

HP Operations Manager

For the UNIX and Linux operating systems

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Deploying SiteScope Configuration with HPOM

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Contents

Introduction.....	6
Concepts.....	7
SiteScope Concepts.....	7
HPOM Concepts.....	7
Integration Concept.....	8
Installation and Configuration.....	9
Enabling on SiteScope.....	9
Configuring on HPOM.....	12
Managing SiteScope Templates.....	13
Exporting SiteScope Templates from SiteScope and Importing Them to HPOM.....	14
Creating or Modifying a SiteScope Template and Exporting It to HPOM.....	14
Exporting All SiteScope Templates to HPOM.....	16
Assigning and Deploying SiteScope Policies.....	19
Example of Deploying SiteScope Templates to the SiteScope Server.....	20
Example of Deploying SiteScope Templates to Virtual Nodes.....	20
Parameter Resolution in SiteScope Policies and Deployment of SiteScope Monitors.....	21
Symbolic Values.....	22
Managing Credentials.....	22
Deleting SiteScope Templates and Monitors.....	25
Reporting.....	26

Introduction

Both HP Operations Manager (HPOM) and HP SiteScope are monitoring solutions whose primary objective is to monitor, control, and maintain systems in distributed heterogeneous environments. While the HPOM management concept is based on communication between a management server and managed nodes (that is, HP Operations agent processes running on managed nodes throughout the environment), SiteScope monitors without the deployment of agent software on the servers to be monitored.

The combined functionality of SiteScope and HPOM provides an effective and in-depth monitoring solution that enables you to manage SiteScope templates with HPOM. To fully utilize and benefit from all the advantages of proactive monitoring, you can operate with unified policy concepts between HPOM and SiteScope, which means that SiteScope templates and monitors can be configured through the HPOM policy assignment and deployment.

Using HPOM as a framework for installing or updating SiteScope templates to SiteScope remote installations and deploying them to monitors through HPOM policies provides SiteScope with the following advantages:

- Desired state handling through policy assignment
- Parallel installation or update of the configuration data on a large number of remote SiteScope installations
- Scheduled deployment in the monitor maintenance time windows to add, remove, or update templates and monitors
- Policy versioning
- Reporting of configuration

Concepts

Using HPOM concepts as a framework for managing SiteScope templates enables you to improve all the aspects of monitoring, controlling, and maintaining systems in distributed heterogeneous environments. When you manage SiteScope templates with HPOM, you should be familiar with the HPOM and SiteScope concepts described in this section.

SiteScope Concepts

In SiteScope, you use templates to deploy sets of monitors that check systems with similar characteristics in the infrastructure.

- Templates

Templates provide an enterprise solution for standardizing the monitoring of different IT elements in your enterprise, including servers, applications, databases, network environments, and so on.

- Monitors

SiteScope monitors are tools for automatically connecting to and querying different kinds of systems and applications used in enterprise business systems. Different monitor types provide generic capabilities for performing actions specific to different systems. You create one or more instances of a monitor type by specifying parameters in the corresponding templates to instruct SiteScope how to monitor specific elements in your IT infrastructure.

For detailed information on SiteScope concepts, see the SiteScope documentation that can be downloaded from the following web site:

<http://support.openview.hp.com/selfsolve/manuals>

Note: To access this web site, you must log on with your HP Passport ID.

HPOM Concepts

In HPOM, a policy is a configuration element that consists of at least two files—a policy header (containing attributes such as a name, a type, and a version) and one or more policy bodies (containing actual agent configuration). The policy is identified either by its name, its version, and its type, or by its UUID. Each policy has a policy type, which means that its body conforms to a specific set of rules (for detailed information about policy body grammar for default policy types, see the *HPOM Concepts Guide*). In addition to policy types predefined in HPOM, custom policy types can be created by the user.

The policy group hierarchy is a tree-like arrangement in which each policy group is referenced through a unique path within the tree and has a world-wide unique UUID.

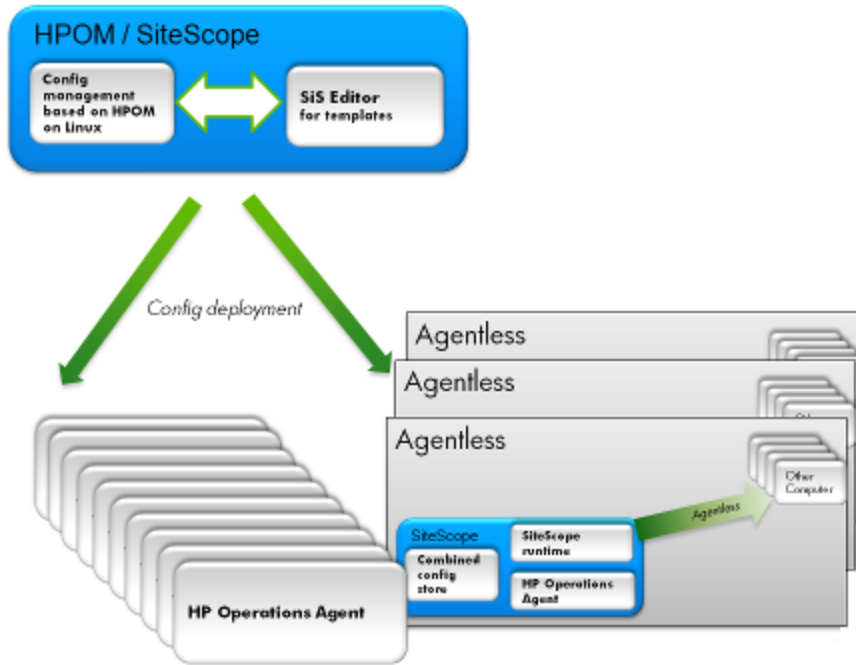
To add, modify, or delete policies and policy groups, use the `opcpolicy` command line tool. For detailed information about command options, see the *opcpolicy(1m)* manual page.

For detailed information about HPOM concepts and administration tasks, see the *HPOM Concepts Guide* and the *HPOM Administrator's Reference* that can be downloaded from the following web site:

<http://support.openview.hp.com/selfsolve/manuals>

Integration Concept

The result of using HPOM concepts as a framework for managing SiteScope templates is a SiteScope policy. The SiteScope policy is a SiteScope template that is converted into an HPOM policy and uploaded to the HPOM database. Its policy type is `sitescope`.



This integration allows you to easily upload SiteScope templates to HPOM by converting them into HPOM policies. This kind of policy can be enriched through a set of parameters (for example, a number of hosts that activate the deployment of the delivered template to monitors).

Installation and Configuration

HPOM and SiteScope can be installed on the same or on different systems. With some platforms (for example, Solaris and Linux) both products are supported, so it is possible to install HPOM and SiteScope on the same system. However, if you want to run an HP Operations management server on HP-UX, you must install SiteScope on a remote system because SiteScope cannot run on HP-UX.

To start using combined functionality of HPOM and SiteScope, your system must conform to the following requirements:

- SiteScope version 11.12 or later is installed.
- HPOM version 9.10 is installed either together with the HP Operations management server patch 9.10.210 and a hotfix with ID QCCR1A125751, or with the next available HP Operations management server patch (that comes after 9.10.210).

When installing SiteScope, make sure that SiteScope version 11.12 or later is installed on both of the following types of SiteScope servers:

- On the SiteScope system from which to export SiteScope templates and import them to the HP Operations management server.
- On all SiteScope systems that perform the monitoring and are configured through the HP Operations management server by deploying policies.

Note: The HP Operations management server can run on Linux, Solaris, and HP-UX, while SiteScope can run on Linux, Solaris, and Windows.

You must transfer SiteScope web services from the SiteScope 11.12 or later Linux or Solaris installation to the HP Operations management server running on HP-UX. To do this, copy the following files to the same location (`/opt/HP/SiteScope/`) on the HP Operations management server:

```
/opt/HP/SiteScope/integrations/om/*.jar
/opt/HP/SiteScope/WEB-INF/lib/ss_integration_om.jar
/opt/HP/SiteScope/WEB-INF/lib/javacore.jar
/opt/HP/SiteScope/integrations/om/bin/export_template_om.sh
/opt/HP/SiteScope/integrations/om/bin/run_api_call.sh
```

Caution: Because the procedure for a full SiteScope installation is not supported on HP-UX, it is necessary that you copy these files.

Enabling on SiteScope

On SiteScope, make sure that the OM integration is enabled. HPOM integration settings are available only if the OM integration is configured and SiteScope is connected to HPOM. By enabling the OM integration, additional functionalities of templates and monitors are available.

For detailed information about SiteScope and the OM integration, see the SiteScope documentation.

Installing and Registering the SiteScope Subagent

To install the SiteScope subagent, choose one of the following two methods:

- **GUI-based method:**

Because the installation of the `sisconfig` subagent is performed along with the installation of the HP Operations agent, you must start the configuration tool for the HP Operations agent deployment after installing SiteScope service pack 11.12. Depending on the platform, choose one of the following to start the configuration tool:

- **Windows:**

Select **Start**→**Programs**→**HP SiteScope**→**Configuration Tool**.

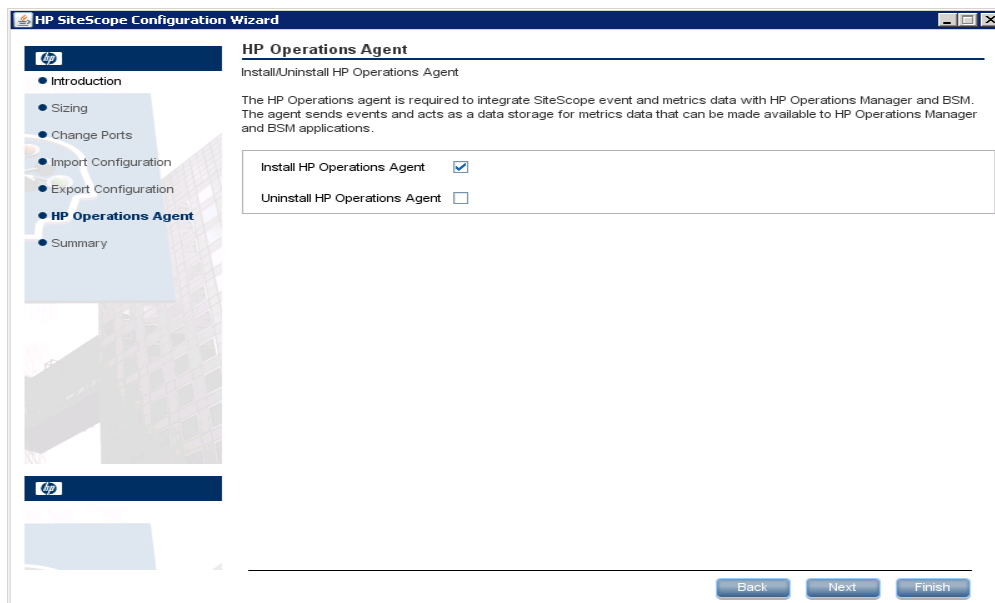
- **Linux and Solaris:**

Run the following commands:

```
cd /opt/HP/SiteScope/bin
./config_tool.sh -i console
```

After you start the configuration tool, follow these steps:

- a. In the HP SiteScope Configuration wizard, select the **HP Operation Agent** check box, and then click **Next**.
- b. Select the **Install HP Operations Agent** check box, and then click **Next** to complete configuration.



- **Command line tool-based method:**

Depending on the platform, use either
`/opt/HP/Sitescope/installation/components/oa_template_`
`management/all/install.sh`
or
`<SITESCOPE_HOME>\installation\components\oa_template_`
`management\all\install.bat`:

- *Solaris:*

```
install.sh -install solaris32
```

```
install.sh -install solaris64
```

- *Linux:*

```
install.sh -install linux32
```

```
install.sh -install linux64
```

- *Windows:*

```
install.bat -install windows32
```

```
install.bat -install windows64
```

After you install the SiteScope subagent, make sure that the subagent process is registered by running the following command:

```
#ovc -status agent
```

The following output should be displayed:

```
opcmsgi    OVO Message Interceptor    AGENT,EA    (23297) Running
agtrep     OV Discovery Agent          AGENT,AgtRep (28218) Running
opcacta    OVO Action Agent           AGENT,EA    (23302) Running
opcmona    OVO Monitor Agent          AGENT,EA    (21820) Running
opcple     OVO Logfile Encapsulator    AGENT,EA    (28164) Running
opcmsga    OVO Message Agent          AGENT,EA    (23340) Running
sisconfig  SiS Configuration          AGENT        (3667)  Running
```

All SiteScope subagent logs are added to `$OvDataDir/log/system.0.en_US`.

For example, on Unix:

```
/var/opt/OV/log/system.0.en_US
```

```
Jul 27, 2011 3:29:56
PM;16;10;com.hp.ov.xpl.log.OvLogger;logMessage;com.hp.ov.opr.sisconfig;INFO;
Importing template to path: Deployed from Operations
Manager/OVO:computer.company.com/gena ping2 (:Gena),
templateName: gena ping2 succeeded
Jul 27, 2011 3:29:56
PM;17;10;com.hp.ov.xpl.log.OvLogger;logMessage;com.hp.ov.opr.sisconfig;INFO;
Enabling monitor group: Deployed from Operations
Manager/OVO:computer.company.com/gena ping2 (:Gena) done.
```

An internal cache file is created at the following location:

```
$OvDataDir/log/system.0.en_US
```

For example, on Unix:

```
/var/opt/OV/log/system.0.en_US
```

For troubleshooting purposes, you can remove the cache file after stopping the subagent with the `ovc -stop sisconfig` command. The location of the cache file where `sisconfig` stores information about which policies are deployed to SiteScope, about policy mapping to the SiteScope templates and monitor instances is as follows:

```
$OvDataDir/datafiles/sisconfig/polcache.temp
```

When you remove the cache file, make sure that you start `sisconfig` again.

After that you can redeploy the configuration from the HP Operations management server to start with the new configuration.

Configuring on HPOM

On HPOM, you must register a new policy type by running the following command:

```
# /opt/OV/bin/OpC/utils/opcpoltype -reg -xml  
/opt/OV/contrib/OpC/SiteScope/sitescope.xml
```

The following is an example of the new policy type that is registered on the HP Operations management server:

```
sitescope.xml  
<?xml version='1.0' encoding='UTF-8' standalone='yes'?>  
<policyTypeList>  
  <policyType>  
    <policyTypeName>SiteScope</policyTypeName>  
    <policyTypeAgentType>sitescope</policyTypeAgentType>  
    <policyTypeUUID>f35c5cdb-63ed-448f-8fff-d192bdeac144</policyTypeUUID>  
    <policyTypeEditor>midas:text</policyTypeEditor>  
    <policyTypeTarget>agent</policyTypeTarget>  
  </policyType>  
</policyTypeList>
```

Managing SiteScope Templates

When managing SiteScope templates with HPOM, you can perform the following actions:

- ["Exporting SiteScope Templates from SiteScope and Importing Them to HPOM" \(on page 14\)](#)
- ["Assigning and Deploying SiteScope Policies" \(on page 19\)](#)
- ["Deleting SiteScope Templates and Monitors" \(on page 25\)](#)
- ["Reporting" \(on page 26\)](#)

You can also deploy a SiteScope template with specified parameters (variables) as an HPOM policy to a SiteScope server. For details, see ["Parameter Resolution in SiteScope Policies and Deployment of SiteScope Monitors" \(on page 21\)](#).

Exporting SiteScope Templates from SiteScope and Importing Them to HPOM

Depending on whether HPOM and SiteScope are installed on the same or on different systems, choose one of the following methods to export templates from SiteScope and import them to HPOM:

- If HPOM and SiteScope are installed on the same system: ["Creating or Modifying a SiteScope Template and Exporting It to HPOM" \(on page 14\)](#)
- If HPOM and SiteScope are installed on different systems: ["Exporting All SiteScope Templates to HPOM" \(on page 16\)](#)

Creating or Modifying a SiteScope Template and Exporting It to HPOM

If HPOM and SiteScope are installed on the same system, you can create or modify a template in SiteScope and then move this template to HPOM. This means that you can either create a new template or modify an existing template to contain the text or the variables that you choose, and then import this template to HPOM.

To create or modify a template and then import it to HPOM, follow these steps:

1. In the SiteScope user interface, select the **Templates** context.

The template tree is displayed in the left pane.

2. Depending on whether you want to create a new template or modify an existing template, do one of the following:
 - From the Deployed from Operations Manager template container, choose the template that you want to modify.

Note: When modifying a template belonging to the Deployed from Operations Manager template container, it is recommended that you create your own template container that you will use for the development, copy the template to this new template container, and then modify the template.

- Create a SiteScope template within a template container.

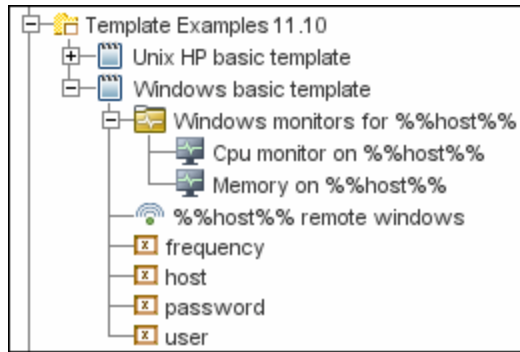
You create a template by adding and configuring groups, remote server definitions, monitors, alerts, and variables to the template. You use template variables as substitution markers for configuration settings that you want to change dynamically or interactively each time you deploy the template. For detailed information about creating templates, see the SiteScope documentation.

SiteScope also provides template examples for monitoring in Windows and UNIX environments (`Unix HP basic template` and `Windows basic template`). These templates are available from the `Template Examples 11.10` folder in the template tree. The following example shows `Windows basic template`. This template contains a template group, `Windows monitors for %%host%%`, two template monitors (CPU and Memory),

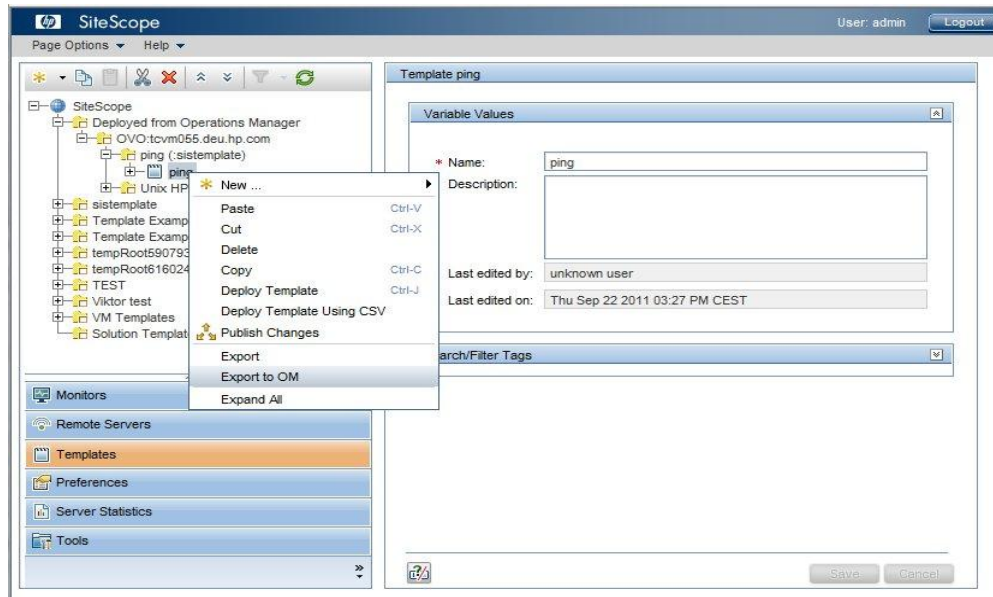
Deploying SiteScope Configuration with HPOM

Exporting SiteScope Templates from SiteScope and Importing Them to HPOM

four user-defined variables (`host`, `user`, `password`, and `frequency`), and a template remote server.



3. *If you are modifying a template:* Select the template that you want to modify, and then modify its properties to meet your needs.
4. From the template tree, right-click the template or template container that you want to import to HPOM, and then select **Export to OM**, as shown in the following figure:



After a short time, an output similar to the following one should be displayed:

```
Template was successfully exported to Operations Manager.
```

Note: If you modify the same template or template container in SiteScope and then again select **Export to OM**, a new version is created because the binary file changed. This means that the policy version is always increased when a new HPOM policy related to this template is uploaded to the HPOM database.

5. In the OMU context of the Administration UI, from the Administrative menu, click **Browse**→**Policy Bank**, and then check that the template is imported.

After you successfully import the SiteScope template to HPOM (the template was also converted to the HPOM policy), you can continue with the policy assignment and deployment. For details, see ["Assigning and Deploying SiteScope Policies" \(on page 19\)](#).

Exporting All SiteScope Templates to HPOM

If HPOM and SiteScope are installed on different systems, you can export all SiteScope templates from a SiteScope server and import them to the HP Operations management server by using the `opc_sis_template2pol` command line tool. By downloading all templates from a specific container on a remote or local SiteScope server and uploading them to the HP Operations management server, templates are converted into policies of the SiteScope policy type, which you can later on assign and deploy.

To export all templates from SiteScope and import them to HPOM as policies, on the HP Operations management server, run the following command:

```
# /opt/OV/bin/OpC/opc_sis_template2pol -sis_group_container <sis_group_container> -sis_user <sis_user> -sis_passwd <sis_passwd> -sis_hostname <sis_hostname>
```

In this instance, `<sis_group_container>` is a group container for all SiteScope templates, `<sis_user>` is a SiteScope user (usually `admin`), `<sis_passwd>` is the password of the SiteScope user, and `<sis_hostname>` is the hostname of a system where SiteScope runs (the default is local host).

For example:

```
# /opt/OV/bin/OpC/opc_sis_template2pol -sis_group_container sistemplate -sis_user admin -sis_passwd admin
```

The following is an example output:

```
Target Policy Group set to default: SitescopePolicies
```

```
Convert to OM Policy:
```

```
Source SiS Template: VMware Host
```

```
Source SiS Template: ping
```

```
Source SiS Template: Unix HP basic template
```

```
opcpolicy upload policies
```

```
dupl_ignored: "ping (:sistemplate)" 0001.0000 SiteScope
```

```
uploaded:      "Unix HP basic template (:sistemplate)" 0001.0012
```

```
SiteScope
```

```
uploaded:      "VMware Host (:sistemplate)" 0001.0016 SiteScope
```

```
1 policies out of 3 from directory /var/opt/OV/share/tmp/OpC/mgmt_sv/tmp_sis/templ/27173/pol were uploaded, check logfile
```

```
opcpolicy upload groups
```

```
Operation successfully completed.
```

The following figure shows a list of all SiteScope templates converted to policies in HPOM:


```

root@tcvm055:/var/opt/OV/datafiles/policies/sitescope
File Edit View Terminal Tabs Help
[root@tcvm055 sitescope]# ovpolicy -l
    * List installed policies for host 'localhost'.

Type          Name                                Status    Version
-----
configsettings "OVO settings"                        enabled   1
configsettings "ThresholdOverridesLinux"          enabled   0160.0001
monitor        "SI-CPUSpikeCheck"                   enabled   0160.0001
sitescope      "Unix HP basic template (:sistemplate)" enabled   0001.0012
sitescope      "ping (:sistemplate)"                 enabled   0001.0015
svcdisc        "SI-SystemDiscovery"                 disabled  0160.0000
svcdisc        "SiteScope Discovery"                 disabled  0003.0000
svcdisc        "SiteScope_Hosts_Discovery"          disabled  0001.0006

[root@tcvm055 sitescope]#

```

After you run the `opc_sis_template2pol` command, check in the Administration UI that a root element named `SitescopePolicies` is created in the HPOM Policy Bank. You can view the elements contained within `SitescopePolicies` by clicking **SitescopePolicies**. To further view the elements, simply click the desired item.

After you successfully download the information from the SiteScope system and upload it to the HP Operations management server (that is, after you convert templates to policies), you can continue with the policy assignment and deployment. For detailed information about assigning and deploying policies, see ["Assigning and Deploying SiteScope Policies"](#) (on page 19).

opc_sis_template2pol Tool Usage

The usage of the `opc_sis_template2pol` command line tool is the following:

```

opc_sis_template2pol -help |
    { -sis_group_container <directory> |
      -sis_template_file <XML_template_file> }
[ -sis_hostname <hostname> ]
[ -sis_user <user> ]
[ -sis_passwd <passwd> ]
[ -sis_port <port> ]
[ -target_group <policy_group> ]

```

The following table shows which options are available with this command line tool and their descriptions:

opc_sis_template2pol Command Line Tool Options	Description
<code>-sis_group_container <directory></code>	Group container for all SiteScope templates to be downloaded from SiteScope and uploaded to HPOM
<code>-sis_template_file <XML_template_file></code>	Single template to be downloaded from SiteScope and uploaded to HPOM

Deploying SiteScope Configuration with HPOM

Exporting SiteScope Templates from SiteScope and Importing Them to HPOM

opc_sis_template2pol Command Line Tool Options	Description
<code>-sis_hostname <hostname></code>	Hostname of a remote system where SiteScope runs (the default is local host)
<code>-sis_user <user></code>	SiteScope user (usually <code>admin</code>)
<code>-sis_passwd <passwd></code>	Password for a SiteScope user
<code>-sis_port <port></code>	SiteScope port number (if it is not specified, use <code>8080</code>)
<code>-target_group <policy_group></code>	Target group on HPOM to which templates are uploaded (the default is <code>SitescopePolicies</code>)

Viewing the Log File

While exporting templates from SiteScope and importing them to HPOM, the following log file is created:

```
/var/opt/OV/log/OpC/mgmt_sv/opc_sis_template2pol.log
```

In this log file, you can find the information about the processes that take place after you run the `opc_sis_template2pol` command.

Assigning and Deploying SiteScope Policies

After SiteScope templates are uploaded to HPOM as policies, you can continue with the assignment and deployment of such policies to managed nodes.

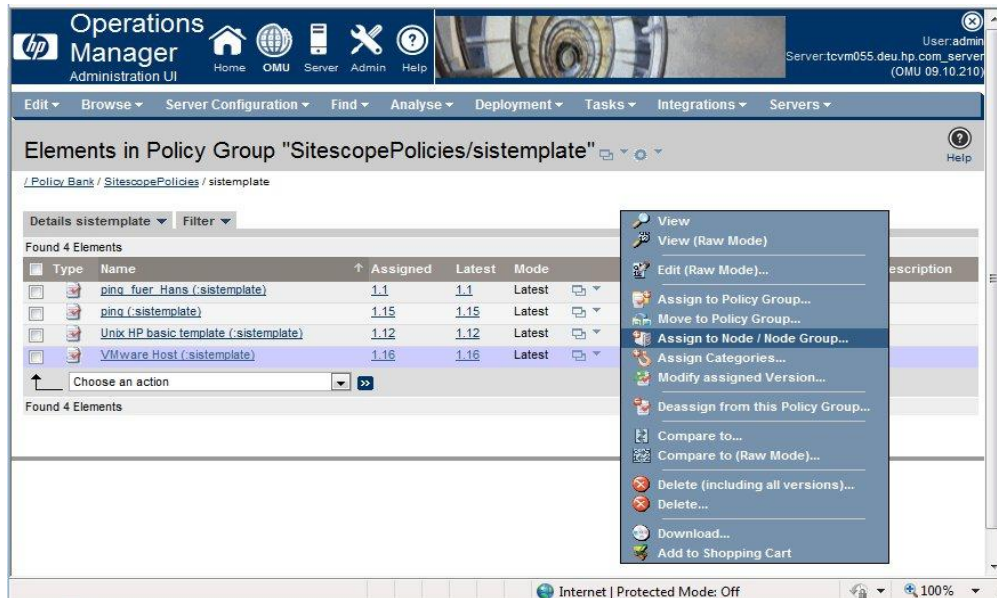
To assign and deploy a SiteScope policy, follow these steps:

1. In the OMU context of the Administration UI, from the Administrative menu, click **Browse**→**Policy Bank**.
2. From the list of all policies and policy groups, select the policy that you imported to HPOM and you want to deploy.

The attributes and values of the selected policy are displayed.

Caution: Do not change the name of the policy or policy group. If you do so, the deployment may fail.

3. Check the attributes and values of the selected policy or policy group, determine to which node or node group you need to assign the selected policy or policy group, and then do the assignment by following these steps:
 - a. Click **Assign to Node / Node Group...** to choose the node or node group to which you want to assign the selected policy or policy group.



- b. Click the **OK** button.
4. After you assign the policy or the policy group to the node or node group, you must distribute it to the node or node group by selecting **Deploy Configuration...** from the Actions Menu.

The window containing the elements to be deployed appears.

5. Make sure that the following check boxes are selected:
 - Distribute Policies
 - Distribute Actions

- Distribute Monitors
 - Distribute Commands
 - Distribute Instrumentation
6. After you selected the needed check boxes, click the **OK** button.

A note similar to the following one should be displayed:

```
Distribution was successful.
```

```
Additional information:
```

```
Node computer2.company.com:
```

```
Create distribution data and inform agent...Done.
```

```
Create distribution data and inform agent...Done.
```

Example of Deploying SiteScope Templates to the SiteScope Server

Usually a SiteScope template is assigned to the SiteScope server and not to the system that should be monitored by this SiteScope server.

In this example, SiteScope server *S1* monitors nodes *n1*, *n2*, and *n3* with the SiteScope *ping* template. The data file of the SiteScope *ping* policy is similar to the following:

```
variables:  
host=%%NODEGROUP:ping_node_group%%,interval=600
```

If you add nodes *n1*, *n2*, and *n3* to the HPOM node group *ping_node_group*, during the deployment to *S1*, the policy is resolved as follows:

```
variables:  
host=n1,interval=600  
host=n2,interval=600  
host=n3,interval=600
```

Thus, the parameters are specified for SiteScope server *S1*.

If you do not want to add nodes *n1*, *n2*, and *n3* into the HPOM node bank, you can also use the `%%FILE:<nodename_file>%%` resolution type instead of `%%NODEGROUP:<nodegroup>%%`. In this case, `<nodename_file>` points to the file that contains node names (one node name per line). This file can be managed by another application, for example, an asset management tool.

Example of Deploying SiteScope Templates to Virtual Nodes

You can also assign SiteScope policies to the node that should be monitored. To do this, add this system as a virtual node to the HPOM node bank (for details, see the HPOM documentation). The physical node of this virtual node must be the SiteScope server that performs the monitoring. When deploying configuration to this virtual node, the policies are deployed to the SiteScope server.

Parameter Resolution in SiteScope Policies and Deployment of SiteScope Monitors

Deploying a SiteScope monitor with HPOM means that a SiteScope template with specified parameters (variables) is deployed as an HPOM policy to a SiteScope server¹.

A SiteScope policy consists of four files that correspond to the SiteScope template from which the policy is derived. These files are similar to the following:

```
Header file:          e3e30af4-b2d1-71e0-1cb3-103925be0000_header.xml
Data:                e3e30af4-b2d1-71e0-1cb3-103925be0000_data
Parameter definition: e3e30af4-b2d1-71e0-1cb3-103925be0000_params.xml
Binary SiteScope template: e3e30af4-b2d1-71e0-1cb3-103925be0000_sis
```

The above files represent a pure, uninstantiated template. But what you actually need for the SiteScope server to work is monitors. A monitor is an instance of a template that is created by replacing the variables in the template with their actual values. This section describes what happens when a SiteScope policy is instantiated (that is, when monitors are created from the SiteScope policy). Instantiation takes place on the HP Operations management server before the configuration is deployed to the SiteScope servers. You can also use the Admin UI policy editor to edit the policy data part and add or remove monitors.

The structure of the template data file is the following:

```
Source_template: <template_name_in_sitescope>
variables       : <var_name_1>=<value_1>[,<var_name_2>=<value_2>[,...]]
```

For example:

```
Source_template: ping_var_host
host=%%HOST%%,user=me,port=8080
```

The symbolic values (%%value%%) are replaced when you create a monitor from this template by filling in the required values. For more information on symbolic values, see ["Symbolic Values" \(on page 22\)](#).

Caution: You may not change the value of `Source_template` because it represents the link to the SiteScope template name that is defined in the binary file.

It is possible to duplicate the variables line. In this case, each line specifies one monitor instance.

For example:

```
variables:      myhost1.company.com,user=me,port=8081
                myhost2.company.com,user=you,port=8082
```

After assigning and deploying such a policy, you see the following output after you run the `/opt/OV/bin/ovpolicy -l` command:

¹Deploying SiteScope monitors through HPOM policies allows you to deploy more than one monitor through a policy.

```
* List installed policies for host 'localhost'.
```

Type	Name	Status	Version
sitescope	"ping_var_host (:rose)"	enabled	0001.0002

Symbolic Values

For convenience, you can use a series of symbolic values in the template variables. These symbolic values are resolved to their actual values during deployment.

For example:

```
variables:    host=%%HOST%%
              %%NODEGROUP:<nodegroup_name>%%
              %%FILE:<file>%%
              %%FILE:<file>.$SISHOST%%
```

%%HOST%% is resolved through the node name of a node to which the policy is distributed.

%%NODEGROUP:<nodegroup_name>%% uses all nodes that are assigned to a specified node group.

%%FILE:<file>%% is a file on the HP Operations management server that includes a list of nodes.

%%FILE:<file>.\$SISHOST%% is a file on the HP Operations management server that includes a list of nodes with the extension of the node name on which SiteScope runs.

Managing Credentials

When managing credentials for SiteScope resources that require user authentication, you are allowed to add, update, and delete credentials that are used in configuring SiteScope monitors and templates. HPOM administrator uses `CRYPT:<VALUE>` in a variable to crypt the value of SiteScope policy variables. For example, if one of the policy variables is a password, this password must be encrypted:

```
variables:    host=%%NODEGROUP:SiteScopeNodes%%, user=root,
              password=CRYPT:<password>, frequency=700
```

After encryption is done (during the process of storing the data into the database), the next time you modify the policy, it looks as follows:

```
variables:    host=%%NODEGROUP:SiteScopeNodes%%, user=root,
              password=1ABG1S2688L4KdVnJ2/SpA==, frequency=700
```

SiteScope credentials must be available on the agent to access SiteScope. The following three methods that are available for managing the SiteScope password are listed in the order of the priority (1-3, with number 1 being of greatest priority):

1. Use a local command line tool to set the credentials that are called on the SiteScope system:

- *On Windows:*

```
%OvInstallDir%\lbin\sisconfig\sisSetCredentials.bat
```

- *On UNIX:*

```
# /opt/OV/lbin/sisconfig/sisSetCredentials.sh
```

An output similar to the following one should be displayed:

```
Set Sitescope login credentials for agent sisconfig connector.
Sitescope login: admin
Sitescope password:
Repeat Sitescope password:
Sitescope port: 8080
Updating config namespace with sitescope login data.
```

The credentials can be verified by using `ovconfget opr.sisconfig`.

2. Deploy the `xpl conf` credentials with the `nodeinfo` policy:

For example:

```
;XPL config
[opr.sisconfig]
sis_login=admin
sis_password=CRYPT:<password>
sis_port=8080
```

This results in the following:

```
;XPL config
[opr.sisconfig]
sis_login=admin
sis_password=1ABG1S2688L4KdVnJ2/SpA==
sis_port=8080
```

To encrypt `sis_passwd=CRYPT:<value>`, you must enable the `CRYPT` functionality by running the following command:

```
# ovconfchg -ovrg server -ns opc -set OPC_NODEINFO_CRYPT TRUE
```

Caution: Make sure that you always first deploy credentials, and then SiteScope policies.

3. Use the Sam Admin to add the SiteScope note with `user/passwd/port`:

```
https://<HPOM_server>:8444/topaz/samadmin/GetSiteScopesList.do
```

The user and the password are the following:

```
user: opc_admin
passwd: <passwd_of_opc_admin>
```

In the Sam Admin, add SiteScope. The credentials are then included in the SiteScope policy header.

To check the policy, run the following command:

```
# ovpolicy -l -level 4
```

An output similar to the following one should be displayed:

```
sitescope          "Unix HP basic template (:rose)"  enabled  0001.0002
  policy id        : "78492476-b467-71e0-1326-103946370000"
```

Deploying SiteScope Configuration with HPOM

Parameter Resolution in SiteScope Policies and Deployment of SiteScope Monitors

```
owner          : "OVO:computer.company.com"
category       : <no categories defined>
attribute (1)  : "product_id" ""
attribute (2)  : "checksum_header"
"42c5d0e5b5ee00bcb82353e7b8c1567ae9052313"
attribute (3)  : "version_info" ""
attribute (4)  : "version_id" "d32e86d2-b468-71e0-1326-103946370000"
attribute (5)  : "SitescopeUser" "admin"
attribute (6)  : "SitescopePassword" "gFQ3HLLKJe+Env0hvEOhyhA=="
attribute (7)  : "SitescopePort" "8080"
```


Deleting SiteScope Templates and Monitors

To delete all HPOM deployed templates and monitors, simply deassign all HPOM policies. By doing this, the subagent `sisconfig` deletes all Deployed from Operations Manager folders from the SiteScope Monitors and Templates.

Reporting

The following are the commands that you can use to generate desired reports and the examples of the reports that are displayed when you want to list the following:

- Desired state of the SiteScope remote installation:

```
# /opt/OV/bin/OpC/opcragt -dist -force -simulate computer1

Node computer1.company.com:
Deployment information for node computer1.company.com
-----
Policies:
  UnixBasicSisTemplate (SiteScope), version 0001.0001
  DiscoverOM (Service_Auto_Discovery), version 0001.0000
  SiteScope Discovery (Service_Auto_Discovery), version 0003.0001
  computer2_Parameters (SiteScope_DeployTemplates), version
0001.0002
Done.
```

If the policy is assigned to virtual nodes and not directly to the SiteScope Server, you can check the list of nodes. For example, if the ping template is assigned to virtual nodes myhost.company.com and yourhost.company.com and both virtual nodes are served through SiteScope server mySiSsrv.company.com, run the following command to check the list of nodes:

```
# /opt/OV/bin/OpC/opcragt -dist -simulate mySiSsrv.company.com
```

The output is as follows:

```
...
  PingTemplate (:PingGroup) (SiteScope), version 0002.0000
  applied for nodes: myhost.company.com,yourhost.company.com
```

- All SiteScope templates imported to the HPOM database:

```
# /opt/OV/bin/OpC/utills/opcpolicy -list_pols pol_type=sitescope
```

List of all Policies in the HPOM database:

```
=====
Name          = JoSeTMPL (JoSeGRP)
Version       = 0001.0021
Type (GUI)    = SiteScope
Type (agent)  = sitescope
=====
Name          = Unix template (:Import)
Version       = 0001.0000
Type (GUI)    = SiteScope
Type (agent)  = sitescope
=====
Name          = Unix template (:Import rose)
Version       = 0001.0000
```

```
Type (GUI)    = SiteScope
Type (agent) = sitescope
=====
Name          = Unix template (:Import rose)
Version       = 0001.0001
Type (GUI)    = SiteScope
Type (agent)  = sitescope
=====
```

- All configuration items or nodes that have the specific SiteScope template through the policy assignment:

```
# /opt/OV/bin/OpC/utils/opcpolicy -list_resolved_assigns pol_
name=UnixBasicSisTemplate pol_type=SiteScope
```

```
computer2.company.com
computer5.company.com
computer3.company.com
computer3.company.com
computer21.example.ad
computer1.company.com
computer1.company.com
```

