set the value to 1, to start receiving debug messages. These messages are displayed on the console with normal severity.
<i>Trace</i>	Set a non-zero value to enable tracing.

Microsoft Windows Cluster Service Monitor Policy

CI-MSWindowsClusterServiceMonitor policy

The CI-MSWindowsClusterServiceMonitor policy is a Service/Process Monitoring type policy that checks for the state and availability of Microsoft Windows services. It monitors the Microsoft Windows services on the managed cluster nodes and sends out an alert in case the service is unavailable or stopped.

The CI-MSWindowsClusterServiceMonitor policy is only supported on Microsoft Windows platform. The default policy group for the policy is:

SPI for Infrastructure → en → Cluster Infrastructure → Availability → Monitors → MS Cluster Server

HP MC/ServiceGuard Cluster Process Monitor Policy

CI-MCSGClusterProcessMonitor policy

The CI-MCSGClusterProcessMonitor policy is a Service/Process Monitoring type policy that monitors the state and availability of HP MC/ServiceGuard Cluster process on Linux, for RHEL and SLES systems. It monitors the process *cmcl* and sends out an alert in case the process is not running on the managed node. The *cmcl* process runs on every cluster node and helps to initialize and monitor the health of the cluster.

The CI-MCSGClusterProcessMonitor policy is only supported on RHEL and SLES platforms. The default policy group for this policy is:

SPI for Infrastructure → en → Cluster Infrastructure → Availability → Monitors → MC ServiceGuard Cluster

Red Hat Cluster Process Monitor Policies

CI-RHClusterCCSDProcessMonitor policy

The CI-RHClusterCCSDProcessMonitor policy is a Service/Process Monitoring type policy that monitors the state and availability of the Red Hat Cluster process on Linux, for RHEL systems. It monitors the process *ccsd* (Cluster Configuration System Daemon) and sends out an alert in case the process is not running on the managed node.

The CI-MCSGClusterProcessMonitor policy is only supported on the RHEL platform. The default policy group for the policy is:

SPI for Infrastructure → en → Cluster Infrastructure → Availability → Monitors → RH Cluster

CI-RHClusterRGManagerProcessMonitor policy

The CI-RHClusterRGManagerProcessMonitor policy is a Service/Process Monitoring type policy that monitors the state and availability of the Red Hat Cluster process on Linux, for RHEL systems. It monitors the process *clurgmgrd* (Cluster Resource Group Manager) and sends out an alert in case the process is not running on the managed node.

The CI-RHClusterRGManagerProcessMonitor policy is only supported on the RHEL platform. The default policy group for the policy is:

SPI for Infrastructure → en → Cluster Infrastructure → Availability → Monitors → RH Cluster

Veritas Cluster Server Process Monitor Policies

The Cluster Infrastructure SPI monitors the Veritas cluster process monitor policies on Windows and Linux systems.

CI-MSWindowsVCS_ProcessMonitor policy

The CI-MSWindowsVCS_ProcessMonitor policy is a Service/Process Monitoring type policy that monitors the state and availability of the Veritas cluster server process on Microsoft Windows systems and sends out an alert in case the process is not running on the managed node. The default group for the policy is:

SPI for Infrastructure → en → Cluster Infrastructure → Availability → Monitors → Veritas Cluster → Windows

CI-LinuxVCS_ProcessMonitor policy

The CI-LinuxVCS_ProcessMonitor policy is a Service/Process Monitoring type policy that monitors the state and availability of the Veritas cluster server process on Linux, for RHEL and SUSE systems and sends out an alert in case the process is not running on the managed node. The default group for the policy is:

SPI for Infrastructure → en → Cluster Infrastructure → Availability → Monitors → Veritas Cluster → Linux

Log Policies

The default group for Microsoft Windows Event Log Monitor policies is:

SPI for Infrastructure → en → Cluster Infrastructure → Logs → MS Cluster Server

CI-MSWindowsClusterServer_NetworkWarnError policy

This policy forwards all warning and error event log entries related to cluster IP address resources, initialization of the cluster and network driver, and creation of NetBIOS interface to the HPOM console.

CI-MSWindowsClusterServer_NodeWarnError policy

This policy forwards all warning and error event log entries related to cluster node to the HPOM console.

CI-MSWindowsClusterServer_StorageWarnError policy

This policy forwards all warning and error event log entries related to cluster disks and quorum resource to the HPOM console.

CI-MSWindowsClusterServer_AvailabilityWarnError policy

This policy forwards all warning and error event log entries related to failover cluster server availability to the HPOM console.

4 Cluster Infrastructure SPI Reports

HP Reporter captures and formats data collected at nodes and generates web-based reports. These reports help you understand an overall picture of cluster resources. To generate and view reports and graphs from data collected by the Cluster Infrastructure SPI, you must use HP Reporter in conjunction with HPOM.

After you install HP Reporter in your environment, you can access Cluster Infrastructure SPI reports from the HPOM for Windows console. Those reports are available under **Reports** section in the HPOM console tree and offer helpful information for analyzing trends for cluster infrastructure availability and performance. To install HP Reporter package, see the *Infrastructure SPI Installation Guide*. To view reports, expand **Reports** → **SPI for Infrastructure** → **HA Cluster Infrastructure** in the console tree.

If HP Reporter is installed on a separate system connected to the HPOM management server (for Windows, UNIX, or Linux operating system), you can view the reports on HP Reporter system. For more information on integration of HP Reporter with HPOM, see *HP Reporter Installation and Special Configuration Guide*.


The Reports folder is not created until data is collected on nodes and the Service Reporter consolidation process has run, which is usually 24 hours after a node becomes managed.

The Cluster Infrastructure SPI provides the following reports:

Cluster Configuration Report

This report displays the configuration information for all nodes that are members of the cluster. It provides information about the active nodes and resource group in the cluster. You can use this report to see the cluster configuration details for a cluster. The following is an example report for Cluster Configuration report.

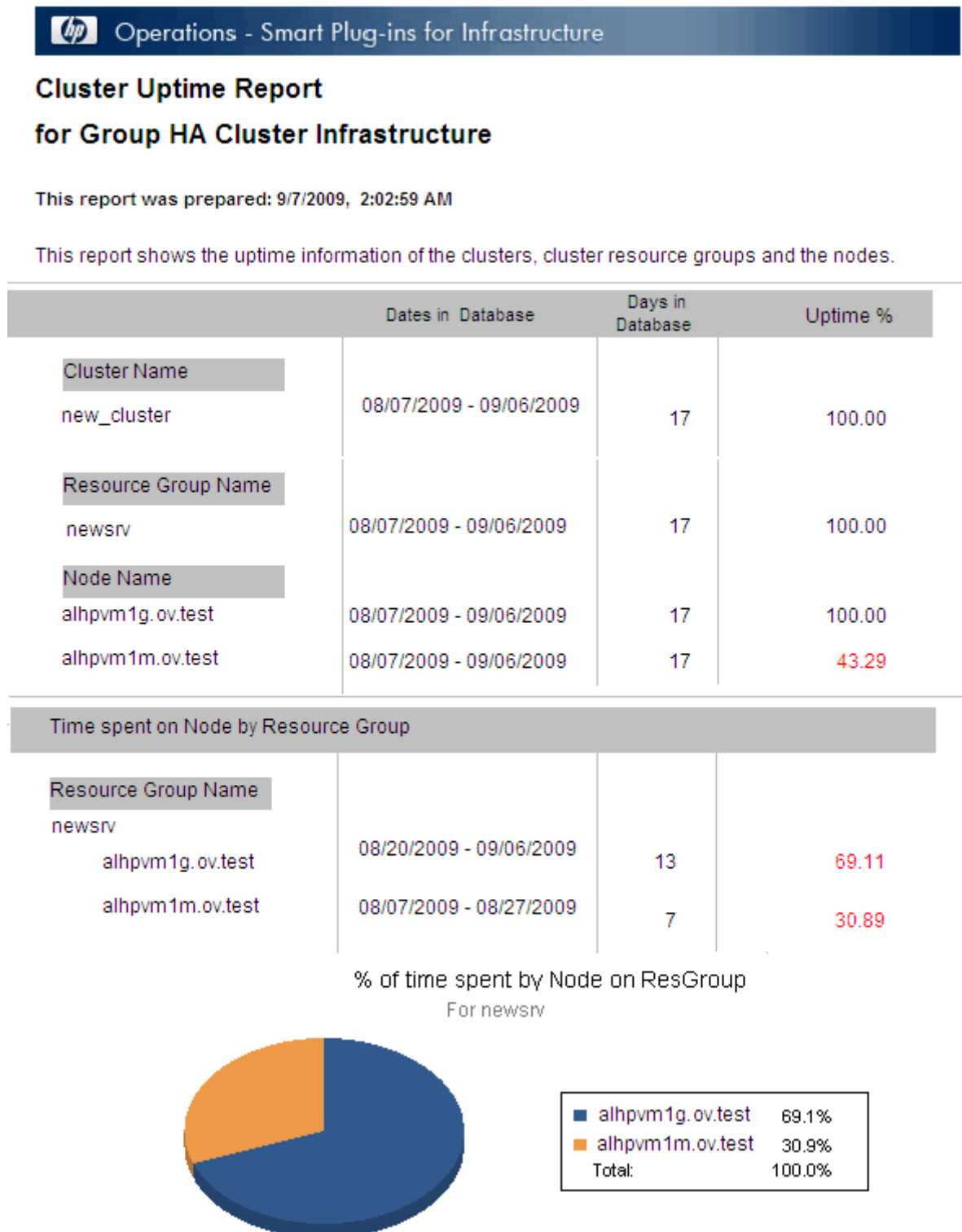
Figure 1 Sample Cluster Configuration report

 Operations - Smart Plug-ins for Infrastructure		
Cluster Configuration for Group HA Cluster Infrastructure		
This report was prepared: 8/11/2009, 2:59:12 AM		
This report shows the configuration information of all the clusters nodes		
cluster1		
Active Nodes	2	
Number of nodes configured	2	
Number of failover resource groups configured	1	
Cluster Type	MC/ServiceGuard (MC/SG)	
Cluster SPI Collector Node	tcivmi07.ov.test	
Resource Groups Configuration		
Resource Group Name	Node List	Active Node
test-oval	tcivmi07 tcivmi08	tcivmi07.ov.test
TCPCLUSTER07		
Active Nodes	2	
Number of nodes configured	2	
Number of failover resource groups configured	4	
Cluster Type	Microsoft Cluster Server (MSCS)	
Cluster SPI Collector Node	tcpc097.ov.test	
Resource Groups Configuration		
Resource Group Name	Node List	Active Node
Cluster Group	tcpc097 tcpc096	tcpc096.ov.test
MSDTC	tcpc096 tcpc097	TCPC096.ov.test
OVOW	tcpc097 tcpc096	tcpc096.ov.test
SQL	tcpc096 tcpc097	TCPC096.ov.test

Cluster Uptime Report

This report displays the uptime information of the cluster, cluster resource groups, and the member nodes. It also provides information about the time spent by the resource groups on each of the nodes it is configured to run on. You can use this report to view the cluster uptime details. The following is an example report for Cluster Uptime report.

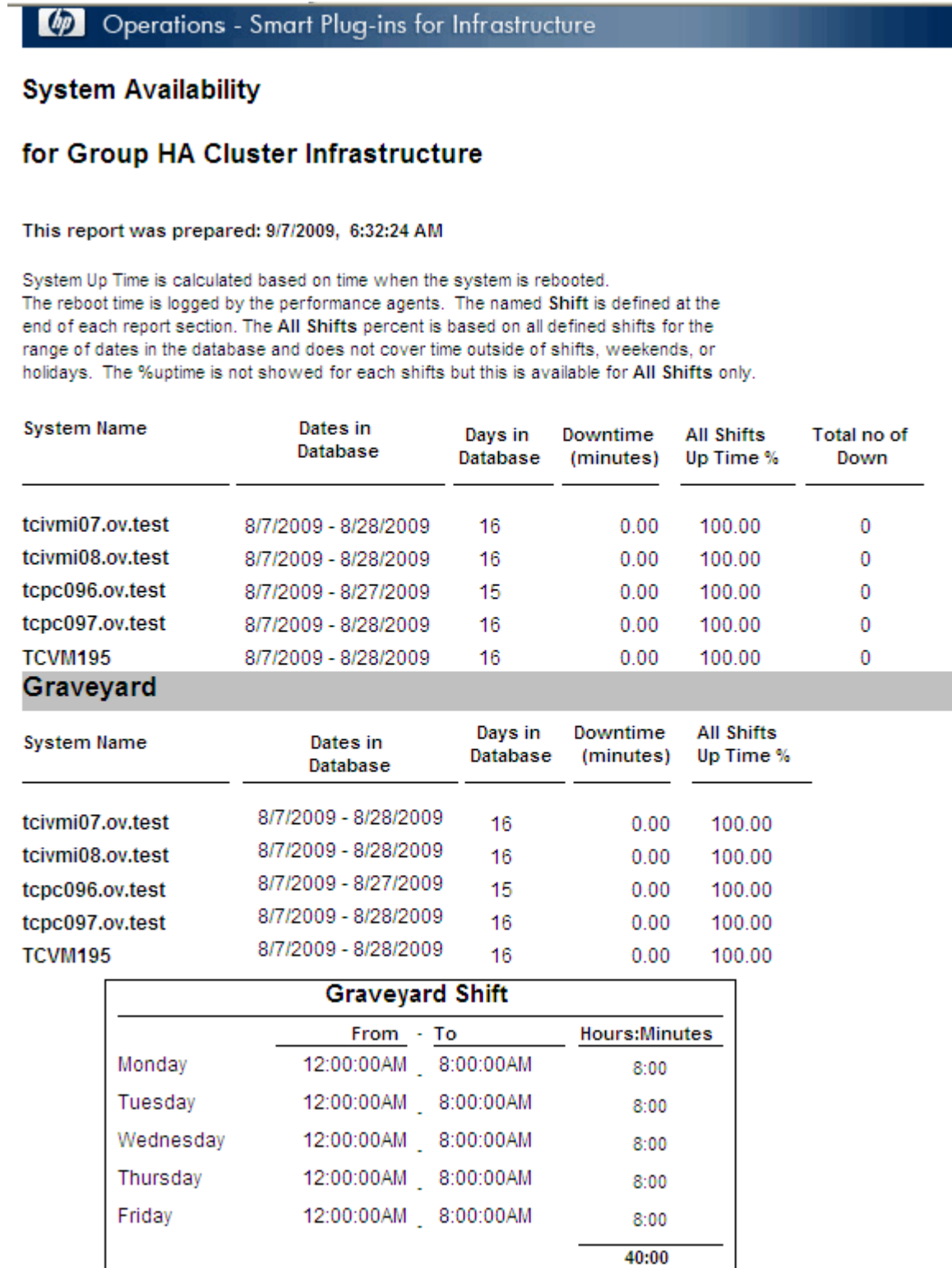
Figure 2 Sample Cluster Uptime report



Cluster System Availability Report

This report displays the system availability information of cluster member nodes. The information is sorted by day and shift-time. The shifts are defined at the end of each report section.

Figure 3 Sample Cluster System Availability report



5 Troubleshooting

This chapter provides an overview of the Cluster Infrastructure SPI limitations and issues, and covers basic troubleshooting scenarios.

Advanced Monitoring policies modified in HPOM for UNIX Administrator GUI fail to run after deployment to managed nodes.

Cause: When advanced monitoring policies are edited in GUI mode in HPOM for UNIX policy editor, syntax errors are induced into the Perl code module. This causes the policy to fail to execute. Errors such as the following appear:

```
An error occurred in the processing of the policy
'SI-LinuxSshdProcessMonitor'. Please check the following errors and take
corrective actions. (OpC30-797)

Error during evaluation of threshold level "Processes - Fill Instance list"
(OpC30-728)

Execution of instance filter script failed. (OpC30-714)

Perl Script execution failed: syntax error at PerlScript line 11, near "1
```

```
#BEGIN_PROCESSES_LIST
#ProcName=/usr/sbin/sshd
#Params=
#Params=
#MonMode=>=
#ProcNum=1
#END_PROCESSES_LIST
@ProcNames"
```

```
Missing right curly or square bracket at PerlScript line 17, within string
syntax error at PerlScript line 17, at EOF
. (OpC30-750)
```

The un-edited advanced monitoring policies (Measurement Threshold type) work fine when deployed from HPOM for UNIX.

Solution: To edit the settings in the Measurement Threshold policy, use 'Edit in Raw mode' feature of the HPOM for UNIX Administrator GUI to change the policy contents. This requires you to know the syntax of the policy data file.

Discovery and DNS resolution

Ensure that cluster resource groups resolve their IP to a well-defined host name on both the server and the agent.

Discovery procedures and data collection gives error with non-English names.

Cause: HA Cluster configurations with non-English cluster names and resource group names are not supported by the Cluster Infrastructure SPI.

The Cluster Infrastructure SPI can be deployed successfully on a non-English HP Operations Manager. However, using non-English names for systems shows up as an error because non-English names are not recognized by the `StoreCollection` `OvPerl` APIs in HP Operations Agent.

Alert Messages while Cluster Discovery automatically adds nodes

Cause: While system discovery automatically adds nodes for cluster environments, it generates alert messages with normal severity. These messages take a while to get acknowledged because the auto-addition feature of the system discover policy takes time to populate the nodes bank.

Solution: Disable the Auto-addition feature by changing the following default values in the XPL configuration parameters:

Configuration Parameters	Default Value	Value to disable auto addition
AutoAdd_ClusterNode	true	false
AutoAdd_Cluster_RG_IP	true	false
AutoAdd_HypervisorNode	true	false
AutoAdd_Guests	false	true

The `ovclusterinfo` tool does not return valid data when a cluster is down for all cluster types.

Cause: The `ovclusterinfo` tool returns valid data when the cluster is down only in case of for MC/ServiceGuard cluster. For other cluster types the cluster data collector logs data for its members only when the cluster status is online.

If the clusters server goes down or loses connectivity with HPOM, it is treated as if the complete cluster is down and the `NUM_ACTIVE_NODES` parameter shows zero. The value is set to zero because of absence of valid data from cluster. The value changes to non zero when the cluster is up.

Warning/error messages on the HPOM console:

An error occurred in the processing of the policy 'CI-ClusterNodeMonitor'. Please check the following errors and take corrective actions. (OpC30-797)
Error during evaluation of threshold level "Node Offline" (OpC30-728)
Execution of threshold script failed. (OpC30-712)

Perl Script execution failed: (in cleanup) Value: Cannot get current instance at PerlScript line 40.(OpC30-750)

Cause: The monitor policies may send out a warning message if they fail to retrieve any cluster information from CODA. This happens when the cluster collector had insufficient time to gather and record the cluster information.

Solution: To avoid such a scenario, first deploy the cluster collector to the node. The cluster collector is scheduled to run every 15 minutes by default. Allow at least two collection intervals before deploying the cluster monitor policies to the node. This ensures proper functioning of the collector and monitor policies.

We appreciate your feedback!

If an email client is configured on this system, by default an email window opens when you click on the bookmark “Comments”.

In case you do not have the email client configured, copy the information below to a web mail client, and send this email to **docfeedback@hp.com**

Product name:

Document title:

Version number:

Feedback:

