HP Operations Smart Plug-in for HP Storage Essentials

for HP Operations Manager for Windows®

Software Version: 1.50

Installation and Reference Guide

June 2008

Legal Notices

Documentation Updates

This guide's title page 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, visit the HP software product manuals web site at:

  http://h20230.www2.hp.com/selfsolve/documents/

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You can visit the HP software support web site at:

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HP Software online support provides an efficient way to access interactive technical support tools. As a valued support customer, you can benefit by using the support web site to:

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Contents

1 HP Storage Essentials

This chapter addresses the following topics:

Overview

HP Storage Essentials (HP SE) is a family of open standards-built Storage Area Network (SAN) management and Storage Resource Management (SRM) solutions. It enables you to visualize, monitor, report on, provision, and manage your heterogeneous storage environment with unprecedented simplicity and speed. The HP suite delivers integrated heterogeneous functionality for network (DAS, SAN, NAS) management, storage resource management, provisioning, backup reporting, and application infrastructure monitoring. It integrates with HP Systems Insight Manager (HP SIM) to provide advanced server and storage management capabilities. The HP SIM suite includes HP SE Enterprise Edition, and features a base management console and an expanding portfolio of value added plug-ins. The architecture and interfaces are based on industry standards, allowing for quick deployment and investment protection. HP SE is accessed through HP SIM menu items that are labeled HP Storage Essentials. It runs on a central server as the HP SE central management application (AppStorManager service). It relies on CIM Extensions, which act as agents to provide information about hosts and applications. A CIM Extension is an agent program that gathers information about a host and its applications, and forwards this information to the HP SE central management application.

Key Features and Benefits of HP Storage Essentials

HP Storage Essentials offers the following features and benefits:

- **End-to-end visibility of business applications**

  Provides an interface to monitor business applications, including their associated infrastructure and interdependencies.

- **Web-based global management console**

  Manages heterogeneous storage environments through a web-based user interface.

- **Reporting**

  Offers flexible, in-depth report generation in both predefined and user-defined formats. It can also export data to other management applications.

- **Standards-based architecture**

  Protects user flexibility and investments with a standards-based interface for managing heterogeneous storage environments.

- **Storage server, network, and subsystem provisioning**

  Reduces manual processes and risk of downtime caused by free-space outages with multi-level storage provisioning.

- **Integrated asset management and carriageable**

  Centralizes all aspects of storage inventory for maximum asset utilization. Improves accountability and budgeting with cost accounting-based carriageable on user-defined utilization characteristics.

- **Integrated storage management**

  Lowers cost of acquiring and managing a heterogeneous storage environment by using multiple disparate point solutions.

- **Visualization**

  Discovers automatically and maps the storage network (DAS, SAN, NAS) and backup topology by pictorially displaying the objects, path, and zones between the application and the LUN on which the corresponding data resides.

- **Zoning and provisioning**

  Enables end-to-end zoning and provisioning tasks at the host, switch, and disk subsystem layers. Provides a common interface for a multi-vendor storage environment.

- **Utilization management**

  Monitors availability and utilization at hosts, switches, and arrays. Provides graphical trending and forecasting. Soft Quota management enables proactive monitoring of consumption levels, and file system management provides file-level scanning, analysis, reporting, and policy-based management capabilities.

- **Performance management**

  Monitors performance from application objects down to storage subsystems. Monitors applications, hosts, HBAs, switches, and disk subsystems. Enables quick detection of bottlenecks that cause performance problems.

- **Chargeback**

  Supports customizable chargeback values, depreciation formulae, asset-based and storage-based chargeback models, and business unit groupings. Reports enable administrators to associate costs with the quality and quantity of storage used by different business units.

- **NAS management**

  Analyzes the impact of configuration changes and file sharing activities.

- **Backup management**

  Offers a single view of backup activities. Identifies unprotected applications, servers, and files. Enables root cause analysis of backup failure. Increases utilization of backup resources.

- **Standards-based architecture**

  Designs solution on the Storage Management Initiative Specification (SMI-S), the storage industry standard for heterogeneous storage network management based on the Common Information Model (CIM) and Web-Based Enterprise Management (WBEM). Enables support for multi-vendor storage infrastructures and ensures that investments are protected.

- **Customizable reports**

  Generates an extensive set of out-of-the-box reports that satisfy requirements related to capacity management and planning, performance management, asset management, and chargeback. Reports can be customized and scheduled for automatic email distribution. Supports a wide variety of reporting formats, including HTML, XML, Microsoft Excel, and PDF.

  For more information on features of HP Storage Essentials and other HP management products, see the following HP web sites at:

  http://www.managementsoftware.hp.com/

  http://www.hp.com/go/storageessentials

2 HP Operations Smart Plug-in for HP Storage Essentials

This chapter addresses the following topics:

Overview

HP Operations Smart Plug-in for HP Storage Essentials (HP SE SPI) integrates HP Storage Essentials (HP SE) with HP Operations Manager for Windows (HPOM). The HPOM management scope for HP SE SPI includes systems managed by HP Storage Essentials installed in an environment comprising an HPOM and one or more HPOM managed nodes. The HP SE SPI is used to monitor the HP Storage Essentials services. The HP SE SPI along with the HP Operations Manager Integration for HP Systems Insight Manager (HP SIM Integration) integrates HP Storage Essentials with HP Operations Manager by forwarding storage events through HP SIM Integration. The HP SIM Integration, together with the HP SE SPI, allows the storage network to be monitored and managed from the HPOM management server console. The HP SE SPI enables the HPOM administrators to troubleshoot problems in the storage network before they become serious enough to affect tools, and ultimately the end-users. Storage events are stored in the HP database. The HPOM intelligent agents are configured on the HP SIM CMS, the HP Storage Essentials CMS and managed servers which are managed nodes in the HPOM management domain.

Features and Functionality

The HP Storage Essentials SPI offers the following features and functionality:

- **Service discovery**

  Discovers the HP Storage Essentials CMS (SE CMS) and HP SE managed hosts CIM Extension services.

- **Service and process monitoring**

  Monitors the availability of HP SE CMS and Storage Essentials CIM Extension. As a result, any service alerts can then be communicated to the HPOM Service map and the HPOM active message browser. This enables administrators to perform root-cause analysis of the inherent HP Storage Essentials services.

- **Policy groups**

  Contains policies for monitoring the HP SE CMS process (AppStorManager) and the HP SE CIM Extension process.

- **Tools groups**

  Contains tools to start, stop, and view the status of the HP SE CMS process (AppStorManager) and the HP SE CIM Extension process.

- **Self-Healing Services (SHS)**

  Integrates with HPOM Self-Healing Services to provide improved troubleshooting, streamlined problem analysis, and incident reporting, by collecting data and system information relevant to the fault. SHS gathers troubleshooting data and saves it in a compressed file. For more information, see the Self-Healing Services web site at:

  http://managementsoftware.hp.com/service/selfheal

3 Installing HP Storage Essentials SPI

This chapter addresses the following topics:

Prerequisites

This section discusses the prerequisites for installing HP SE SPI. To avoid problems during the installation of the HP SE SPI software, it is mandatory that you read this section, and other documents recommended in this section before you start the installation process.

Hardware Requirements

You must read this section and any other documents recommended in this section before installing HP SE SPI. For a detailed list of hardware requirements, see the following documents:

- For the HPOM 8.10 management server, see the *HP Operations Manager for Windows Installation Guide*.
- For the HPOM 8.10 HTTPS managed nodes, see the *HP Openview Operations HTTPS Agent Concepts and Configuration Guide*.
- For HPOM 8.10 DCE managed nodes, see the *HP Openview Operations OVO DCE Agent Concepts and Configuration Guide*.

Table 1 lists the disk space requirements for each operating system.

Table 1 Disk Space Requirements

System	Operating System	Installation	Runtime Files	Total
HPOM management server	Windows 2000 (supported only on OVOW 7.50) Windows 2003 (32-bit)	4 MB	1 MB	5 MB
HPOM managed node	HP-UX 11.00 (supported only on OVOW 7.50) HP-UX 11.11 HP-UX 11.23 IA HP-UX 11.23 PA HP-UX 11.31 PA HP-UX 11.31 IA	1 MB	1 MB	2 MB
	Solaris 8, 9,10			
	RedHat Linux Advanced Server 3.0 (32–bit), RedHat Linux Advanced Server 4.0 (32-bit and 64-bit), SuSE Linux Enterprise Server 8 (32-bit), SuSE Linux Enterprise Server 9 (32-bit and 64-bit)			
	AIX 5.1, 5.2, and 5.3			
	Tru64 5.1B			
	Microsoft Windows 2000, Microsoft Windows 2003 (32-bit)	1 MB	1 MB	2 MB

No additional memory (RAM) is required either on the HPOM or on the managed nodes for HP SE SPI.

Software Requirements

This section lists the software requirements for installing HP SE SPI.

Prerequisites

Following are the software requirements for installing the HP SE SPI:

- OVO for Windows 7.50 or HPOM for Windows 8.10 updated with the latest server and agent patches
- HP Systems Insight Manager 5.1 or 5.2
- HP Storage Essentials 6.0, 5.1 or 5.1.1 (Linux)
- HP SIM Integration, Version 1.50
- HP Operations DCE Agent A.07.29, A.07.32
- HP Operations HTTPS Agent 08.50.011
- HP Operations Smart Plug-In Self-Healing Integration Component, Version 2.30
- Install **OVOW_00244** patch for running the HP Storage Essentials SPI 1.50 on HP OVOW 7.50

  For more information on installing HP SIM Integration, see *HP Operations Integration for HP Systems Insight Manager Administrator's Reference for HP Operations Manager for Windows*.

Table 2 lists HPOM versions supported by HP SE SPI.

Table 2 HPOM Management Server Versions

HPOM management server	Operating System	HPOM Agent Types
OVOW 7.50	Microsoft Windows 2000	DCE
	Microsoft Windows 2003 (32-bit)	
HPOM 8.10	Microsoft Windows 2003 (32-bit)	HTTPS DCE

Table 3 lists HP Systems Insight Manager CMS versions supported by HP SE SPI.

Table 3 HP Systems Insight Manager CMS Versions

HP Systems Insight Manager CMS	Operating System
HP SIM 5.1 HP SIM 5.2	• Windows 2000 (supported only on OVOW 7.50) • Windows 2003 (32-bit) • RedHat Linux AS 4 (32-bit) • SuSE Linux ES 9 (32-bit)

Table 4 lists HP Storage Essentials CMS versions supported by HP SE SPI.

Table 4 HP Storage Essentials CMS Versions

HP Storage Essentials	Operating System
HP SE 6.0 HP SE 5.1 HP SE 5.1.1	Windows 2000 (supported only on OVOW 7.50) Windows 2003
HP SE 6.0 HP SE 5.1.1	RHEL 4.0 (32-bit) SLES 9 (32-bit)

Table 5 lists CIM Extension and HPOM agents supported by HP SE SPI.

Table 5 CIM Extension and HPOM Agent Versions

Agent	Operating System
CIM Extension HPOM Agent	Windows 2000 (supported only on OVOW 7.50) Windows 2003 (32-bit) HP-UX 11.00 (supported only on OVOW 7.50) HP-UX 11.11 HP-UX 11.23 PA HP-UX 11.23 IA HP-UX 11.31 PA HP-UX 11.31 IA Solaris 8 Solaris 9 Solaris 10 RedHat Linux EL 3.0 (32-bit) RedHat Linux EL 4.0 (32-bit) RedHat Linux EL 4.0 (64-bit) SuSE Linux ES 9 (32-bit) SuSE Linux ES 9 (64-bit) AIX 5L 5.1 AIX 5L 5.2 AIX 5L 5.3 Tru64 5.1 B

Installing HP Storage Essentials SPI

You can install HP SE SPI from the HP Operations Smart Plug-ins DVD. The Installer executable verifies whether HPOM is installed. It also installs the package, and loads the selected packages to the HPOM management server.

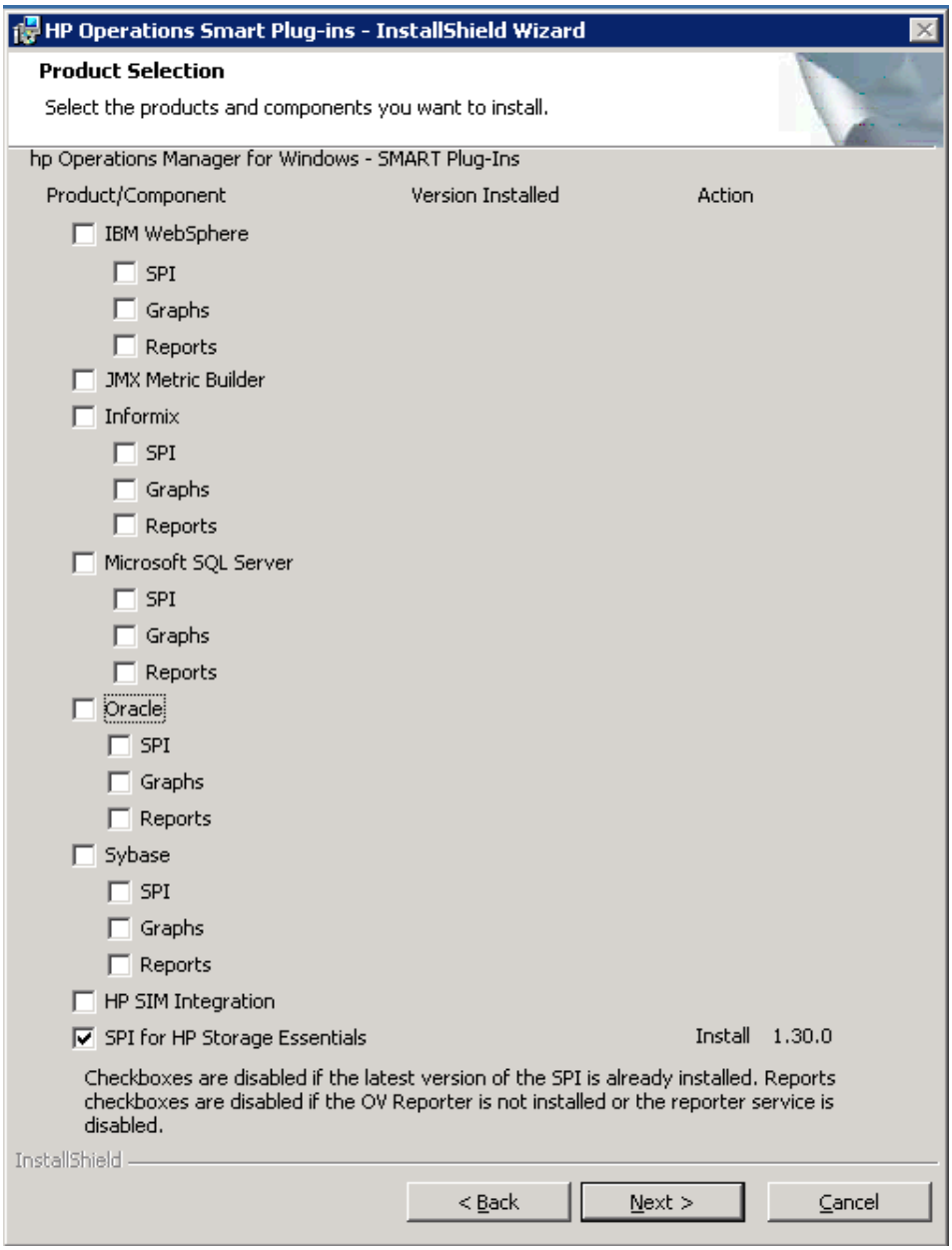
To install the HP SE software bundle on HPOM, complete the following steps:

1. Ensure that the HPOM system where you want to install the HP SE SPI meets installation prerequisites.

   For more information, see Prerequisites on page 20.

2. Log in to HPOM as an administrator.
3. Insert the *HP Operations Smart Plug-ins DVD*. The installation wizard displays, as shown in Figure 1.

Figure 1 SPI Installation window



4 Select **SPI for HP Storage Essentials** in the Product Selection window, and click **Next**.

Selecting SPI for HP Storage Essentials in the Product Selection window also installs HP SIM Integration.

5 Follow the on-screen instructions to complete the installation process.

The wizard displays the status of the installation.

6 Click **Finish** to exit from the installation wizard.

For more information on installing HP Operations New and Upgraded Smart Plug-ins, see the *HP Operations Smart Plug-ins DVD, Installation and Upgrade Guide*.

Upgrading the HP Storage Essentials SPI

To upgrade to the latest version of HP Storage Essentials SPI, complete the following steps:

1. Ensure you have read the hardware and software requirements in Prerequisites section.
2. If you want to preserve any policy customization that you have made in the previous version, you must take a backup to save the complete and current HP Storage Essentials SPI policies.
3. Stop HP System's Insight Manager SPI Event Listener using the **Stop Event Listener** tool.
4. Remove node from the node group using the **De-assign node from node group** tool.
5. Install the HP Storage Essentials SPI from the DVD by following the steps mentioned in the Installing HP Storage Essentials SPI section.
6. Ensure that **Auto-deployment** registry variable **Disable** is set to False.
7. Assign node to node group that you have de-assigned using **Assign node to node group**. Re-deploy the instrumentations and policies manually if they are not deployed automatically.
8. Run **Get HP SIM Credentials** tool and **Start Event Listener** tool.

Verifying Installation

To verify whether the installation of the HP SE SPI is completed successfully on HPOM, open the HPOM console and check whether the elements listed in Table 6 are present.

Table 6 HPOM elements

HPOM Console	Element
Node Groups	HP SE CMS-Win HP SE CMS-Unix HP SE CIM Extn-Win HP SE CIM Extn-Unix
Tool Groups	HP Storage Essentials — AppStorManager-Win — AppStorManager-Unix — CIM Extension-Win — CIM Extension-Unix — HPSESPI Utils
Policy Groups	HP Storage Essentials — AppStorManager-Win — AppStorManager-Unix — CIM Extension-Win — CIM Extension-Unix — Service Discovery
User Roles	HP Storage Essentials SPI Admin

If the elements listed in Table 6 are not present in the HPOM console, you must uninstall and reinstall the HP SE SPI to resolve this issue.

For information on uninstalling HP SE SPI, see Uninstalling HP Storage Essentials SPI on page 71.

For information on reinstalling HP SE SPI, see Installing HP Storage Essentials SPI on page 26.

Installed File Locations

The installation process copies the necessary files on the HPOM.

Table 7 lists the files and directories that are created during the installation process of HP SE SPI on HPOM.

Table 7 Locations on the HPOM

File Type	Location
Binaries and Scripts	<OvInstallDir>install\HPSESPI <OvOWShareInstallDir>SPI-Share\HPSESPI
Instrumentation	<OvInstallDir>Data\shared\Instrumentation\Supported Operating Systems\HP Storage Essentials
Documentation	<OvInstallDir>install\HPSESPI\doc
MofFiles	<OvInstallDir>install\HPSESPI\NLS\1033\MofFiles

Table 8 lists the directories that are used on deployment of the policies to the HPOM managed node(s).

Table 8 File Locations for the HPOM Managed Node

Operating System	Location
HP-UX, Solaris, Linux, Tru64	/var/opt/OV/bin/instrumentation
Microsoft Windows	<OvAgentDir>\bin\instrumentation
AIX	/var/lpp/OV/OpC/instrumentation

The HP SE SPI instrumentation scripts are copied into these paths when the **HP Storage Essentials** instrumentation is deployed to the managed nodes.

4 Configuring the HP Storage Essentials SPI

This chapter addresses the following topics:

Starting HP Storage Essentials SPI Configuration

Configuring the Storage Essentials SPI involves the following tasks:

- Installing HPOM Agent on Nodes
- Assigning Nodes to the HP Storage Essentials Node Group
- Obtaining HP Storage Essentials Credentials
- Deploying Instrumentation to CIM Extension Nodes

Installing HPOM Agent on Nodes

The first step in configuring the HP SE SPI is installing the HPOM agent on all the nodes where HP SE SPI and/or IM Agents are installed. Before starting the HPOM agent installation, ensure that the system on which you want to install the HPOM agent meets the installation requirements mentioned in the Prerequisites on page 20. You can install the HPOM agent on a managed node by various methods. For more information on the various installation methods, see the *HP Operations Manager for Windows Installation Guide* and also the documents listed in Prerequisites on page 20.

Assigning Nodes to the HP Storage Essentials Node Group

Assigning nodes to the node group involves:

- Assigning AppStorManager Node to the Node Group
- Assigning the CIM Extension Node to the Node Group

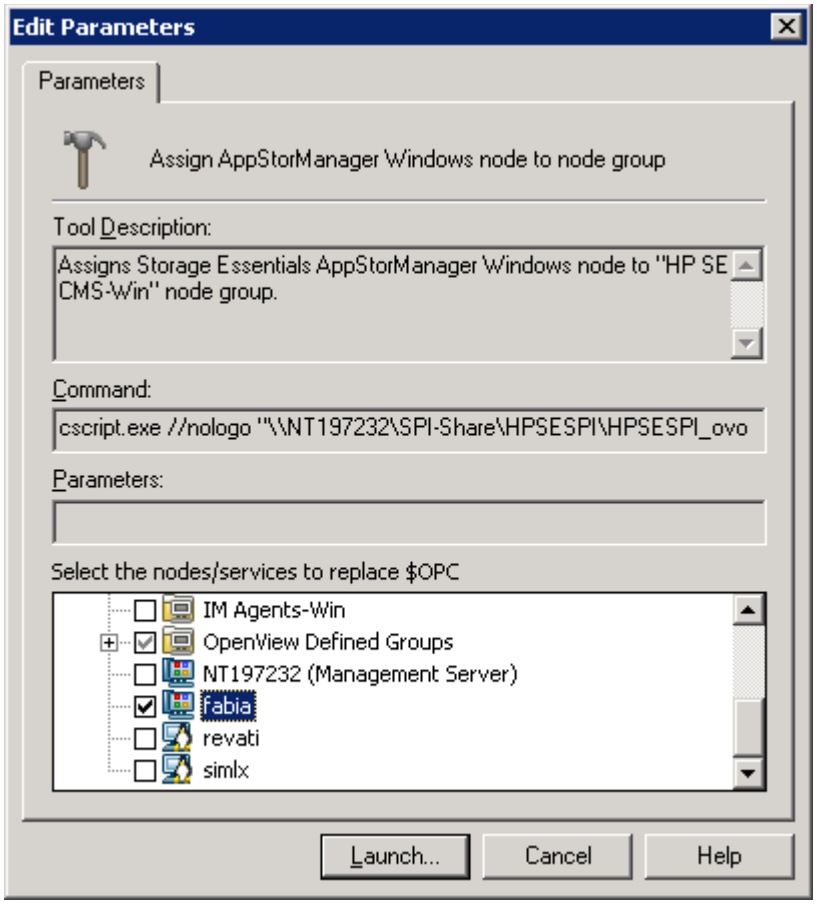
Assigning AppStorManager Node to the Node Group

This tool assigns the node to the chosen HP SE CMS node group and deploys the HP Storage Essentials policy groups **AppStorManager-Win** or **AppStorManager-Unix** (depending on your node's operating system), and Service Discovery policies. The service discovery policy deployment causes the HP Storage Essentials discovery process to run. If an HP Storage Essentials service is not discovered, the corresponding monitor policy is disabled.

To assign the nodes, on which the Storage Essentials AppStorManager service is running, to the node group, complete the following steps:

1. Log in to the HPOM management server, and start the HPOM Console.
2. Select **Tools→HP Storage Essentials→AppStorManager-Win or AppStorManager-Unix** (depending on your node's operating system), and right-click **Assign AppStorManager node to node group.**
3. Select **All Tasks→Launch Tool.** The Edit Parameters window displays, as shown in Figure 2.

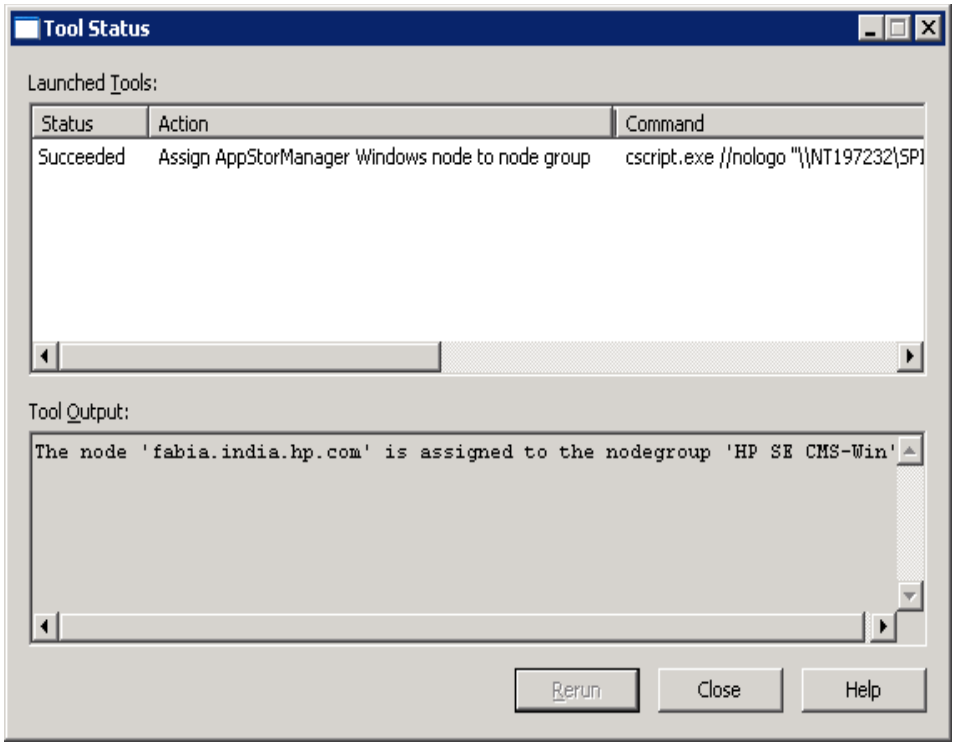
Figure 2 Edit Parameters–Assign AppStorManager node to node group



4 From the **Select the nodes/services to replace $OPC** window pane, select the node on which the Storage Essentials AppStorManager service is running.

5 Click **Launch...**. The Tool Status window displays, as shown in Figure 3.

Figure 3 Tool Status–Assign AppStorManager node to node group



This assigns the node, on which the Storage Essentials AppStorManager process is running, to the **HP SE CMS-Win** or **HP SE CMS-Unix** node group.

When the new nodes in the **HP SE CMS-Win** or **HP SE CMS-Unix** node group are added, the Service Discovery policy is deployed to each new node.

Assigning the HP SE CMS node to the node group also invokes auto-deployment of HP SE SPI Service Discovery and AppStorManager Service Monitoring policies to the node. The HP Storage Essentials instrumentation gets auto-deployed along with the Service Discovery policy to the node.

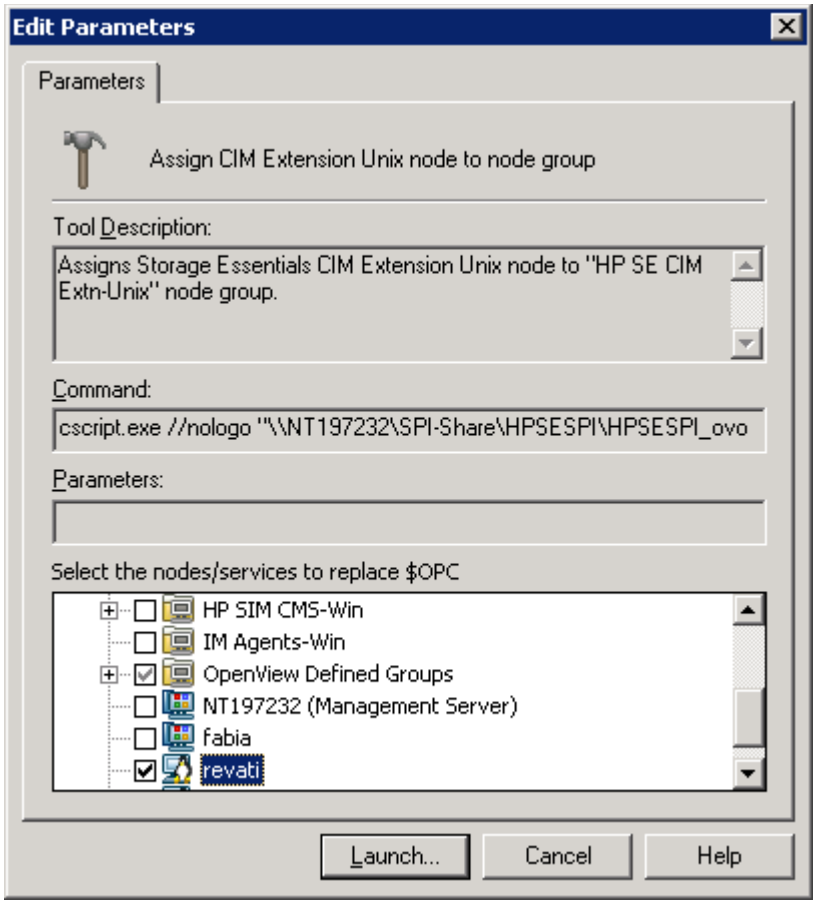
The automatic policy deployment requires that the HPOM agent be present on the managed nodes. If the HPOM agent is not present on the Windows nodes, the management server deploys the agent automatically. For UNIX nodes, the agent must be installed manually. You can install the HPOM agent by various methods. For more information, see Installing HPOM Agent on Nodes on page 35.

Assigning the CIM Extension Node to the Node Group

To assign the node, on which the Storage Essentials CIM Extension process is running, to the node group, complete the following steps:

1. Log in to the HPOM management server, and start the HPOM Console.
2. Select **Tools→HP Storage Essentials→CIM Extension-Unix or CIM Extension-Win** (depending on your node's operating system), and right-click **Assign CIM Extension node to node group.**
3. Select **All Tasks→Launch Tool.** The Edit Parameters window displays, as shown in Figure 4.

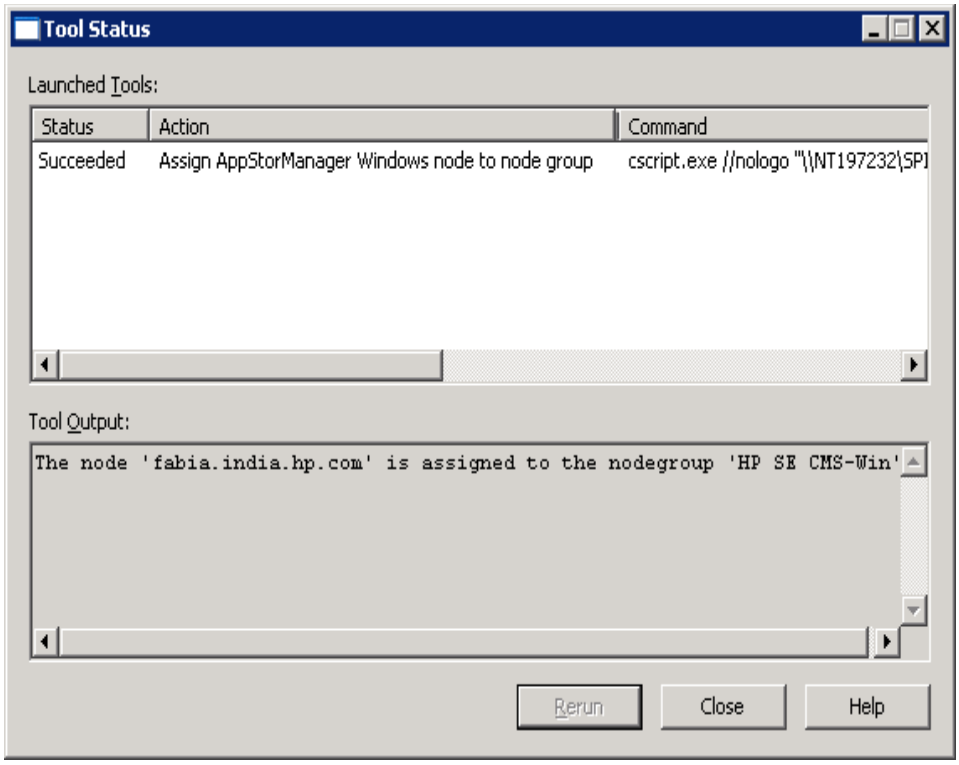
Figure 4 Edit Parameters–Assign CIM Extension node to node group



4 From the **Select the nodes/services to replace $OPC** pane, select the node on which the Storage Essentials CIM Extension process is running.

5 Click **Launch...**. The Tool Status window displays, as shown in Figure 5.

Figure 5 Tool Status–Assign CIM Extension node to node group



This assigns the node, on which the Storage Essentials CIM Extension process is running, to the **HP SE CIM Extn-Win** or **HP SE CIM Extn-Unix** node group.

When the new nodes are added in the **HP SE CIM Extn-Win** or **HP SE CIM Extn-Unix** node group, the Service Discovery policy is deployed to each new node.

Assigning HP SE CIM Extension node to the node group also invokes auto-deployment of Storage Essentials CIM Extension Service Monitoring policy to the node.

Obtaining HP Storage Essentials Credentials

To start the functionality provided with the HP SE SPI, you must first enter the HP SIM credentials for each HP SE CMS.

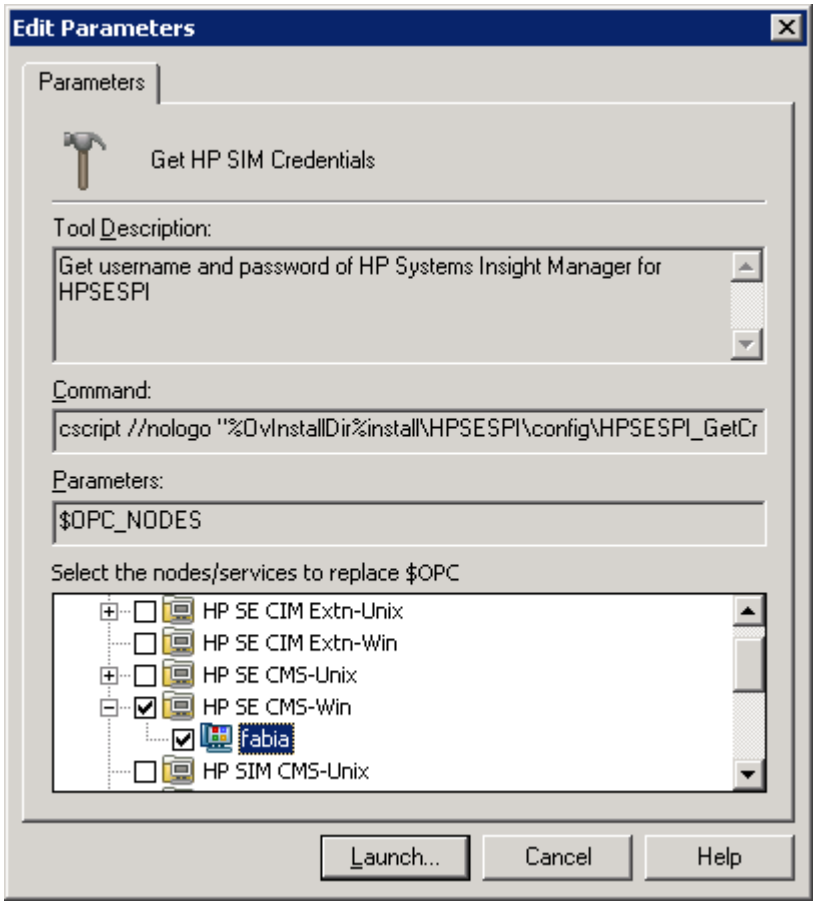
Enter the same credential that is used to log in to HP Systems Insight Manager. The HP SIM credentials used must have the role Domain_Admin in Storage Essentials CMS for the HP SE SPI to function correctly. HP SIM credentials are stored in an encrypted format on the HPOM managed nodes.

To obtain HP SE SPI credentials, complete the following steps:

1. Log in to the HPOM management server, and start the HPOM Console.
2. Select **Tools→HP Storage Essentials→HPSESPI Utils**, and right-click **Get HP SIM Credentials**.

3 Select **All Tasks→Launch Tool**. The Edit Parameters window displays, as shown in Figure 6.

Figure 6 Edit Parameters–Get HP SIM Credentials



4 From the **Select the nodes/services to replace $OPC parameters with:** pane, select the node on which HP SIM CMS is running.

5 Click **Launch...**. The following message displays if the selected node is HP SE CMS on Windows:

```
Enter the HP Systems Insight Manager DOMAIN\username:
```

The following message displays if the selected node is HP SE CMS on UNIX:

```
Enter the HP Systems Insight Manager username:
```

6 At the prompt, enter the HP Systems Insight Manager user name for HP SE CMS on this node, and press **Enter**.

The following message displays at the prompt:

```
Enter the HP Systems Insight Manager password:
```

7 Enter the corresponding HP Systems Insight Manager password, and press **Enter**.

8 Re-enter the password to confirm.

After you enter the password, the following message displays:

```
Done creating hpsecms.conf file.

Press any key to continue . . .
```

The tool attempts to verify the user name and password. On success, you are prompted to press **Enter** to exit.

If the credentials entered are not authenticated by HP SE, the following message is displayed:

```
Failed to validate the HP SE CMS credentials. Possible causes
could be:

1. HP SE CMS is not installed

2. HP SE CMS service is not running

3. HP SE CMS credentials incorrect

Press any key to continue . . .
```

9 Press **Enter**. The command prompt window closes.

After successful execution, the `hpsecms.conf` file is created on the HP SE CMS node.

The credentials are used for Storage Essentials service discovery.

Service Discovery does not function correctly if the user name and password are incorrect. If you do not know the user name and password, contact your system administrator.

Deploying Instrumentation to CIM Extension Nodes

After you have successfully assigned the node, on which the Storage Essentials CIM Extension service is running, to the **HP SE CIM Extn-Win** or **HP SE CIM Extn-Unix** node group, HP SE SPI Instrumentation must be deployed to the node.

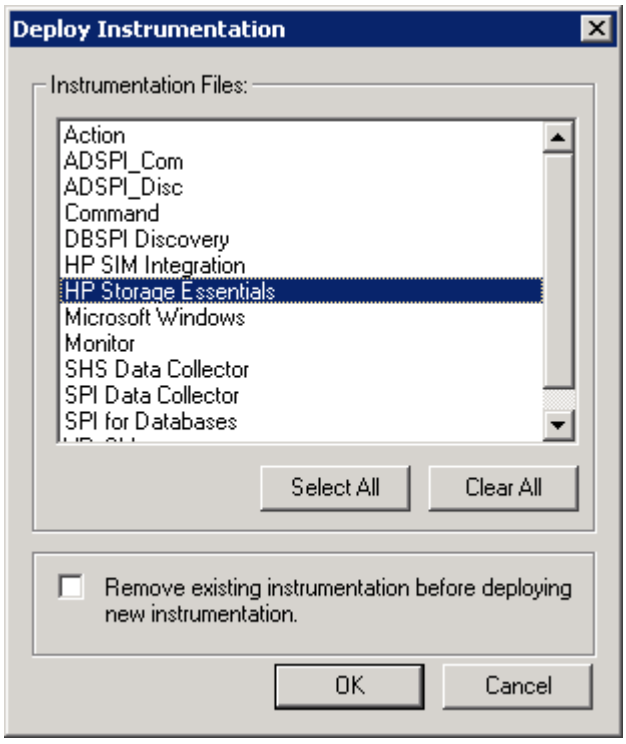
To deploy instrumentation on the Windows node on which the Storage Essentials CIM Extension service is running, complete the following steps:

1 Right-click the **HP SE CIMExtn-Win** node folder in the nodes tree.

To deploy the instrumentation to the multiple nodes, ensure that CIM Extension nodes are added to the node group and select the appropriate node group in the nodes tree.

- Select **All Tasks→Deploy instrumentation.** The Deploy Instrumentation window displays, as shown in Figure 7.

Figure 7 Deploy Instrumentation


Deploy Instrumentation
Instrumentation Files:
Action
ADSPI_Com
ADSPI_Disc
Command
DBSPI Discovery
HP SIM Integration
HP Storage Essentials
Microsoft Windows
Monitor
SHS Data Collector
SPI Data Collector
SPI for Databases
Select All
Clear All
Remove existing instrumentation before deploying new instrumentation.
OK
Cancel

2 Select **HP Storage Essentials**.

3 Click **OK**.

Configuring the OVO Agent for a Non-root User

For information on configuring the OVO agent to run as a non-root user, see the *HP Operations HTTPS Agent Concepts and Configuration Guide*.

To configure non-root agents for HP SE SPI, complete the following steps:

1 Log in to the managed node as a root user, and open a terminal window.

2 Open the following instrumentation directory for HTTPS node:

```
cd /var/opt/OV/bin/instrumentation
```

3 Enter the following command at the command prompt:

```
./HPSESPI_perl HPSESPI_root.pl.
```

This command generates the `HPSESPI.su` file.

The following message displays on successful execution of the command:

```
The script has completed successfully.
```

HP SE SPI does not support non-root OVO agent on AIX and Tru64 CIM Extension nodes.

Providing Access to Storage Essentials SPI Applications

To provide access to the HP SE SPI applications, complete the following steps:

1 Log in to the managed node as a root user, and open a terminal window.

2 Open the following file:

```
/etc/HPSESPI.su
```

3 Edit the file by uncommenting lines or by adding the following:

```
root:$CIMExtnPath/APPQcime/tools/start
root:$CIMExtnPath/APPQcime/tools/stop
root:$CIMExtnPath/APPQcime/tools/status
root:/etc/init.d/appstormanager start
```

```
root:/etc/init.d/appstormanager stop
```

On HP-UX and Linux, the `$CIMExtnPath` is `/opt`

On Solaris, enter the following command to get the value for `$CIMExtnPath`:

```
/usr/bin/pkginfo -r APPQcime
```

5 Using HP Storage Essentials SPI

This chapter addresses the following topics:

- Using HP Storage Essentials SPI Node Group
- Using HP Storage Essentials SPI Tools
- Using HP Storage Essentials SPI messages
- Using HP Storage Essentials SPI Service Map

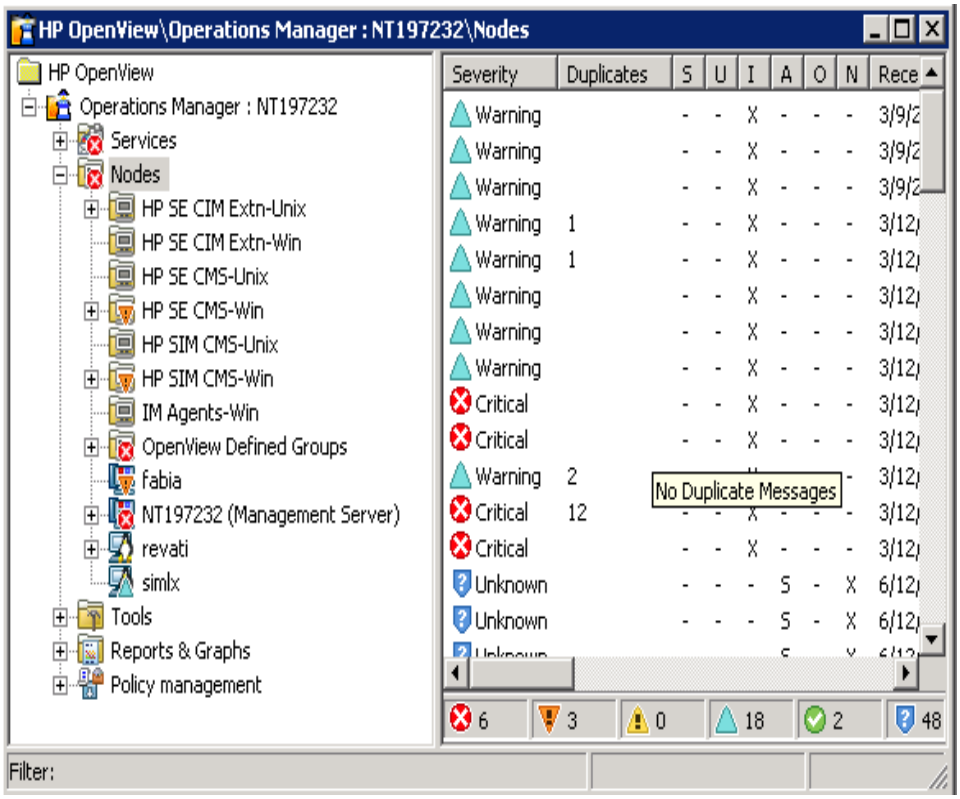
Using HP Storage Essentials SPI Node Group

Installing HP SE SPI creates the following node groups:

- HP SE CMS-Win
- HP SE CMS-Unix
- HP SE CIM Extn-Win
- HP SE CIM Extn-Unix

Figure 8 shows the HP SE SPI node groups.

Figure 8 HP SE SPI nodes group



For more information on adding nodes to the node groups, see Assigning Nodes to the HP Storage Essentials Node Group on page 36.

Table 9 lists the association between the nodes folder and the relevant tools folders.

Table 9 Association of Nodes Folder with Tools Folder

Nodes Folder	Tools Folder
HP SE CMS-Win	AppStorManager-Win
HP SE CMS-Unix	AppStorManager-Unix
HP SE CIM Extn-Win	CIM Extension-Win
HP SE CIM Extn-Unix	CIM Extension-Unix

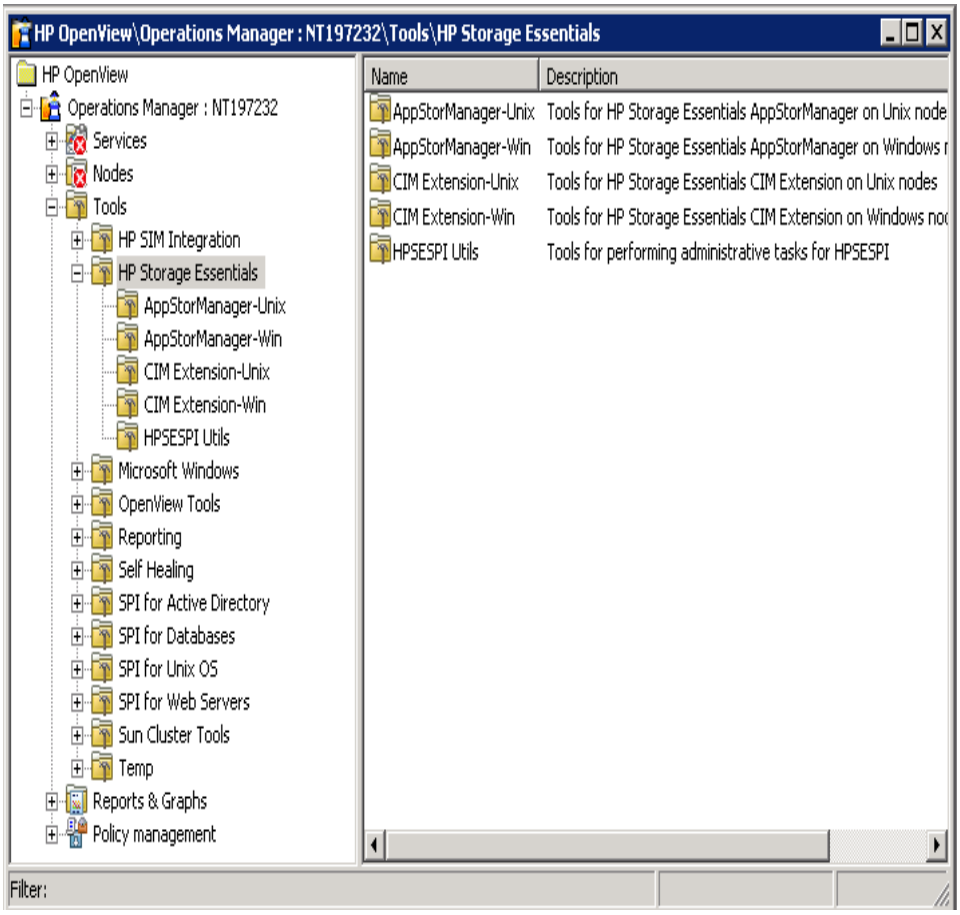
Using HP Storage Essentials SPI Tools

The HP SE SPI adds the top-level tools group in the HPOM Application bank window. The following tools are available in the HP Storage Essentials tools group:

- AppStorManager-Unix
- AppStorManager-Win
- CIM Extension-Unix
- CIM Extension-Win
- HPSESPI Utils

Figure 9 shows the HP SE SPI tools group.

Figure 9 HP SE SPI Tools



The HP SE SPI tool folders contain a number of tools that enable the HPOM administrator to manage HP Storage Essentials. These tools are grouped under the HP Storage Essentials folder.

The **AppStorManager-Unix** or **AppStorManager-Win** (depending on your node's operating system) tools group contains tools that can be executed on HP SE CMS nodes (UNIX or Windows).

Using the AppStorManager Tools Group

The **AppStorManager-Unix** or **AppStorManager-Win** (depending on your node's operating system) tools group includes tools for HP Storage Essentials AppStorManager that are executed on HP SE CMS server nodes.

The AppStorManager tools group includes tools that monitor the HP Storage Essentials AppStorManager process on selected Unix or Windows nodes.

Table 10 lists the tools in the AppStorManager tools group.

Table 10 AppStorManager Tools Group

Tools Group	Tool Name	Description
AppStorManager-Unix	AppStorManager-Unix Start	Starts the HP Storage Essentials AppStorManager service on the selected Unix nodes.
	AppStorManager-Unix Status	Status of HP Storage Essentials AppStorManager service on selected Unix nodes.
	AppStorManager-Unix Stop	Stops HP Storage Essentials AppStorManager service on selected Unix nodes.
	Assign AppStorManager Unix node to node group	Assigns Storage Essentials AppStorManager Unix node to **HP SE CMS-Unix** node group.
	De-assign AppStorManager Unix node from node group	De-assigns Storage Essentials AppStorManager Unix node from **HP SE CMS-Unix** node group.

Table 10 AppStorManager Tools Group

Tools Group	Tool Name	Description
AppStorManager-Win	AppStorManager-Win Start	Starts HP Storage Essentials AppStorManager service on selected Windows nodes.
	AppStorManager-Win Status	Status of HP Storage Essentials AppStorManager service on selected Windows nodes.
	AppStorManager-Win Stop	Stops HP Storage Essentials AppStorManager service on selected Windows nodes.
	Assign AppStorManager Windows node to node group	Assigns Storage Essentials AppStorManager Windows node to **HP SE CMS-Win** node group.
	De-assign AppStorManager Windows node from node group	De-assigns Storage Essentials AppStorManager Windows node from **HP SE CMS-Win** node group.

Using CIM Extension Tools Group

The **CIM Extension-Unix** or **CIM Extension-Win** (depending on your node's operating system) tools group includes tools for HP Storage Essentials CIM Extension that are executed on the HP SE CIM Extension nodes (UNIX or Windows). The CIM Extension tools group includes the tools that monitor HP Storage Essentials CIM Extension services on the selected UNIX or Windows nodes.

Table 11 lists the tools in the CIM Extension tools group.

Table 11 Tools in the CIM Extension Tools Group

Tools Group	Tool Name	Description
CIM Extension-Unix	CIM Extension-Unix Start	Starts HP Storage Essentials CIM Extension on selected Unix nodes
	CIM Extension-Unix Status	Status of the HP Storage Essentials CIM Extension on selected Unix nodes.
	CIM Extension-Unix Stop	Stops HP Storage Essentials CIM Extension on selected Unix nodes.
	Assign CIM Extension Unix node to node group	Assigns Storage Essentials CIM Extension Unix node to **HP SE CIM Extn-Unix** node group.
	De-assign CIM Extension Unix node from node group	De-assigns Storage Essentials CIM Extension Unix node from **HP SE CIM Extn-Unix** node group.

Table 11 Tools in the CIM Extension Tools Group

Tools Group	Tool Name	Description
CIM Extension-Win	CIM Extension-Win Start	Starts the HP Storage Essentials CIM Extension on selected Windows nodes.
	CIM Extension-Win Status	Gets the status of HP Storage Essentials CIM Extension on selected Windows nodes.
	CIM Extension-Win Stop	Stops the HP Storage Essentials CIM Extension on selected Windows nodes
	Assign CIM Extension Windows node to node group	Assigns Storage Essentials CIM Extension Windows node to **HP SE CIM Extn-Win** node group.
	De-assign CIM Extension Windows node from node group	De-assigns Storage Essentials CIM Extension Windows node from **HP SE CIM Extn-Win** node group.

Using HPSESPI Utils Tools Group

The HPSESPI Utils tools group includes tools for performing administrative tasks for HP SE SPI. Table 12 lists the tools in the HPSESPI Utils tools group.

Table 12 HPSESPI Utils Tools Group

Tools Group	Tools Name	Description
HPSESPI Utils	Clean HPSESPI - Unix	Deletes HP SE SPI files on selected Unix managed nodes. This tool also disables the HP SE SPI policies on the DCE managed nodes and deletes HTTPS managed nodes. When agent is running as a non-root user, the file /etc/HPSESPI.su will not be removed.
	Clean HPSESPI - Win	Deletes HP SE SPI files on selected Windows managed nodes. This tool also disables the HP SE SPI policies on the DCE managed nodes and deletes HTTPS managed nodes. After the successful execution of the tool, only HPSESPI_perl.cmd file remains on the managed node.
	Get HP SIM Credentials	Obtains login credentials for Storage Essentials for use by HP SE SPI.
	Self-Healing Info	Runs the HP SE SPI Data collector on managed nodes.
	Service Discovery - Unix	Performs HP Storage Essentials Service Discovery on the Unix managed nodes.
	Service Discovery - Win	Performs HP Storage Essentials Service Discovery on the Windows managed nodes.

Table 12 HPSESPI Utils Tools Group

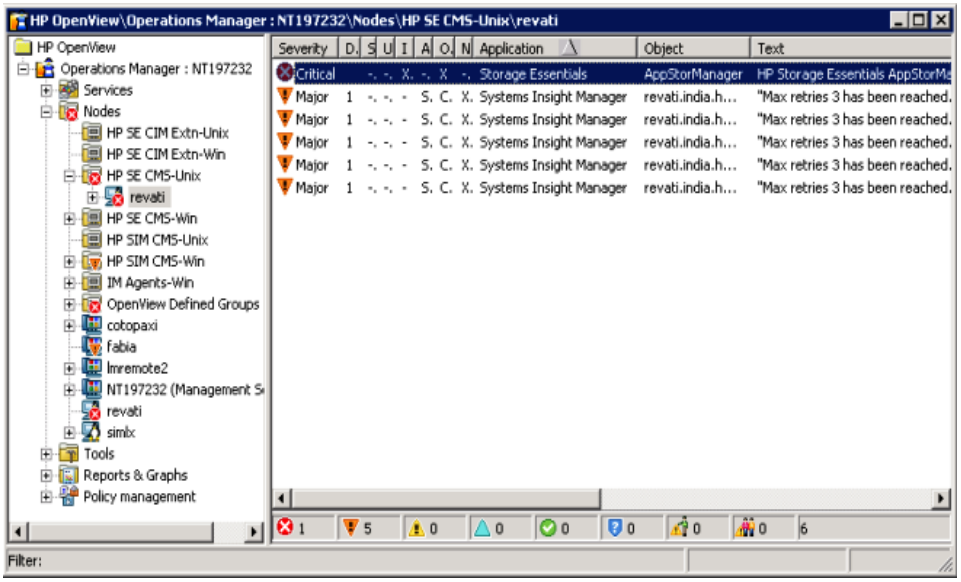
Tools Group	Tools Name	Description
	Tracing Off - Unix	Sets the HP SE SPI tracing to OFF state on Unix managed nodes.
	Tracing Off - Win	Sets the HP SE SPI tracing to OFF state on Windows managed nodes.
	Tracing On - Unix	Sets the HPSESPI tracing to ON state on the Unix managed nodes.
	Tracing On - Win	Sets the HPSESPI tracing to ON state on the Windows managed nodes.
	Version Verify	Verifies the version of HPSESPI files.

Using HP Storage Essentials SPI messages

Events generated by HP SE SPI are grouped under the HP SE SPI's **HPSESPI-Storage_Essentials** message group. The messages generated by the HP SE SPI policies appear in the message browser window and contain information that is vital for understanding the problems being reported.

Figure 10 shows the message browser window with a selection of messages generated by HP SE SPI.

Figure 10 HPOM message browser showing messages for the HP SE CMS node



In Figure 10, there are messages for other SPIs in addition to the messages for HP SE SPI.

The message headline describes the scope of the problem. In the HP SE SPI context, this information can be categorized into the following:

- **Node** - Name of the Storage Essentials management server or CIM Extension.
- **Application** - Category of the message is Storage Essentials.

- **Text** - A single line description of the event.
- **Object** - Source of the event is AppStorManager or CIM Extension.
- **Group** - HPSESPI-Storage_Essentials

Using HP Storage Essentials SPI Service Map

The HP SE SPI provides the administrator with the additional perspective of service views. It discovers the services automatically and uses the discovered data to generate service maps that can be viewed by the administrator from the HPOM console.

The HP Storage Essentials managed hosts are discovered by querying the Storage Essentials CMS for its managed hosts. Hence, some of the nodes represented in this tree may not be HPOM managed nodes; status is shown only for CIM Extension nodes that have an HPOM Agent installed and the HP SE SPI configured.

You can decide whether these nodes must be configured as HPOM managed nodes or not. You can also decide whether the HP SE SPI policies must be installed or not. If the nodes in this tree are HPOM managed nodes with the SE SPI policies deployed, the service view node status changes based on the status of the CIM Extension on the node, is displayed, as shown in Figure 11.

Figure 11 HP SE SPI service map showing HP SE AppStorManager process status

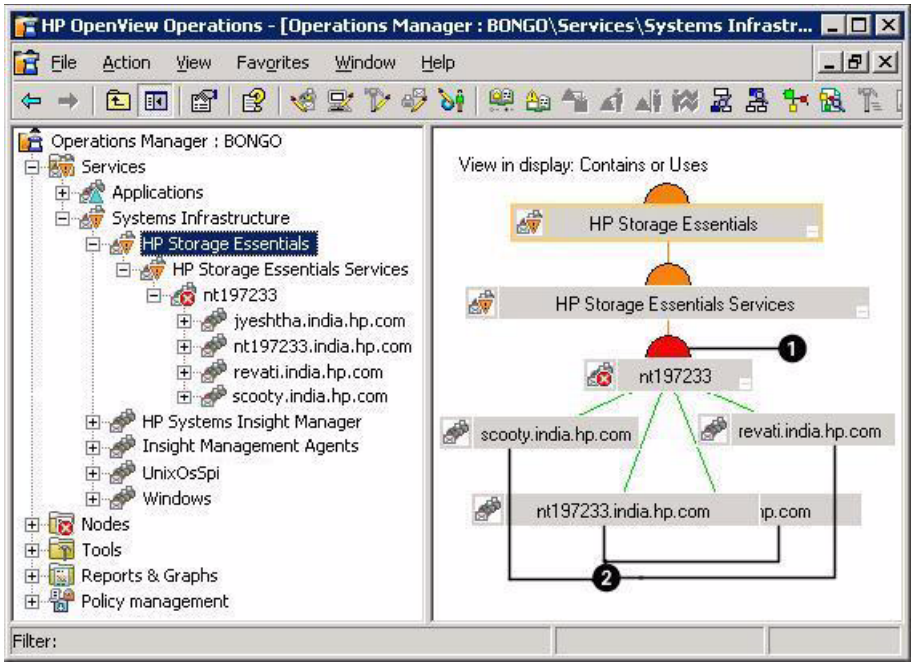


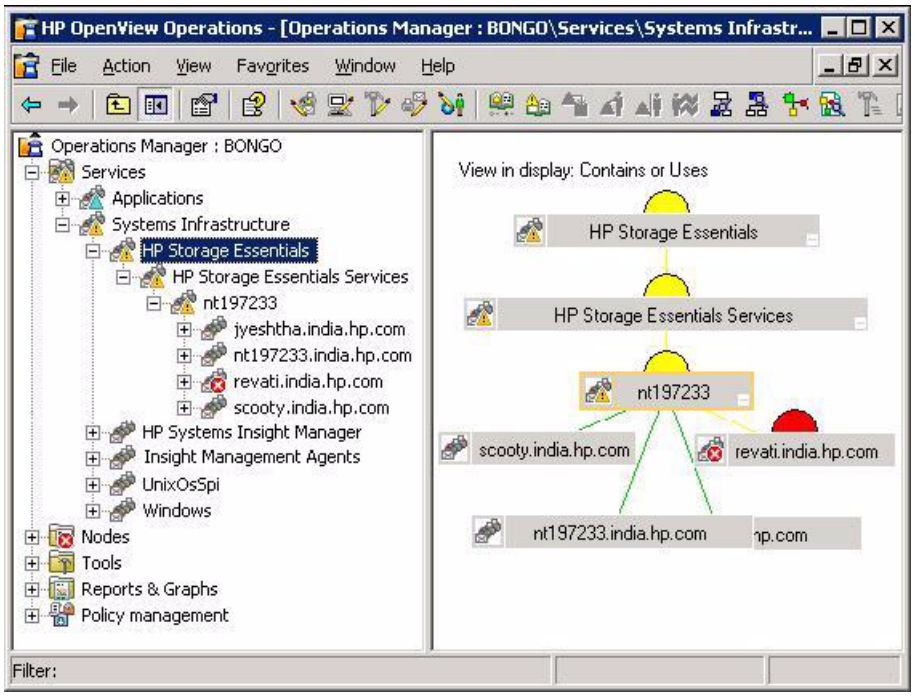
Table 13 describes the service status implications of the service map in Figure 11.

Table 13 HP SE SPI service map showing HP SE AppStorManager process status

Item	Description
1	Storage Essentials CMS node
2	Nodes with CIM Extensions installed or running

Figure 12 shows a Storage Essentials service map where the CIM Extension service on the node **revati.india.hp.com** is not running.

Figure 12 HP Storage Essentials service map showing HP SE AppStorManager process status



The service discovered by the HP SE SPI enables root-cause analysis of problems in crucial elements on the CIM Extension node in a HP Storage Essentials network managed storage network.

By default, status propagation rules for the objects in the HP Storage Essentials service trees are defined such that if the HP SE CIM Extension service objects is critical, item marked as 2 as shown in Figure 11, the higher service objects status are decreased by two levels to minor. If the HP SE AppStorManager service objects is critical, item marked as 1 as shown in Figure 11, the higher service objects status are decreased by a level to major. The parent service does not change the status of a child object and by default, calculation rules for the HP Storage Essentials service trees are set to Most Critical. Hence, if a parent service has more than one child service, the parent service assumes the status equal to the highest severity of its child services.

Viewing Services

The service views are created after Storage Essentials CMS is added to the **HP SE CMS-Win** or **HP SE CMS-Unix** node group and service discovery is invoked. For information on adding Storage Essentials CMS is added to the **HP SE CMS-Win** or **HP SE CMS-Unix** node group, see Assigning Nodes to the HP Storage Essentials Node Group on page 36.

Running the appropriate Service Discovery tool on the SE CMS node generates services in the HP Storage Essentials service map. Ensure that you perform the steps described in Obtaining HP Storage Essentials Credentials on page 42 before performing the steps for viewing the discovered HP Storage Essentials service.

To view the discovered HP Storage Essentials service, complete the following steps:

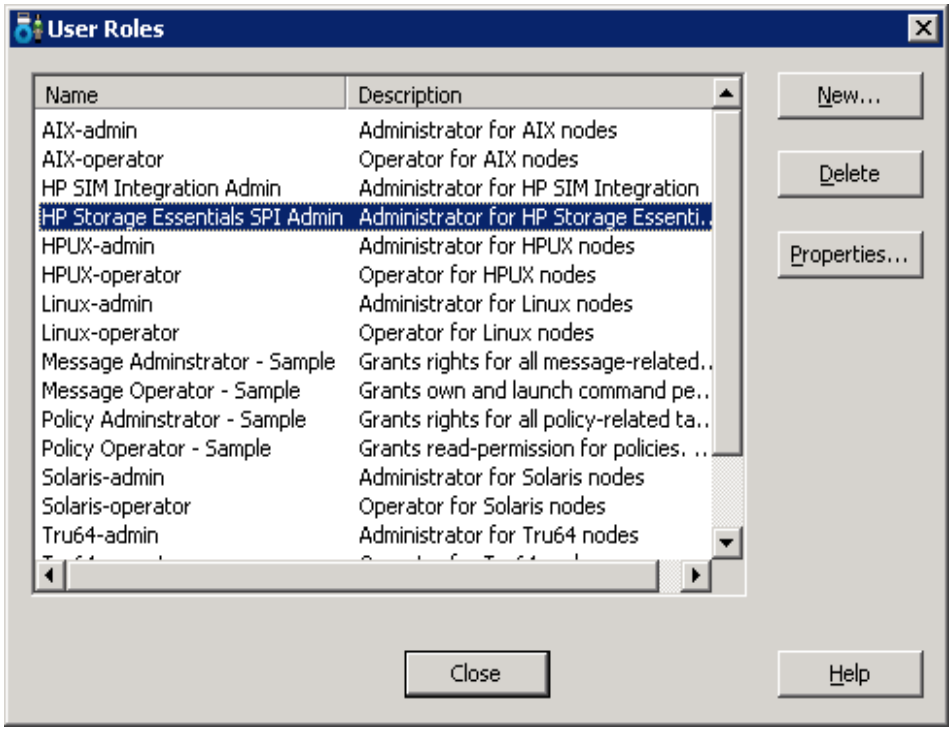
1. Log in to the HPOM management server, and start the HPOM console.
2. Select **Services→System Infrastructure** on the left pane of the HPOM console. The HP Storage Essentials service map displays in the right pane, as shown in Figure 12.

By default, the HP SE SPI service discovery policy is configured to run service discovery everyday at 2:00 am. You can change the service discovery period by modifying the Service discovery policy. The changed discovery period comes into effect only after the policies are re-deployed on the HP SE CMS node.

Using HP Storage Essentials SPI User Roles

The installation of the HP SE SPI adds a new user role, HP Storage Essentials SPI Admin to HPOM is displayed as shown in Figure 13.

Figure 13 User Roles



The HPOM administrator uses user roles to simplify the process of assigning responsibilities to HPOM users. The users associated with the role HP SE SPI Admin can access all the HP SE SPI tools, policies, and **HPSESPI-Storage_Essentials** message groups assigned to them, and can manage and control the HP SE CMS and HP SE CIM Extension nodes.

The HP SE SPI Admin user role assigns the following authorizations:

- Access all messages with message group attribute **HPSESPI-Storage_Essentials** from HP SE CMS or HP SE CIM Extension node.

- Execute any tool in the HP Storage Essentials Tools groups.
- Update HPOM service map, displaying the HP Storage Essentials services successfully discovered.

6 Uninstalling HP Storage Essentials SPI

This chapter addresses the following topics:

Deleting HP Storage Essentials SPI Instrumentation from Nodes

To remove HP SE SPI instrumentation from the managed nodes, complete the following steps:

1. Open the **HPSESPI Utils** tools group in the HP SE SPI tools group.
2. Run the **Clean HPSESPI - Win** tool on the selected Windows managed nodes.
3. Run the **Clean HPSESPI - Unix** tool on the selected Unix managed nodes.

Removing Nodes from the Node Group

Removing a node from the node group involves the following:

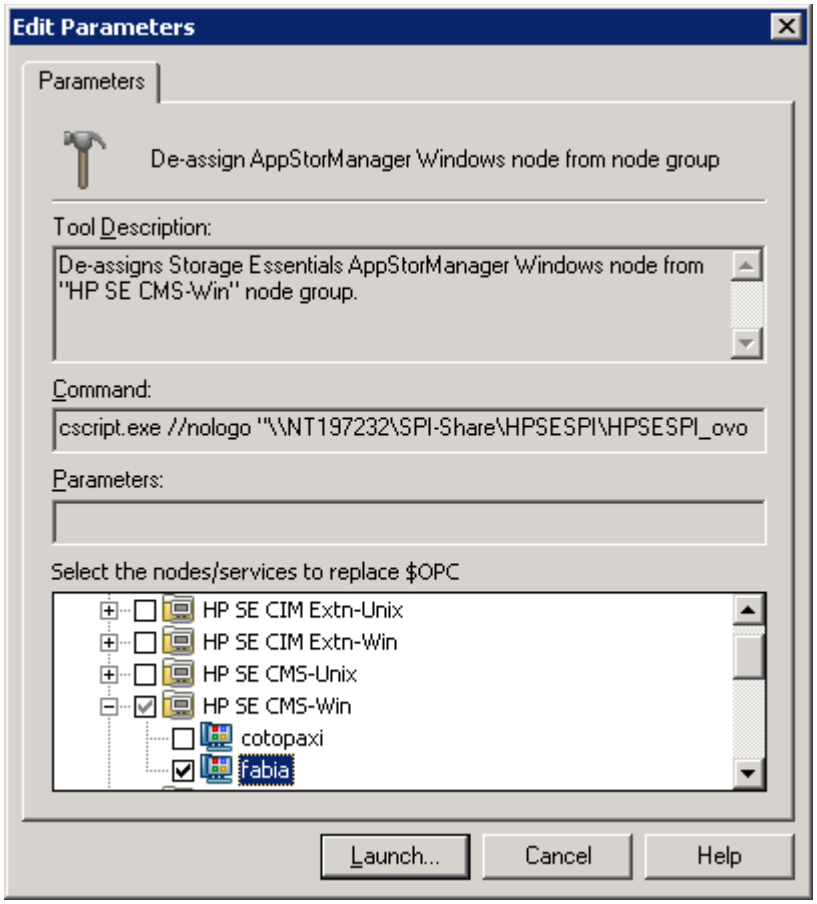
- Removing the AppStorManager Node from the Node Group
- Removing the CIM Extension Windows Node from the Node Group

Removing the AppStorManager Node from the Node Group

To remove the node, on which the Storage Essentials AppStorManager service is running from the **HP SE CMS-Win** or **HP SE CMS-Unix** node group, complete the following steps:

1. Log in to the HPOM management server, and start the HPOM Console.
2. Select **Tools→HP Storage Essentials→AppStorManager-Win**, and right-click **De-assign AppStorManager node from node group.**
3. Select **All Tasks→Launch Tool**. The Edit Parameters window displays, as shown in Figure 14.

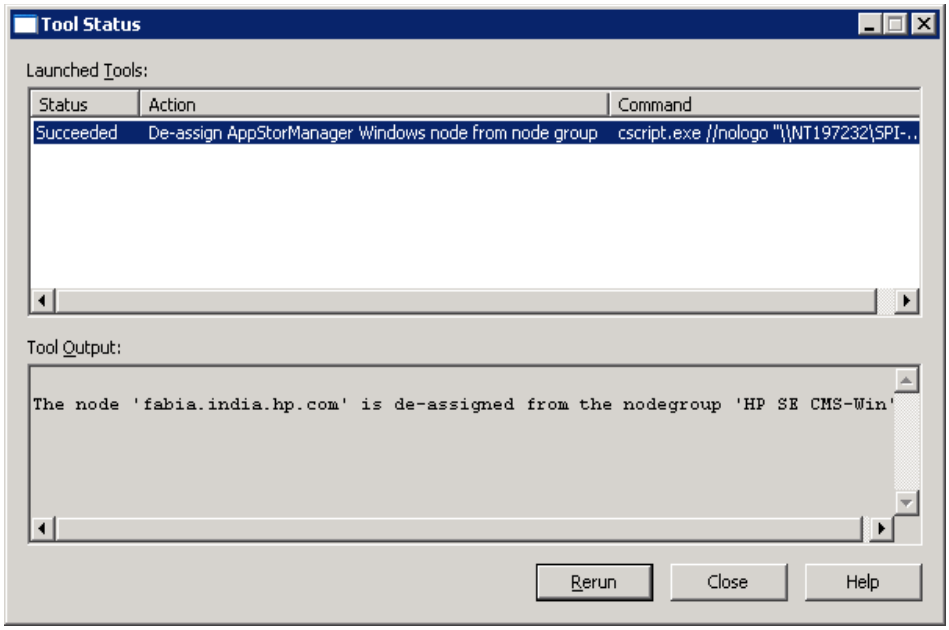
Figure 14 Edit Parameters–De-assign AppStorManager node from node group



4 Select the node in the **HP SE CMS-Win** node group in the **Select the nodes/services to replace $OPC** window pane.

5 Click **Launch...**. The Tool Status window displays, as shown in Figure 15.

Figure 15 Tool Status



You have now successfully removed the Windows node, on which the Storage Essentials AppStorManager service is running, from the **SE AppStorMgr-Win** node group.

Repeat above steps to remove nodes from the **AppStorMgr-Unix** Node groups, using **Tools→HP Storage Essentials→AppStorManager-Unix→De-assign AppStorManager Unix** node from the node group.

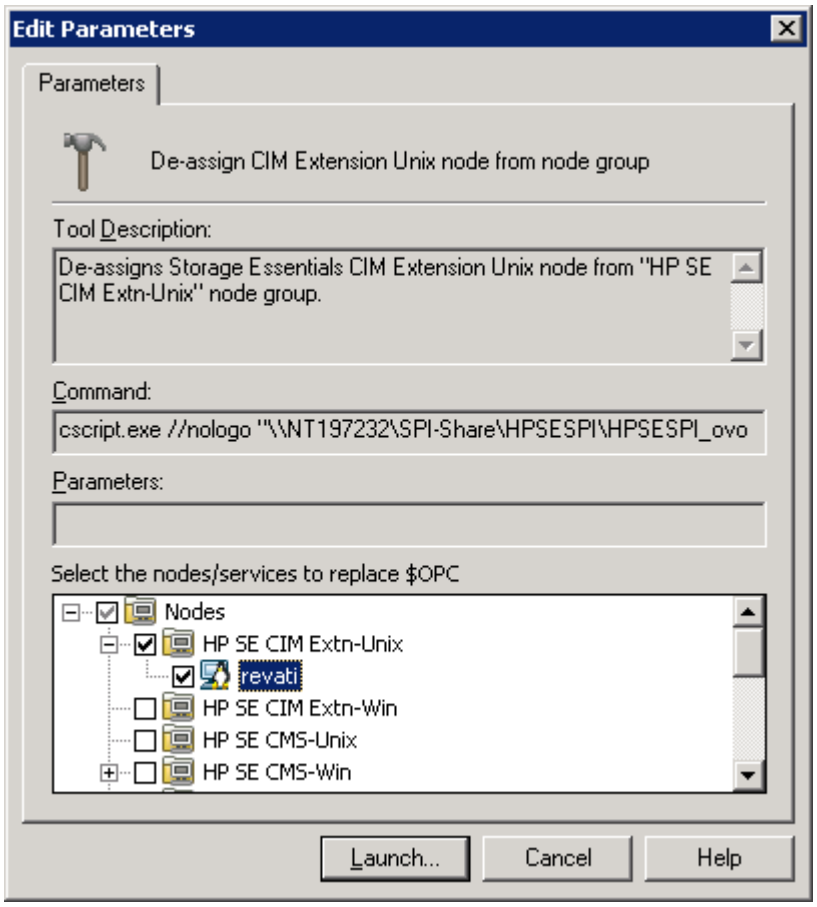
Removing the CIM Extension Windows Node from the Node Group

To remove the node, on which the Storage Essentials CIM Extension service is running, from the **HP SE CIM Extn-Win** or **HP SE CIM Extn-Unix** node group, complete the following steps:

1 Select **Tools→HP Storage Essentials→CIM Extension-Win**, and right-click **De-assign CIM Extension Windows node from node group.**

2 Select **All Tasks→Launch Tool.** The Edit Parameters window displays, as shown in Figure 16.

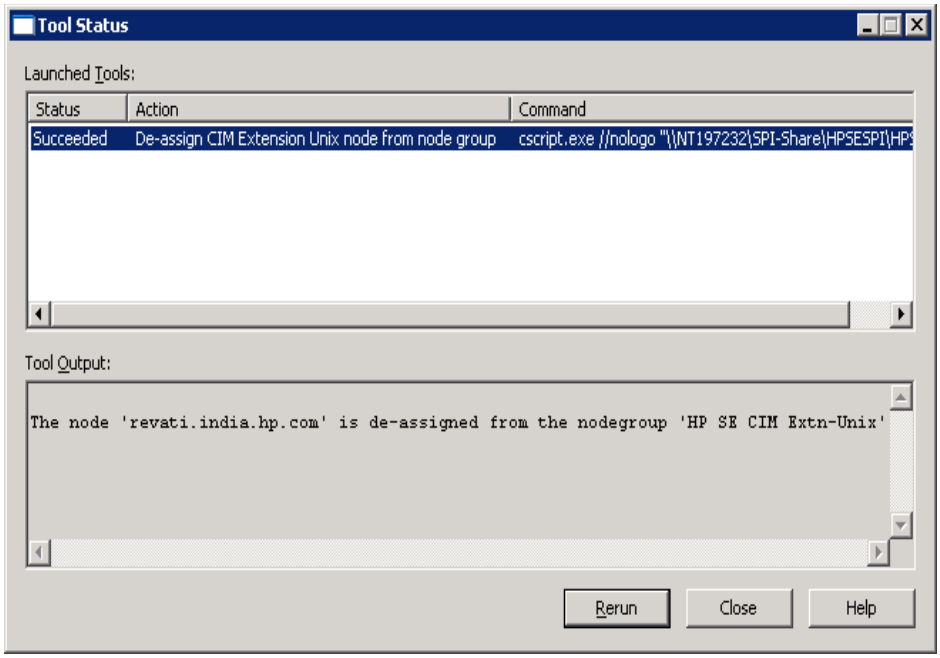
Figure 16 Edit Parameters–De-assign CIM Extension Windows node from node group



3 Select the node in the **HP SE CIM Extn-Win** node group in the **Select the nodes/services to replace $OPC** window pane.

4 Click **Launch...**. The Tool Status window displays, as shown in Figure 17.

Figure 17 Tool Status



You have now successfully removed the Windows node, on which the Storage Essentials CIM Extension service is running, from the **HP SE CIM Extn-Win** or **HP SE CIM Extn-Unix** node group.

Repeat above steps to remove nodes from the **SE CIM Extension-Unix** node groups, using the **Tools→HP Storage Essentials→CIM Extension-Unix→De-assign CIM Extension-Unix** node from node group.

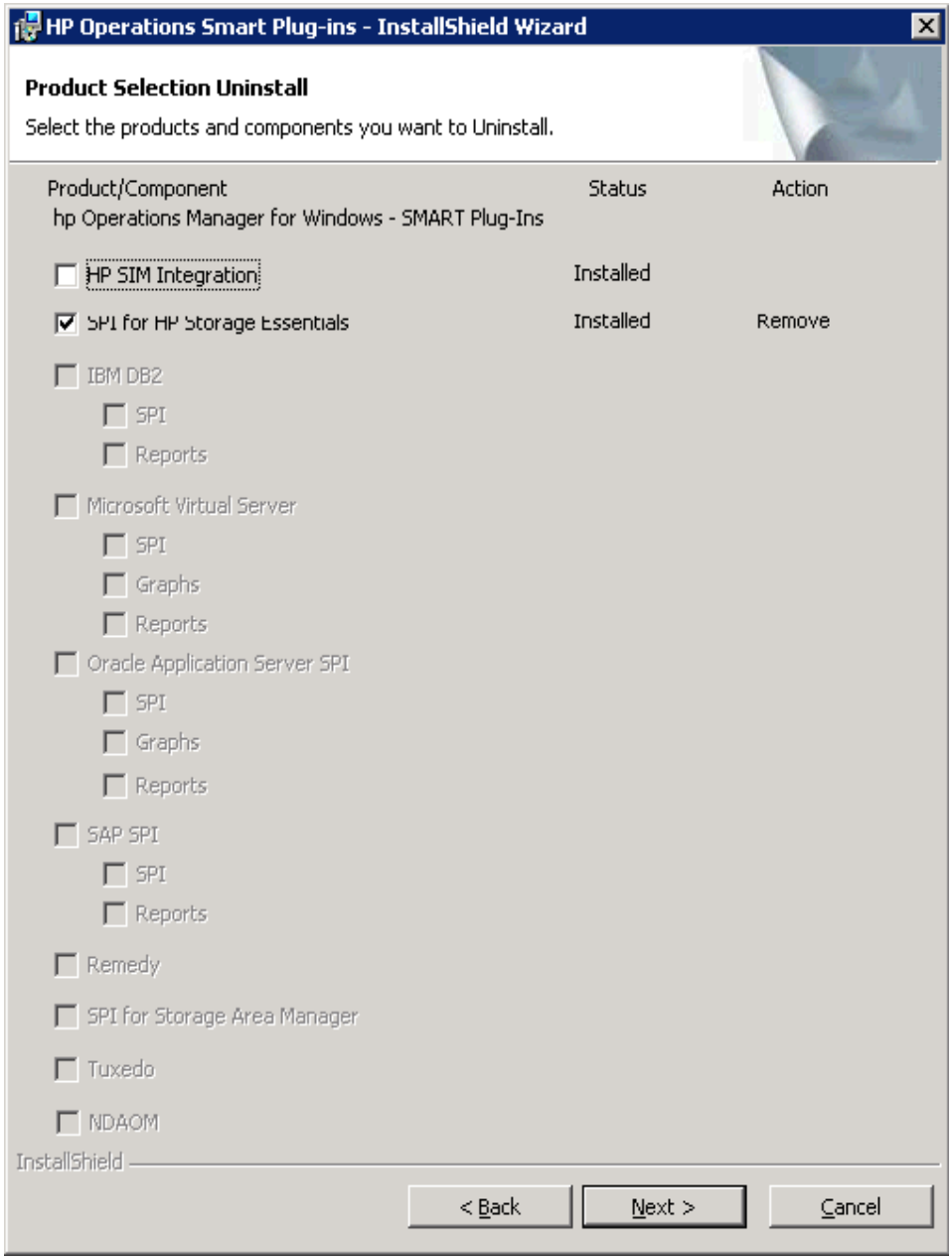
Uninstalling HP Storage Essentials SPI from HPOM

To uninstall the HP SE SPI components from HPOM, complete the following steps:

Ensure that HPOM managed nodes are not present under HP SE SPI node groups. They must be moved out of their respective groups before uninstalling HP SE SPI. For information on removing the HPOM managed nodes, see Removing Nodes from the Node Group on page 73.

1. Insert the *HP Operations Smart Plug-ins DVD, Installation and Upgrade Guide*.
2. Select **Remove products** to proceed to the product selection dialog box.
3. In the Product Selection Uninstall window, select **SPI for HP Storage Essentials** and click **Next** as shown in Figure 18.

Figure 18 SPI Uninstallation window


HP Operations Smart Plug-ins - InstallShield Wizard
Product Selection Uninstall
Select the products and components you want to Uninstall.
Product/Component
Status
Action
hp Operations Manager for Windows - SMART Plug-Ins
HP SIM Integration
Installed
SPI for HP Storage Essentials
Installed
Remove
IBM DB2
SPI
Reports
Microsoft Virtual Server
SPI
Graphs
Reports
Oracle Application Server SPI
SPI
Graphs
Reports
SAP SPI
SPI
Reports
Remedy
SPI for Storage Area Manager
Tuxedo
NDAOM
InstallShield
< Back
Next >
Cancel

Selecting **HP SIM Integration** in the Product Selection Uninstall window also uninstalls HP SE SPI.

4 Select **Remove.**

5 Click **Finish** to complete the uninstallation procedure and exit the wizard.

This removes all the configuration files and executables of HP SE SPI from the HPOM server. The HP SE SPI node groups, policies, and tools are also removed from the HPOM.

For more information on uninstalling HP Operations New and Upgraded Smart Plug-ins, see the *HP Operations Smart Plug-ins DVD, Installation and Upgrade Guide*.

Uninstalling HP Storage Essentials SPI Components from HPOM

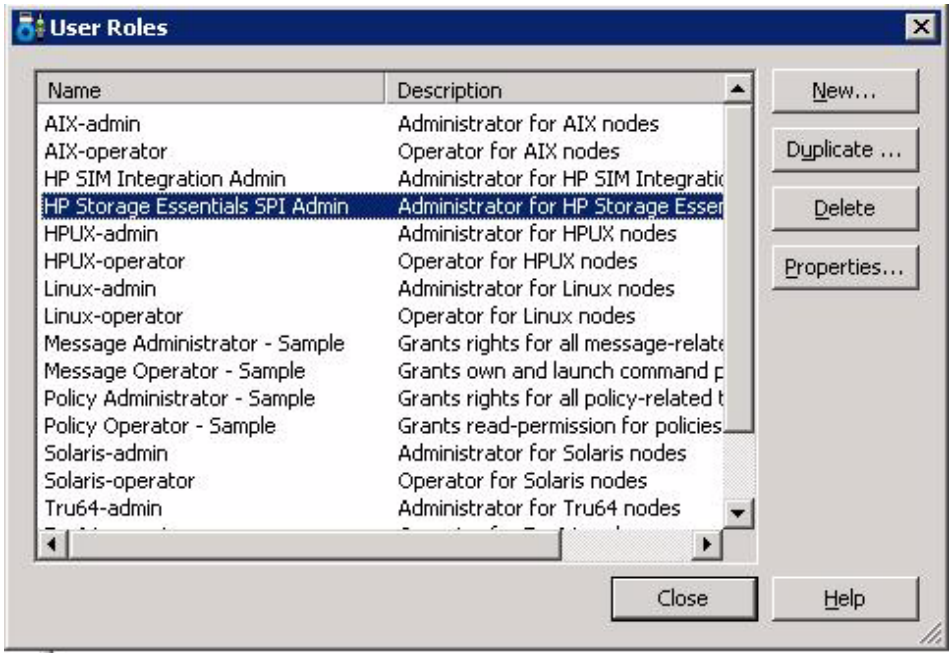
Most of the components of the HP SE SPI in HPOM are automatically removed during the uninstallation of the product. However, HP SE SPI Admin user role must be removed manually.

Removing HP Storage Essentials SPI User Roles

To remove the HP SE SPI user roles, complete the following steps:

1 Select **Actions→Configure→User Roles**. You can also click **User Roles Configuration Editor** located on the menu bar of the main HPOM. The User Roles window displays, as shown in Figure 19.

Figure 19 User Roles



2 Select **HP Storage Essentials SPI Admin**, and click **Delete**.
You have now successfully removed the HP SE SPI user roles.

7 Troubleshooting HP Storage Essentials SPI

This chapter discusses the following topics:

Before you start

Before investigating the problem, you must perform the following basic checks to ensure that the HP SE SPI environment is installed and configured correctly:

- Ensure that the HP SE SPI is installed properly. For more information on installing HP SE SPI, see Installing HP Storage Essentials SPI on page 26.
- Ensure that the HP SE SPI is configured properly. For more information on configuring HP SE SPI, see Configuring the HP Storage Essentials SPI on page 33.

  The above steps ensure that you have installed and configured HP SE SPI in the recommended manner, and that the messages seen in the HPOM message browser are:

- Intercepted by the HP SE SPI policies.
- Appearing in the HPOM message browser in the form you expect.

  If the preliminary check does not resolve the problem, go through the list of common problems and their solutions described in the following section.

Troubleshooting

Following are the issues in the HP SE SPI:

- Service monitoring events not arriving on the HPOM Message Browser console
- HP SE services not visible in the HPOM console
- Auto-deployment of policies failing on HPOM 8.00
- Auto-deployment of policies failing on OVOW 7.50
- SHS related tools fail on non-root HTTPS node says cannot open SPI_SE.xml

Service monitoring events not arriving on the HPOM Message Browser console

Table 14 provides troubleshooting information for service monitoring events that do not arrive in the HPOM message browser.

Table 14 Service monitoring events not arriving on the HPOM message browser console

Symptom	Solution
No Storage Essentials service monitoring events arrive in HPOM message browser	• Ensure that the connection between HPOM and the Storage Essentials CMS and the CIM Extension nodes is up and running. • Verify whether the HPOM agent is correctly installed and configured on the management server, and the HPOM agent processes (especially the control agent) are running. • Ensure that Storage Essentials CMS and CIM Extension nodes are added to the appropriate node groups. For more information, see Assigning Nodes to the HP Storage Essentials Node Group on page 36.

HP SE services not visible in the HPOM console

Table 15 provides troubleshooting information for HP Storage Essentials services that are not visible in the HPOM console.

Table 15 HP Storage Essentials services not visible in the HPOM console

Symptom	Solution
HP Storage Essentials services are not visible in the HPOM console	• Ensure that the connection between the HPOM and the Storage Essentials CMS nodes is up and running. • Verify whether the HPOM agent is correctly installed and configured on the management server, and the HPOM agent processes (especially the control agent) are running. • If the HP SE CMS credentials are invalid, there is a possibility of having error messages in the service discovery log at <OvAgentDir>\log\javaagent.log on the HP SE CMS node indication authentication failures. • Ensure that the correct HP SIM Credentials are entered before adding the node to the **SE AppStorMgr-Win** node group, and also ensure that the nodes are added using the **Tools→HP Storage Essentials→AppStoManager-Win→Assign AppStorManager node to node group** tool. This ensures that the proper credentials are copied to the Storage Essentials CMS node along with other instrumentation. If there are multiple Storage Essentials CMS nodes with different credentials, the **Get SIM CMS Credentials** tool must be launched for one node at a time and that node must be added to the **SE AppStorMgr-Win** node group before entering the credentials for the next node.

Table 15 HP Storage Essentials services not visible in the HPOM console

Symptom	Solution
	• Ensure that the Service Discovery policies present in **Policy Management→Policy Groups→HP Storage Essentials→Service Discovery** are deployed on the HP SE CMS nodes. To check whether the policies are correctly deployed, right-click the node, select **View→Policy Inventory**, and ensure that the Service Discovery policies are present. You can also check the service discovery log at <OvAgentDir>\log\javaagent.log on the HP SE CMS node for error messages.

Auto-deployment of policies failing on HPOM 8.00

Symptom: auto-deployment of policies failing on HPOM 8.00

Action: OVO Console→Operations Manager→Nodes→Server Configuration Utility→Name Space→Policy Management and Deployment→Disable autodeployment for all nodes and services

Check that the above parameter value is set to False.

Auto-deployment of policies failing on OVOW 7.50

Symptom: auto-deployment of policies failing on HPOM 7.50

Action: Verify whether the registry key SOFTWARE\Hewlett-Packard\OVEnterprise\Management Server\AutoDeployment\Disable is set to value 0.

SHS related tools fail on non-root HTTPS node says cannot open SPI_SE.xml

The tools Version Verify and Self-Healing Info fails on agent running as non-root user.

Symptom: When the OM Agent is migrated from root user to non-root user, the Version Verify and Self-Healing Info fails with the following error.

Cannot open collector output file `/tmp/SPI_SE/SPI_SE.xml` for writing.

Action: If the OM Agent is migrated from root user to non-root user, delete or rename the HP Storage Essentials SPI files/directories from `/tmp` on the node which were created by root user.

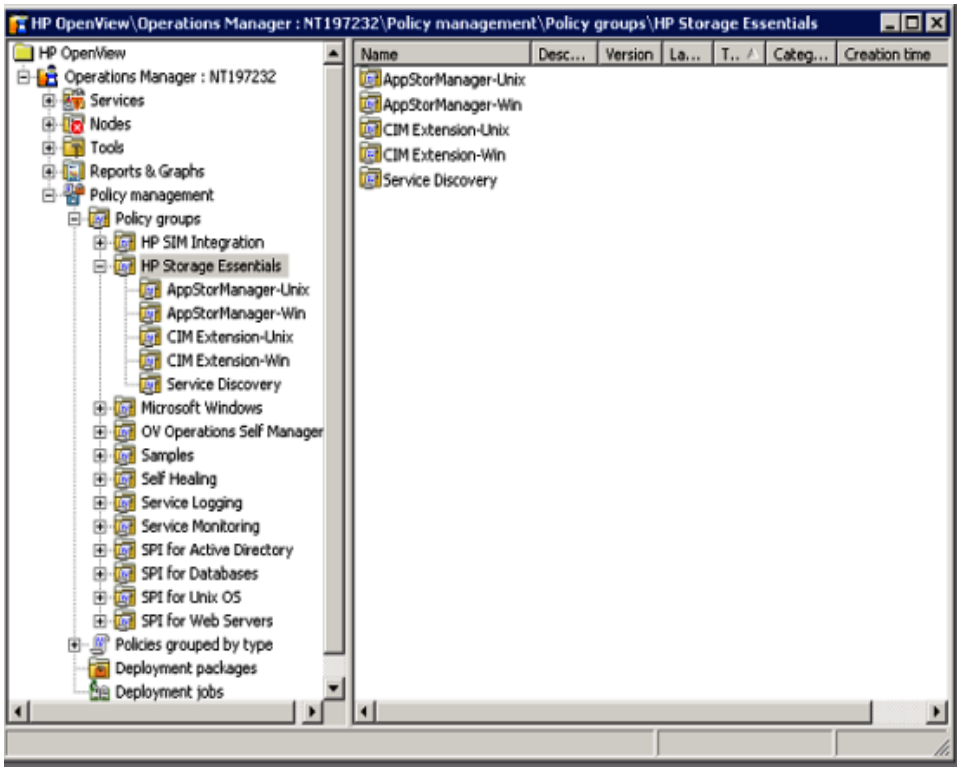
A HP Storage Essentials SPI Policy Groups

The high-level HP SESPI policy groups are available in HP Storage Essentials SPI Policy Groups, as shown in Figure 20.

Using HP Storage Essentials SPI Policy Groups

Policies provided with the HP SE SPI are grouped under the HP Storage Essentials policy group is displayed as shown in Figure 20.

Figure 20 HP Storage Essentials Policy Group



Messages generated by the HP SE SPI policies are assigned HPOM severity level as defined in the policy groups. By default, all messages generated by the HP SE SPI policy belong to HPSESPI-Storage_Essentials message group.

Policies in the **AppStorManager** and **CIM Extension** policy groups for the indicated operating systems monitor the status of the AppStorManager service running on the HP Storage Essentials CMS node and the Storage Essentials CIM Extension service running on the HP Storage Essentials managed nodes. These policies generate messages to indicate any status change in the monitored services.

Policies in the Service Discovery policy group discover the Storage Essentials services when deployed on the HP SE CMS nodes.

Table 16 describes the policies in the HP SE SPI policy group.

Table 16 HP SE SPI Policy

Policy Group	Policy Name	Description	Policy Type
AppStorManager-Unix	HPSESPI-AppStorManager-Unix	Monitors HP Storage Essentials AppStorManager service on Unix	Measurement Threshold
AppStorManager-Win	HPSESPI-AppStorManager-Win	Monitors HP Storage Essentials AppStorManager service on Windows	Measurement Threshold
CIM Extension-Unix	HPSESPI-CIM Extension-Unix	Monitors HP Storage Essentials CIM Extension on Unix	Measurement Threshold
CIM Extension-Win	HPSESPI-CIM Extension-Win	Monitors HP Storage Essentials CIM Extension on Windows	Measurement Threshold
Service Discovery	HPSESPI-Storage_Essentials_Services	Discovers services of the hosts managed by the Storage Essentials AppStorManager	Service Auto-discovery

CIM extension can be either an extension to the Windows WMI service or a separate executable called AppStorWin32Agent service. The **HPSESPI-CIM_Extension-Win** monitor policy monitors only the AppStorWin32Agent service, and **HPSESPI-CIM_Extension-Win** is disabled if this service is not present or only the extension to the WMI service is present on a Windows managed node.