HP SiteScope

for the Windows, Solaris, and Linux operating systems

Software Version: 11.10

SiteScope-Business Service Management/Operations Manager Integration Best Practices

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Table of Contents

Welcome to This Guide

This guide describes the best practices for using and configuring the integration of SiteScope with HP Business Service Management (BSM) and HP Operations Manager (HPOM) products.

This chapter includes:

How This Guide Is Organized

The guide contains the following chapters:

Chapter 1 Integrating SiteScope with Business Service Management Applications

Describes best practices for integrating SiteScope with BSM applications.

Chapter 2 Integrating SiteScope with Operations Manager Applications

Describes best practices for using and configuring the HP Operations Manager (HPOM) integration for sending events and reporting metrics to HPOM and HP Performance Manager.

Chapter 3 Integrating SiteScope with Business Service Management or Operations Manager

Describes best practices for using SiteScope with BSM and HPOM applications.

Chapter 4 Troubleshooting SiteScope Integration Issues

Describes troubleshooting when using and configuring the integration of SiteScope with BSM and HPOM applications.

Who Should Read This Guide

This guide is intended for the following users of SiteScope and BSM:

- SiteScope/BSM/HPOM administrators
- SiteScope/BSM/HPOM application administrators
- SiteScope/BSM/HPOM data collector administrators
- SiteScope/BSM/HPOM end users

Readers of this guide should be knowledgeable about enterprise system administration, infrastructure monitoring systems, and SiteScope, and have familiarity with the systems being set up for monitoring. Readers should also be familiar with BSM/HPOM, and enterprise monitoring and management concepts.

How Do I Find the Information That I Need?

This guide is part of the HP SiteScope Help. The SiteScope Help provides a single-point of access for all SiteScope documentation.

You can access the SiteScope Help by selecting **Help** > **SiteScope Help** on the SiteScope server.

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1

Integrating SiteScope with Business Service Management Applications

SiteScope can be used to report data that is used in many applications in Business Service Management (BSM). This section contains details of the benefits, prerequisites, best practices, and troubleshooting for integrating SiteScope with BSM applications.

This section includes:

Note: For recommendations on integrating SiteScope with BSM or HP Operations Manager (HPOM), see "Integrating SiteScope with Business Service Management or Operations Manager" on page 25.

Integration Benefits

- **Events:** Ability to configure and generate events directly from SiteScope, reuse existing alerts as events, and manage and use SiteScope events in BSM's Operations Management and Service Health. For details, see "Sending Events" in *Using SiteScope*.
- **Run-time Service Model (RTSM):** SiteScope can discover and report topology on monitored systems to BSM's RTSM. You can then manage and work with these discovered configuration items (CIs) in views that provide a subset of the components in which your business functions. For details, see "Integrating SiteScope Data with BSM's Configuration Items" in *Using SiteScope*.
- **Service Health and Service Level Management:** Health indicators assigned to SiteScope monitor data provide a more detailed view of the health of a configuration item (CI) when SiteScope reports metrics or events.
  - For details on managing indicators in the centralized Indicator Assignments repository in SAM Administration, see "Indicator Assignment Settings" in *Using System Availability Management* in the HP Business Service Management Documentation Library.
  - For details on mapping metrics to indicators in SiteScope, see "Assigning SiteScope Metrics to Indicators" in *Using SiteScope*.
- **System Availability Management Administration:** Enables viewing and managing multiple SiteScopes from within System Availability Management Administration. For details, see "System Availability Management Administration Overview" in *Using System Availability Management* in the HP Business Service Management Documentation Library.
- **Reports:** Ability to create and view reports of SiteScope monitor metrics in System Availability Management and Operations Management.
  - For details on System Availability Management reports, see "System Availability Management Reports" in *Using System Availability Management* in the HP Business Service Management Documentation Library.
  - For details on Performance Perspective (the graphing component of Operations Management), see the *Using Operations Management* guide in the HP Business Service Management Documentation Library.

➤ **Downtime:** Centralized management enables configuring downtime for your IT infrastructure from one place in BSM. For details, see "CI Downtime" in *Using SiteScope*.

Integration Prerequisites

The following are required to enable the integration:

SiteScope Integration	Prerequisites	Enables reporting
BSM	System Availability Management license. For details, see "System Availability Management Administration Overview" in *Using System Availability Management* in the HP Business Service Management Documentation Library.	➤ Metrics (using the BSM integration) ➤ Topology data to BSM
HP Operations Manager	HP Operations agent must be installed on the SiteScope server. For details, see the HP SiteScope Deployment Guide PDF.	➤ Metrics (using the Operations Manager Integration) ➤ Events to BSM's Operations Management

Integration Options and Details

The metrics and event data collected by SiteScope monitors is used in BSM applications. Choose the integration option according to the type of data to be collected, and the monitoring environment that exists in your organization.

BSM Application	What to Use	SiteScope Integration	Where to Get Details
Service Health	**Metrics** (using the BSM Integration) Advantages: ➤ Displays metric values in Service Health tooltips. ➤ You can create customized calculation rules. For details, see "Business Rule Repository Overview" in *Using Service Health* in the HP Business Service Management Documentation Library. **Recommended if you do not have Operations Management.**	BSM	"How to Configure the Integration between SiteScope and BSM" in *Using SiteScope*
	Events (metrics status change) Advantage: Reduces the amount of data SiteScope sends to BSM. **Recommended when managing events in Operations Management.**	HP Operations Manager	"How to Enable SiteScope to Send Events to HPOM or BSM's Operations Management" in *Using SiteScope*
	Topology (required)	BSM	"HP Integration Settings" in *Using SiteScope* (To report topology, make sure the **Report monitor and related CI topology** check box is selected in **BSM Integration Data and Topology Settings** for each monitor instance)

BSM Application	What to Use	SiteScope Integration	Where to Get Details
Service Level Management	**Metrics** (using the BSM Integration) (recommended)	BSM	"How to Configure the Integration between SiteScope and BSM" in *Using SiteScope*
	Events (optional)	HP Operations Manager	"How to Enable SiteScope to Send Events to HPOM or BSM's Operations Management" in *Using SiteScope*
	Topology (required)	BSM	"HP Integration Settings" in *Using SiteScope* (To report topology, make sure the **Report monitor and related CI topology** check box is selected in **BSM Integration Data and Topology Settings** for each monitor instance)
SAM Reports	**Metrics** (using the BSM Integration) (required)	BSM	"How to Configure the Integration between SiteScope and BSM" in *Using SiteScope*
	Topology (required)	BSM	"HP Integration Settings" in *Using SiteScope* (To report topology, make sure the **Report monitor and related CI topology** check box is selected in **BSM Integration Data and Topology Settings** for each monitor instance)

BSM Application	What to Use	SiteScope Integration	Where to Get Details
Service Health and **Service Level Management/ SAM Reports**	Since SiteScope can report metrics to BSM (which are used in Service Level Management and System Availability Management), and metrics and events (which are used in Service Health), perform the following steps: 1. Decide on the reporting mode (events, metrics, or both) that you want to use in Service Health. For details, see Service Health above. 2. Select the data preference (events or metrics) for influencing Service Health when both SiteScope events and metrics are reported to Service Health, according to the specific use case. For details, see "BSM Service Health Preferences" in *Using SiteScope*.		

BSM Application	What to Use	SiteScope Integration	Where to Get Details
Operations Management	**Events** (required) Status change: ➤ Use if you want to manage raw (low-level) events. ➤ These events affect services. Alerts: ➤ Use if you want to manage alerts as events. ➤ These events do not affect services. You need to select the event or metrics reporting mode for Service Health. For details, see Service Health above. Events generated from health indicators: ➤ Use if you create customized calculation rules for metrics in Service Health. ➤ Use for earlier versions of SiteScope (10.x) that report metrics to BSM.	HP Operations Manager	For details on status change or alert events, see "How to Enable SiteScope to Send Events to HPOM or BSM's Operations Management" in *Using SiteScope* For details on events generated by health indicators, see "Business Rule Repository Overview" in *Using Service Health* in the HP Business Service Management Documentation Library.
	Topology Recommended for: ➤ Topology-based event correlation rules. ➤ Drill downs from events to views and related CIs.	BSM	"HP Integration Settings" in *Using SiteScope* (To report topology, make sure the **Report monitor and related CI topology** check box is selected in **BSM Integration Data and Topology Settings** for each monitor instance)

BSM Application	What to Use	SiteScope Integration	Where to Get Details
Performance Perspective Tab (the graphing component in Operations Management)	**Metrics** (using the Operations Manager Integration)	HP Operations Manager	"How to Enable SiteScope to Report Metrics to the HP Operations Agent" in *Using SiteScope*
	Topology (required)	BSM	"HP Integration Settings" in *Using SiteScope* (To report topology, make sure the **Report monitor and related CI topology** check box is selected in **BSM Integration Data and Topology Settings** for each monitor instance)

Troubleshooting

- For topology reporting issues, see "Business Service Management Topology Issues" on page 27.
- For Operations Manager Event Integration issues, see "Operations Manager Event Integration Issues" on page 34.
- For BSM Metrics integration issues, see "Business Service Management Metrics Integration Issues" on page 43.
- For Operations Manager Metrics Integration issues, see "Operations Manager Metrics Integration Issues" on page 48.
- For CI downtime issues, see "Business Service Management CI Downtime Issues" on page 51.

Note: Depending on the integration option, the suggested troubleshooting might be applicable to specific HPOM or BSM applications only.

2

Integrating SiteScope with Operations Manager Applications

The purpose of this section is to provide best practices for using and configuring the HP Operations Manager integration for sending events to HP Operations Manager (HPOM) and reporting metrics to HP Performance Manager (HPOM reporting component).

Note: For recommendations on integrating SiteScope with BSM or HPOM, see "Integrating SiteScope with Business Service Management or Operations Manager" on page 25.

This section includes:

Integration Benefits

- SiteScope works together with HPOM to provide a powerful combination of agentless and agent-based infrastructure management.
- SiteScope can communicate with HPOM using the HP Operations agent, which is installed on the SiteScope server. The agent enables SiteScope to integrate both events and metrics data.

- SiteScope sends events by writing them to a log file which is monitored by the HP Operations agent. The agent reads the data and converts it to common events, which it forwards to the HPOM management server.
- SiteScope stores the data in the HP Operations agent data storage, which is collected by Performance Manager and used in Performance Manager graphs.

Integration Prerequisites

The following are required to enable the integration:

Prerequisites	Where to Get Details
The HP Operations agent must be installed on the SiteScope server. If the agent is used only for integrations (not for monitoring), ignore the request from HPOM for the agent license. The agent can be installed during SiteScope installation, or after SiteScope is installed using the SiteScope Configuration Tool.	HP SiteScope Deployment Guide PDF
For HP Operations Manager for Windows 8.1x, patch **OMW_00071** is required to support the Node discovery feature in SiteScope-HPOM event integration.	The Patches page on the HP Software Support site
For HP Operations Manager for UNIX/Linux 9.10, patch **9.10.200** is required to support the Node discovery feature in SiteScope-HPOM event integration.	The Patches page on the HP Software Support site

Integration Options and Details

The following SiteScope-HPOM integration options are available. Choose the most suitable for the monitoring environment that exists in your organization.

Application	What to Use	Where to Get Details
HP Operations Manager	**Events** ➤ Status change: If you want to manage raw (low-level) events. ➤ Alerts: If you want to manage alerts as events. Discovery Policies: ➤ Node discovery policy (recommended). Advantage: Automatically maps SiteScope events to nodes created in HPOM for each node monitored by SiteScope. **Note:** For nodes monitored by SiteScope only, you can ignore the request from HPOM for a Target Connector license. ➤ Monitor discovery policy (not required). Advantage: Automatically maps SiteScope events to SiteScope monitors in HPOM Service Navigation maps.	"How to Enable SiteScope to Send Events to HPOM or BSM's Operations Management" in *Using SiteScope* **Note:** For details on the discovery policies, see "Sending Events" in *Using SiteScope*, and expand Discovery Scripts and the Drill Down User for Viewing HPOM Events.

Application	What to Use	Where to Get Details
HP Performance Manager	**Metrics** (required)	"How to Enable SiteScope to Report Metrics to the HP Operations Agent" in *Using SiteScope*

Troubleshooting

- For Operations Manager Event Integration issues, see "Operations Manager Event Integration Issues" on page 34.
- For Operations Manager Metrics Integration issues, see "Operations Manager Metrics Integration Issues" on page 48.

Note: Depending on the integration option, the suggested troubleshooting might be applicable to specific HPOM or BSM applications only.

3

Integrating SiteScope with Business Service Management or Operations Manager

The following are recommendations for integrating SiteScope with Business Service Management (BSM) or HP Operations Manager (HPOM):

- It is recommended to integrate SiteScope directly with BSM's Operations Management rather than with HPOM.
- If your deployment prevents you from integrating directly with Operations Management in BSM, or you want to get event pre-processing in HPOM before forwarding SiteScope events to Operations Management, you should integrate SiteScope with HPOM.

Note: Even if you are integrating SiteScope with HPOM, it is recommended to integrate SiteScope directly with BSM and to configure SiteScope to report topology to BSM (a System Availability Management license is required). Reporting topology provides topology-based event correlation rules and drill down from events to views and related CIs. You can report topology to BSM with or without metrics. If you do not want SiteScope metrics to be used in System Availability Management, Service Level Management, and so forth, report topology without metrics.

For details on integrating SiteScope with BSM, see "How to Configure the Integration Between SiteScope and BSM" in *Using SiteScope*.

Troubleshooting

- For topology reporting issues, see "Business Service Management Topology Issues" on page 27.
- For Operations Manager Event Integration issues, see "Operations Manager Event Integration Issues" on page 34.
- For BSM Metrics integration issues, see "Business Service Management Metrics Integration Issues" on page 43.
- For Operations Manager Metrics Integration issues, see "Operations Manager Metrics Integration Issues" on page 48.
- For CI downtime issues, see "Business Service Management CI Downtime Issues" on page 51.

Note: Depending on the integration option, the suggested troubleshooting might be applicable to specific HPOM or BSM applications only.

4

Troubleshooting SiteScope Integration Issues

This section describes troubleshooting when integrating SiteScope with HP Business Service Management (BSM) and HP Operations Manager (HPOM) products.

Business Service Management Topology Issues

This section describes troubleshooting and limitations when SiteScope is integrated with BSM and enabled to report monitor and related CI topology to BSM.

This section includes:

Opening Logs in SiteScope in Debug Mode

The following log files in SiteScope contain information relating to the BSM integration. Open the relevant log files in debug mode using the instructions listed below.

- **SiteScope\logs\bac_integration\bac_integration.log**
- **SiteScope\logs\bac_integration\discovery.log**
- **SiteScope\logs\bac_integration\probeGW-taskResults.log**
- **SiteScope\logs\bac_integration\topology_queue_consumer.log**

To open logs in SiteScope in debug mode:

1 In the **<SiteScope root directory>\conf\core\Tools\log4j\PlainJava** folder, open the **bac_integration.properties** file and change the debug level to the following appenders:

```
# discovery logger
log4j.category.com.hp.ucmdb.discovery=DEBUG, discovery.appender
log4j.additivity.com.hp.ucmdb.discovery=false
```

```
# Change ${loglevel} to DEBUG to view topology sent to BAC
log4j.category.com.hp.ucmdb.discovery.probe.services.dynamic.core.TopologyD
ynamicService=DEBUG, discovery.appender
log4j.additivity.com.hp.ucmdb.discovery.probe.services.dynamic.core.TopologyD
ynamicService=false
```

```
# Jython logger
log4j.category.PATTERNS_DEBUG=DEBUG, discovery.appender
log4j.additivity.PATTERNS_DEBUG=false
```

2 Add the following appender to the **probeGW-taskResults.log** file:

```
################################################################################
###############
# Topology task results
################################################################################
###############

log4j.category.ProbeTaskResultsLog=DEBUG, PROBE_TASK_RESULT_FILE
log4j.additivity.ProbeTaskResultsLog=false

log4j.appender.PROBE_TASK_RESULT_FILE=org.apache.log4j.RollingFileAppend
er
log4j.appender.PROBE_TASK_RESULT_FILE.MaxFileSize=10MB
log4j.appender.PROBE_TASK_RESULT_FILE.MaxBackupIndex=5
log4j.appender.PROBE_TASK_RESULT_FILE.File=../${log.file.path}/probeGW-
taskResults.log
log4j.appender.PROBE_TASK_RESULT_FILE.Threshold=DEBUG
log4j.appender.PROBE_TASK_RESULT_FILE.Append=true
log4j.appender.PROBE_TASK_RESULT_FILE.layout=org.apache.log4j.PatternLayo
ut
log4j.appender.PROBE_TASK_RESULT_FILE.layout.ConversionPattern=<%d> %-
4r [%-5p] (%F:%L) - %m%n
log4j.appender.PROBE_TASK_RESULT_FILE.encoding=UTF-8
```

3 Add the following appender for the **log topology_queue_consumer.log**:

```
#########################################################################
#################
# Topology queue consumer printer
#########################################################################
#################

log4j.category.TopologyQueueConsumer=DEBUG,
topology.queue.consumer.appender
log4j.additivity.TopologyQueueConsumer=false

log4j.appender.topology.queue.consumer.appender=org.apache.log4j.RollingFileAp
pender
log4j.appender.topology.queue.consumer.appender.File=../${log.file.path}/topology_
queue_consumer.log
log4j.appender.topology.queue.consumer.appender.MaxFileSize=1000KB
log4j.appender.topology.queue.consumer.appender.MaxBackupIndex=5
log4j.appender.topology.queue.consumer.appender.layout=org.apache.log4j.Pattern
Layout
log4j.appender.topology.queue.consumer.appender.layout.ConversionPattern=%d
[%t] (%F:%L) %-5p - %m%n
```

Opening Logs in BSM in Debug Mode

The following log files in BSM contain information relating to the integration with SiteScope. Open the relevant log files in debug mode using the instructions listed below.

- **<BSM root directory>\log\odb\odb\mam.autodiscovery.log**
- **<BSM root directory>\log\odb\odb\cmdb.reconciliation.log**
- **<BSM root directory>\log\odb\odb\cmdb.reconciliation.datain.ignored.log**
- **<BSM root directory>\log\odb\odb\discovery-servlet.log**

To open logs in BSM (on the Data Processing server machine in a distributed environment) in debug mode:

Change RTSM debug level in BSM:

- **<BSM root directory>\odb\conf\log\reconciliation.properties**
- **<BSM root directory>\odb\conf\log\mam.properties**
- **<BSM root directory>\odb\conf\log\mam.web.properties**

No Topology Reported

1. Open all SiteScope and BSM logs in debug mode. For details, see "Opening Logs in SiteScope in Debug Mode" on page 28 and "Opening Logs in BSM in Debug Mode" on page 31.
2. Check if there are **\bin** files stuck in the **<SiteScope root directory>\cache\topologyresultsData\merged** directory.
3. Check for errors in the logs in the following order:
   - **bac_integration.log**. Topology is not sent due to general errors or syntax problems in the scripts.
   - **discovery.log**. Shows the complete picture of the topology reported from SiteScope to BSM using Data Flow Management.
   - **topology_queue_consumer.log**. Shows the topology SiteScope is trying to send to the Data Flow probe. (It does not mean that this is the topology that the probe client sends to the server). This log reflects what SiteScope script intended to report to Data Flow Management.
   - **probeGW-taskResults.log**. Shows the topology Data Flow Management sends to the RTSM server.
   - **mam.autodiscovery.log**. Shows the steps Data Flow Management probe is doing on the topology reporting from SiteScope to Data Flow Management (bulk creation) and the interaction with the RTSM server.
   - **cmdb.reconciliation.log**. If the issues are on the RTSM server-side, it is most likely a reconciliation issue.
   - **cmdb.reconciliation.datain.ignored.log**. Shows topology that is ignored by the RTSM server and not reported.
   - **discovery-servlet.log**. Shows data from the connection opened by SiteScope and the reply sent to SiteScope. Check for exceptions in this log when there are issues with topology not being sent to BSM. This log exists also on BAC 8.0.
4. It is recommended to open logs that are in XML format using an XML editor.

RTSM Troubleshooting

To get the properties of a CI reported to a Data Flow database with JMX:

1 Open http://<BSM_machine>:21212/jmx-console/ in a Web browser.

2 Click **UCMDB:service= Model Services**.

3 Invoke method: retrieveObjectProperties.

Where to Configure the Port to Which Data Flow Reports

The server settings are initialized in BSM in **Admin** > **System Availability Management** > **Topology Settings** from the **Topology receiver port** or **Topology receiver SSL port** boxes.

Operations Manager Event Integration Issues

This section describes troubleshooting when using the HP Operations Manager integration to send SiteScope events directly to the HPOM management server or to Operations Management in BSM.

This section includes:

Tip: When referring to the integration log file, you can open it from the SiteScope user interface (**Server Statistics** > **Log files** > **HPSiteScopeOperationsManagerIntegration.log**).

Installation Problems

Symptom:

An error occurred while running the HP Operations agent installation in the SiteScope Configuration Wizard during SiteScope installation.

Troubleshooting:

1. Open the agent installation log, **opc_inst.log**, in the **c:\Windows\Temp**, **/var/tmp** (Solaris) or **/tmp** (Linux) folder, and delete **opc_inst.lock**.
2. Refer to the SiteScope documentation to make sure your operating system is supported for HP Operations agent installation.
3. Run the SiteScope Configuration Tool, and install the HP Operations agent again (it is also recommended to restart the server).
4. Run SiteScope Configuration Tool, and uninstall the HP Operations agent and then install it again (it is also recommended to restart the server).

5 Manually reinstall the HP Operations agent (it is also recommended to restart the server).

On Windows:

Uninstall the agent:

a **C:\Program Files\HP\HP BTO Software\bin\OpC\install**

b cscript opc_inst.vbs -remove -force

c From the Control Panel, uninstall the HP Operations Integration Adapter Policy Activation package.

Install the agent:

a **<SiteScope root directory>\install\components\oa\<Operating System>**

b cscript opc_inst.vbs

c Install **<SiteScope root directory>\install\components\oa_policy_signing_tool**

On UNIX:

a /opt/HP/SiteScope/install/components/oa/<operating_system>/opc_inst -remove

where <operating_system> is either solaris, linux, or linux64.

b /opt/HP/SiteScope/install/components/oa/<operating_system>/opc_inst

c For Solaris:

/opt/HP/SiteScope/install/components/oa_policy_signing_tool/
solaris pkgadd -a HPOprIAPA.admin -d HPOprIAPA-09.00.<version>-SunOS5.10-release.sparc

For Linux:

/opt/HP/SiteScope/install/components/oa_policy_signing_tool/
rpm -i HPOprIAPA-09.00.<version>-Linux2.6-release.rpm

6 Put a new clean image on the system and install SiteScope and the HP Operations agent again.

7 Contact your HPOM administrator for assistance.

Integration Setup Problems

Symptom:

Any problem that occurs while trying to configure the HP Operations Manager Integration (between connecting the agent to the HPOM/BSM server and sending a test message).

Troubleshooting:

1. In SiteScope, open the HP Operations Manager Integration dialog box panel (**Preferences** > **Integration Preferences** > **HP Operations Manager Integration**).
2. In the HP Operations Manager Integration Main Settings pane, check the **HP Operations agent installation path**.
   a. Click the **Resolve Path** button.
   b. Make sure the agent is installed on the path you see in this field.
      - If the agent is installed on a different path, update the path accordingly.
      - If you do not see the path is resolved (probably the agent is not installed properly), try restarting the server machine. If it does not help, follow the troubleshooting in "Installation Problems" on page 34.
   c. Make sure your HPOM management server or BSM Gateway host name is typed correctly in the host field.
3. Click the **Analyze** button.
   a. If the command outputs are empty, there is a problem with the agent installation. Follow the troubleshooting in "Installation Problems" on page 34.
   b. Check that the bbcutil command output returns **status=eServiceOK**. If it does not, there is a connectivity problem to your HPOM server and you should contact your HPOM administrator for assistance.
   c. Check the opcagt -status command output. You should see a few processes running (some can be in Aborted state—this is fine at this stage). If they are not running, manually start the agent by running command line: opcagt -start, or restart your server machine.

4 Make sure your HPOM server is up and running.

5 If you are working with BSM, check your Gateway and Data Processing Server. Run command line ovc -status. Make sure all processes are running (in particular, the "Certificate Broker") if they do not start with ovc -start.

6 If you are working with a distributed BSM environment (in BSM 9.00 or later), follow the procedures for initiating trust between your Gateway and Data Processing Server, and forwarding the certificate request from the Gateway to the Data Processing Server. For details, see "How to Enable SiteScope to Send Events to HPOM or BSM's Operations Management" in *Using SiteScope*.

7 Click the **Connect** button, and make sure the command output returns: opcactivate Info: Successfully activated OVO agent.

If it does not, contact your HPOM administrator for assistance.

8 Accept the certificate request.

- When connecting to a BSM server, follow the step for accepting the agent connection request in "How to Enable SiteScope to Send Events to HPOM or BSM's Operations Management" in *Using SiteScope*.
- When connecting to an HPOM management server, consult your HPOM administrator. If you do not see the certificate request, contact your HPOM administrator.

9 Click the **Analyze** button.

a Make sure the ovcert -check is ok, and it ends with "Check Succeeded".

b Make sure ovcert -list lists some certificates.

c If there are problems with the command outputs:

- Contact your HPOM administrator, or
- Start the integration process troubleshooting from the connect phase, or even reinstall the agent.

10 Click the **Install Policies** button.

a If you get an error here or this process is stuck with "please wait" and:

- ➤ You recently reinstalled the agent and did not restart yet, restart your server.
- ➤ Otherwise, there is a problem with the agent (and the additional policy activation tool package) installation. Reinstall on a clean image.

b Click the **Analyze** button, or check the output of the Install Policies for the list of policies. Make sure you see the following list with all enabled:

- ➤ HP_SiteScope_to_Operations_Manager_Integration_by_Log_File
- ➤ HP_SiteScope_to_Operations_Manager_Integration
- ➤ SiteScope_Hosts_Discovery

11 In the **Test Message** box, type a message and click **Send test message**.

a Check your HPOM Event Console or Operations Management Event Browser.

b If you do not see the message in the Event Console/Browser:

- ➤ Run command line: `opcmsg a=a o=o msg_t=xxx`
- ➤ If the command is not available, something went wrong with the process so far (either the certificate or the policies does not work). Try to install the policies again, and if the same problem occurs contact HP Software Support.
- ➤ If the command is executed but you still do not see the message in the Event Console, contact your HPOM administrator for support.

Problems Sending Events

Symptom 1:

Sending a test event from the HP Operations Manager Integration dialog box does not reach the HPOM Event Console/Operations Management Event Browser.

Troubleshooting:

1. In the HP Operations Manager Integration dialog box, enter a test message in the **Test message** box, and click **Send test message**. If the test message is not displayed in the Event Console, follow all the steps in "Integration Setup Problems" on page 36, and then try again.
2. Click the **Analyze** button, and make sure all commands are successful (in particular, see the list of policies installed). For details, see "Integration Setup Problems" on page 36.
3. Click the **Send Test Event** button.
4. In the <**SiteScope root directory**>**\logs** directory, check the events log file, **HPSiteScopeOperationsManagerIntegration.log**. Verify the event entry in the log file. If you do not see it, contact HP Software Support.
5. If you still do not see the event in the HPOM Event Console/Operations Management Event Browser, check you are viewing the correct node in HPOM, or are not filtering out anything in the Operations Management Event Browser. If you still do not see the event, contact HP Software Support.
6. Open the <**SiteScope root**>**\tools\OMIntegration\Policies\F516CEC3-3AD4-4627-9CFD-BB155B894349_data** file, and check that the path specified for **HPSiteScopeOperationsManagerIntegration.log** is correct (it might use an environment variable). If you make any changes here, you must install the policies again.

Symptom 2:

The metric status change or alert event is not displayed in the HPOM Event Console/Operations Management Event Browser.

Troubleshooting:

1. Check if the test event is displayed in the Event Console/Browser. If it not displayed, follow the guidelines for Symptom 1 in "Problems Sending Events" on page 39 above.
2. Check that event integration is enabled in the monitor or alert configuration settings. Change the monitor metric status, or trigger an alert. In the **<SiteScope root directory>\logs** directory, check the events log file, **HPSiteScopeOperationsManagerIntegration.log**.
3. If you do not see the event entry in the log file, check you enabled event integration correctly in the monitor or alert you are running (for details, see "How to Enable SiteScope to Send Events to HPOM or BSM's Operations Management" in *Using SiteScope*). If it still not in the log file, contact HP Software Support.
4. If you see the event entry in the log file, but not in the Event Console/Browser:
   a. Check that no filter is set in the Event Browser.
   b. If it is a newly-created monitor, and you are filtering the related CI in Operations Management, it is possible that the CI topology is not reported yet. Try again in a few minutes.
   c. In HPOM legacy, make sure the event target node exists on your console.
   d. Contact HP Software Support.

Symptom 3:

You see the metric or alert event in the Operations Management Event Browser, but it has no related CI or HI, or Indicator state or severity.

Troubleshooting:

1 Check the event attribute values in the **HPSiteScopeOperationsManagerIntegration.log** file located in the **<SiteScope root directory>\logs** directory. Look for the HI (ETI) and CI hint. They should look like this: CPULoad:High:80 and SiteScope:3:123456 respectively.

a To know the attribute order in this tab separated values line, you can send a test event before this event and compare the lines. The test event writes the name of each attribute in its order.

b If the CI Hint or HI hint are unknown, empty, or look different than the example, there is a problem with the SiteScope configuration.

- ➤ Check that the SiteScope is registered to BSM.
- ➤ Check that the monitor thresholds have indicator states assigned to them, or that your alert has some ETI and ETI state set.
- ➤ Check the preference setting for reporting SiteScope data in the monitor configuration is set to **Events** (in **HP Integration Settings** > **BSM Service Health Preferences**).

2 If everything looks fine in the log file in SiteScope, open the event in the Operations Management Event Browser.

a In the **General** tab, check the **related CI** attribute. If you do not see the related CI, select the **Resolver** tab and check the **Status** field.

- ➤ Check if there is information about the CI resolution failure.
- ➤ Check that the monitor topology is available in the RTSM (you can check this in the System Hardware or System Monitors views).

Note: If this is a newly-created monitor, it will take few minutes for the topology to arrive and the event to be assigned with a related CI.

---

b In the **General** tab, if you see the **related CI** but **Event Type Indicator** is empty:

- ➤ Select the **Resolver** tab and check the ETI Hint attribute value sent by SiteScope. If it is empty or unknown, check your SiteScope configuration.
- ➤ If the value exists but does not show up in **Event Type Indicator** in the General tab, there was a problem when applying the indicator to the CI. Check out Service Health or Operations Management for support.

Node Discovery and Monitor Discovery Troubleshooting

Node Discovery:

- ➤ If you are using HP Operations Manager for Windows 8.1x, patch OMW_00071 is required to support the Node discovery feature in SiteScope-HPOM event integration.
- ➤ If you are using HP Operations Manager for UNIX/Linux 9.10, patch 9.10.200 is required to support the Node discovery feature in SiteScope-HPOM event integration.

Problems with Node discovery:

1. Click the **Analyze** button in the HP Operations Manager Integration dialog box. Make sure you see the **SiteScope_Hosts_Discovery policy** installed and enabled.
2. Check that your event configuration is set. Send a test event and make sure you see it in the HPOM Event Console on the SiteScope node.

   New nodes are reported within 5 minutes from the time they started to being monitored by SiteScope monitors.

   The discovery policy runs SiteScope scripts that generate XML consumed by the policy. Each run is logged in the following log: **%OvDataDir%\log\System.txt** (for Linux **<SiteScope Server>/var/opt/OV/log**).

3 You can invoke the process manually, by running the following commands:

```
ovagtrep -run "SiteScope_Hosts_Discovery"
ovagtrep -publish
```

Monitor Discovery:

➤ To enable HPOM Service Navigator to view SiteScope groups and monitors in HPOM service maps, follow the configuration instructions in "How to Enable the SiteScope Monitor Discovery Policy" in *Using SiteScope*.

Business Service Management Metrics Integration Issues

This section describes troubleshooting when working with the BSM metrics integration if CI statuses are not displayed in Service Health.

This section includes:

1 Check HI/KPI Assignment

If CI statuses are not displayed in Service Health, check if HIs and KPIs are assigned to the relevant CI:

a In BSM, select **Admin** > **Service Health** > **CI indicators**, expand the **Monitors** folder, and select one of the following views: System Monitors, System Hardware Monitoring, or System Software Monitoring.

b In the view you have selected, check if there are HIs and KPIs assigned to the relevant CI, as follows:

- System Monitors view: SiteScope Monitor or SiteScope Measurement CI
- System Hardware Monitoring view: Node or Computer CI
- System Software Monitoring view: Running Software CI

2 Check that SiteScope data is not ignored by BSM

If HIs and KPIs are assigned to the relevant CI, check if SiteScope sends data and that the data is not ignored by BSM.

a Run the relevant monitor in SiteScope.

b On the BSM machine, open the **wdeIgnoredSamples.log** located in **<BSM root directory>\log\wde** folder. If this log includes samples of the monitor you have just run, or you see many ignored samples, this means SiteScope is sending the wrong data.

c If you do not see the relevant SiteScope sample, look for it in the **wdePublishedSamples.log** and check that Eti_id and ci_hint are not null.

d If you cannot find the SiteScope sample in the wde logs in BSM, check in SiteScope if the sample was generated. Open the **bac_integration.properties** file located in **<SiteScope root directory>\conf\core\Tools\log4j\PlainJava** and add the following to the end of the file:

```
#####################################################################
###################
# Sample printer
#####################################################################
###################

log4j.category.SamplePrinter=DEBUG, samples.appender
log4j.additivity.SamplePrinter=false

log4j.appender.samples.appender=org.apache.log4j.RollingFileAppender
log4j.appender.samples.appender.File=../${log.file.path}/samples.log
log4j.appender.samples.appender.MaxFileSize=1000KB
log4j.appender.samples.appender.MaxBackupIndex=5
log4j.appender.samples.appender.layout=org.apache.log4j.PatternLayout
log4j.appender.samples.appender.layout.ConversionPattern=%d [%t] (%F:%L)
%-5p - %m%n
```

e Run the monitor, and check the **samples.log file** in the **<SiteScope root directory>\logs\bac_integration** directory.

3 Check CI resolution

If HIs and KPIs are assigned to the relevant CI, and samples are not ignored by the wde logs in BSM, check CI resolution (in case the problem is with the monitored CI and not the monitor or measurement).

a Run the relevant monitor in SiteScope.

b On the BSM machine, open the **cir_enrichment.log** file located in the **<BSM root directory>\log\wde** folder, and check if there are badHint or CI not found messages.

Note: To change the log file to debug mode, open the **cir_enrichment_service.properties** file located in the **<BSM root directory>\conf\core\Tools\log4j\wde** folder and change loglevel to loglevel=DEBUG.

---

4 If there are no HIs on the relevant CI (in case the problem is with the monitored CI and not the monitor/measurement)

If the relevant CI does not have any HIs, in SiteScope, check the indicator mappings in the monitor user interface (**HP Integration Settings** > **Indicator Settings**).

- If the mapping seems correct, go to the correct SiteScope Monitor CI or SiteScope Measurement CI in RTSM in BSM, and check that you can see the HI ID in the **health_indicator_list** attribute.
- If you can see it, check that you can see the monitored CI connected to this SiteScope Monitor or Measurement CI with a **monitored_by** link.
- If it seems fine, check that HPOM (HPOpr) content packs are deployed (in **Admin** > **Platform** > **Content Packs**), and that you can see the indicators you expect to get in it (in most cases, you will find it in the **HPOprInf** package).

5 If there are no KPIs on the relevant CI (in case the problem is with the monitored CI and not the monitor/measurement)

If the relevant CI does not have any KPIs, check if the HPOM content pack has KPI assignments.

a In BSM, select **Admin** > **Service Health** > **Assignments** > **KPI Assignments**.

b In the CI Types tree, drill down to the relevant CI (for example, **Infrastructure Element** > **Node** > **Computer**), and check if the CIT has a KPI assignment defined. KPI assignments appear in the right pane.

6 If there are no HIs/KPIs and everything seemed to work in the previous two steps

Try to resynchronize the HI and KPI assignments on the problematic CIs, based on their CI types.

a In BSM, select **Admin** > **Service Health** > **Assignments** > **Health Indicator Assignments.**

b Select the problematic CI type (for example, computer), and select the assignment you HI want to run.

c Click the **Synchronize CI Type** button.

d When this is done, perform the same action on the KPI assignment using the **KPI Assignments** tab.

Operations Manager Metrics Integration Issues

This section describes troubleshooting when using the HP Operations Manager integration to make SiteScope metrics data available to HP Performance Manager or to Performance Perspective in BSM's Operations Management.

This section includes:

SiteScope and HP Operations Agent Configuration

Check the HP Operations Agent Configuration

1 Check the status of the HP Operations agent installed on the SiteScope server status by running the following command: opcagt -status

The expected output is:

If opcacta or opcmsgi are not running, try to restart the agent by running:

opcagt -stop

opcagt -start

2 Select **Preferences** > **Integration Preferences**, and select an existing or create a new **HP Operations Manager Integration**. Verify that the **Enable sending events** check box is selected.

3 In the HP Integration Settings for the monitor, Verify that the **Report metrics to HP Operations agent** check box is selected.

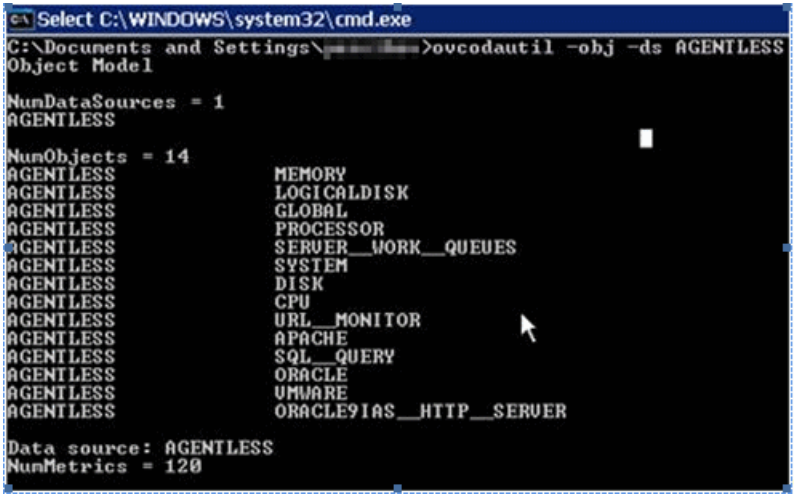
4 Run the monitor, and wait for about a minute.

5 Run the following command to check if the agent data store contains the data:

set CODAMAGIC=0X05201993

ovcodautil -obj -ds AGENTLESS

You should receive object names from AGENTLESS data source (similar to the following):



To dump the summarized last record for AGENTLESS data source, run the following command:

ovcodautil -dumpds AGENTLESS

Check the Relevant SiteScope Logs

Check the following logs that are available from the **<SiteScope root directory>\logs** directory:

- **error.log**
- **RunMonitor.log**
- **om_metric_integration.log**
- **data_integration.log**

Health Monitors Errors

In the SiteScope monitor tree, expand **Health** and click **Log Event Checker**.

- If the **Failed to report data to HP OM Agent** counter is in error, SiteScope failed to connect or report data to the HP Operations agent using Java API. For more information, see the **oa_metric_integration.log** file in the **<SiteScope root directory>\logs** directory.
- If the **Generic Data Integration queue exceeded allowed size** counter is in error, the queue of metrics waiting to be sent is oversized and some metrics were dropped to maintain SiteScope stability. For more information, **data_integration.log** file in the **<SiteScope root directory>\logs** directory.

HP Performance Manager Configuration

1. On the Performance Manager server, open the **OVPMconfig.ini** file in the **%ovdatadir%\shared\server\conf\perf** directory.
2. Update the SiteScope server details as follows:
   - [SITESCOPE]
   - SERVER = servername
   - NODEGROUP = Agentless
3. Restart the HP Openview Tomcat(B) service.

CI Resolution does not work ("BadHint error" in the cir_enrichment.log)

1. Go to **Admin** > **Platform** > **Infrastructure Setting**.
2. In the **Application** dropdown, select **End User/System Availability Management**.
3. In the **SiteScope CI Resolver Settings**, check for **TQL Queries** value.

   The default value is CIs Monitored by SiteScope.

4 Go to **Admin** > **RTSM Administration** and check for **CIs Monitored by SiteScope** query results. If you do not get the requested CI in the query results, CI resolution will not find it as well.

Possible problem: CI has missing attributes orthe SiteScope monitor CI is not connected to any monitored CI.

Business Service Management CI Downtime Issues

This section describes troubleshooting CI downtime issues when SiteScope is integrated with BSM.

This section includes:

➤ "Troubleshooting CI Downtime (BSM-side)" on page 51

➤ "Troubleshooting CI Downtime (SiteScope-side)" on page 52

Troubleshooting CI Downtime (BSM-side)

If the SiteScope monitor does not enter downtime (it is still running, or is sending alerts while it should not be according to the downtime configuration), perform the following checks on SiteScope and BSM:

1 Check SiteScope reported topology to BSM. In BSM, select **Admin** > **RTSM Administration**, and check the node and monitor CIs.

2 Logs:

➤ Open **<BSM root directory>\conf\core\Tools\log4j\PlainJava\topaz.properties** and change the debug level to the following appender:

```
log4j.category.com.mercury.topaz.sitescopetmc=DEBUG, aims.appender
```

➤ Open the **aims.ejb.log** file located in **<BSM root directory>\log\EJBContainer** and search for "downtime" string. Check whether your downtime was created, which CIs were affected by it, and when a downtime request was made from SiteScope.

Troubleshooting CI Downtime (SiteScope-side)

If the SiteScope monitor is still running after configuring downtime on a specific node using the stop monitoring option, perform the following checks on SiteScope:

1. In **Preferences** > **Infrastructure Preferences** > **General Settings**, check the **Enable downtime mechanism** setting is enabled.
2. Check the following logs:
   - **<SiteScope root directory>\logs\audit.log**
   - **<SiteScope root directory>\logs\downtime.log**

   To open these logs in debug mode:
   a. In the **<SiteScope root directory>\conf\core\Tools\log4j\PlainJava** folder, open the **log4j.properties** file.
   b. Change the debug level to the following appenders:

```
# Downtime logger
log4j.category.com.mercury.sitescope.integrations.bac.downtime=DEBUG,
downtime.appender
log4j.additivity.com.mercury.sitescope.integrations.bac.downtime=false
log4j.category.com.mercury.sitescope.platform.downtime=DEBUG,
downtime.appender
log4j.additivity.com.mercury.sitescope.platform.downtime=false
```