

HP OpenView Service Navigator Value Pack

Service Configuration for Service Navigator Reference Guide

Software Version: 8.0

for the HP-UX, Microsoft Windows, and Sun Solaris operating systems

This PDF file has been provided for your convenience.
All information in this document can also be found in the online help.



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1 Keyboard Navigation

Service Configuration includes features that make the software accessible to a wider range of users, including those who have limited dexterity, low vision, or other disabilities.

This section describes how to navigate the Service Configuration console using the keyboard only.

See also “Moving Around Without a Mouse” on page 5.

Moving Around Without a Mouse

You can access and use the functionality of the Service Configuration console, wizard pages, and dialog boxes using only the keyboard, without the need for the mouse.

The Service Configuration console follows industry standards for navigating the console with the keyboard only. For example, the **TAB** key navigates forward, and the key combination **SHIFT+TAB** navigates backward. Exceptions to this rule are text fields and tables. In text fields the **TAB** key inserts a tab stop and in tables the **TAB** key moves through the fields of the table. Use **CTRL+TAB** and **SHIFT+CTRL+TAB** to navigate forward and backward in text fields and tables.

See also the documentation supplied with your operating system for more information about keyboard navigation in your environment.

Keyboard Navigation

Moving Around Without a Mouse

2 **About Menus**

Console Menus

The menu bar of the main Service Configuration console contains the following menu items:

- File Menu in the Console
- Edit Menu in the Console
- View Menu in the Console
- Actions Menu in the Console
- Tools Menu in the Console
- Help Menu in the Console

File Menu in the Console

The **File** menu in the menu bar of the Service Configuration console has the following options:

New Service Hierarchy...

Starts the Service Hierarchy Wizard. Use the Service Hierarchy Wizard to create a new service hierarchy.

Load...

Opens the Load Service Hierarchy dialog box where you can choose another service hierarchy for display in the console. If there are any unsaved changes in the current service hierarchy, you will be asked to save the changes before the new service hierarchy is loaded.

Reload

Updates the current service hierarchy in the console. For example, objects that were added or deleted by other users or by SPI discovery processes are added to or deleted from the service hierarchy. Any changes you have made to the same service hierarchy will be lost after the hierarchy has been reloaded. This menu item may be grayed out if no service hierarchy is loaded.

Apply Service Hierarchy Rules (Service Desk integration only)

Executes the service hierarchy rules and updates the current service hierarchy. You are asked to save the current service hierarchy before the rules will be applied. This menu item may be grayed out if no service hierarchy is loaded.

Save

Saves any changes you have made to the current service hierarchy. This menu item may be grayed out if no changes were made to the current service hierarchy.

Save as...

Opens the Save As dialog box where you can save the current service hierarchy under a new name. This menu item may be grayed out if no service hierarchy is loaded.

Delete Service Hierarchy...

Deletes the current service hierarchy. A confirmation message asks you to confirm that you really want to delete the service hierarchy. Once the hierarchy has been deleted, you are prompted to load another service hierarchy or, if you have deleted the last service hierarchy, to create a new one. This menu item may be grayed out if no service hierarchy is loaded.

Import Data from OVO Management Server...

Opens the Import Data from OVO Management Server dialog box where you can select an OVO management server from where you can import OVO data such as users, nodes, and service names in messages.

Deploy Service Hierarchies...

Opens the Deploy Service Hierarchies dialog box where you can select the service hierarchies you want to deploy and the OVO management server where they will be deployed. You can also save the service hierarchies in XML format and deploy them manually.

Service Hierarchy Properties...

Displays properties of the current service hierarchy, such as the name, description, and the list of OVO management servers that are associated with the service hierarchy. This menu item may be grayed out if no service hierarchy is loaded.

Exit

Closes all Service Configuration windows and exits the application. If there are still any unsaved changes, you are prompted to save them before exiting.

See also “Edit Menu in the Console” on page 11.

Edit Menu in the Console

The **Edit** menu in the menu bar of the Service Configuration console has the following options:

Add Child Object...

Opens the Add Child Object dialog box where you can select a child object to be added under the currently selected parent object. This menu item may be grayed out if no object is currently selected.

New Child Object...

Opens the New Child Object dialog box where you can create a new child object to be added under the currently selected parent object. This menu item may be grayed out if no object is currently selected.

New Root Object...

Opens the New Root Object dialog box where you can create a new root object to be added under the top-level *Services* object. This menu item is only available when the top-level *Services* object is selected.

Add Child Object Rules... (Service Desk integration only)

Opens the Child Object Rule Editor where you can select a child object rule to be associated with the currently selected object. This menu item is only available when an object is selected and that object is not mapped to a Service Desk object.

Add Parent-and-Child Object Rules... (Service Desk integration only)

Opens the Parent-and-Child Object Rule Editor where you can select a parent-and-child object rule to be associated with the service hierarchy. If a mapped Service Desk object is selected when the editor is opened, the list of rules in the editor is limited to those where the parent filter matches the selected object.

Copy between Service Hierarchies

Copies the currently select object and its child objects to the clipboard and opens the Load Service Hierarchy dialog box where you can select the target service hierarchy. This menu item may be grayed out if the top-level *Services* object, a root object, or no object is currently selected.

Paste between Service Hierarchies

Pastes a copied object (and its child objects) from the clipboard into a service hierarchy. This menu item may be grayed out if no object is currently selected or if you have loaded the source service hierarchy.

Delete from Parent Object...

Deletes the currently selected object. A confirmation message asks you to confirm that you really want to delete the object.

If the object is not associated with any other parent object, it is deleted from the Service Configuration application.

Exclude from Service Hierarchy...

Excludes the currently selected object from the service hierarchy. Excluded objects do not contribute to the status of their parent objects and are not deployed to Service Navigator. Excluded objects disappear from the console but can be made visible again by selecting **View: Show Excluded Objects** from the console menu bar.

This menu item is only available if the origin of the selected object is generated or discovered.

Include in Service Hierarchy...

Includes the currently selected, excluded object in the service hierarchy. This menu item is only available if the selected object is currently excluded. Select **View: Show Excluded Objects** from the console menu bar to show all currently excluded objects.

Object Properties...

Displays the properties of the current object. This menu item may be grayed out if no object is currently selected.

See also “View Menu in the Console” on page 14.

View Menu in the Console

The **View** menu in the menu bar of the Service Configuration console has the following options:

Show Scope Pane

Shows or hides the scope pane. If the menu item is checked, the scope pane appears. If the menu item is not checked, the scope pane does not appear.

Show Excluded Objects

Shows or hides excluded objects in the console. If the menu item is checked, excluded objects appear in the console. They can be identified by their badge. If the menu item is not checked, excluded objects are not visible in the console. This menu item may be grayed out if no service hierarchy is loaded.

Show Origin Badges

Shows or hides origin badges for objects that were added manually, added by discovery, or added by service hierarchy rules. If the menu item is checked, the badges appear. If the menu item is not checked, the badges do not appear. This menu item may be grayed out if no service hierarchy is loaded.

See also “Actions Menu in the Console” on page 15.

Actions Menu in the Console

The **Actions** menu in the menu bar of the Service Configuration console has the following option:

Show Object Status Summary...

Displays the Status Summary dialog box for the currently selected object. This dialog box contains links to the propagation and calculation rules used by the object, and displays information about weighting and mapped OVO messages. This menu item may be grayed out if no object is currently selected.

Add Actions...

Displays the Action Editor where you can select one or more actions for association with the currently selected object. This menu item may be grayed out if no object is currently selected.

Edit Simulated Messages...

Displays the Simulated Messages dialog box for the currently selected object. This dialog box contains a list of simulated messages that includes the name of the object as well as the matching service names in messages. This menu item may be grayed out if simulation mode is not enabled and no object is currently selected.

Set Simulated Messages to Normal...

Sets the simulated message status of the selected object to normal so that it changes its status color to green. This menu item may be grayed out if simulation mode is not enabled and no object is currently selected.

See also “Tools Menu in the Console” on page 16.

Tools Menu in the Console

The **Tools** menu in the menu bar of the Service Configuration console has the following options:

Propagation Rule Editor...

Starts the Propagation Rule Editor. This is your main tool for configuring, editing, and deleting propagation rules.

Calculation Rule Editor...

Starts the Calculation Rule Editor. This is your main tool for configuring, editing, and deleting calculation rules.

Node Editor...

Starts the Node Editor. This is your main tool for configuring, editing, and deleting nodes.

Action Editor...

Starts the Action Editor. This is your main tool for configuring, editing, and deleting actions.

Child Object Rule Editor... (Service Desk integration only)

Starts the Child Object Rule Editor. This is your main tool for configuring, editing, and deleting child object rules.

Parent-and-Child Object Rule Editor... (Service Desk integration only)

Starts the Parent-and-Child Object Rule Editor. This is your main tool for configuring, editing, and deleting parent-and-child object rules.

Simulation Mode

Enables or disables status simulation mode. If the menu item is checked, objects display a green background to indicate a normal status. If the menu item is not checked, the object background is transparent and any previously configured message statuses are set to normal.

Simulated Message Editor...

Displays the Simulated Message Editor. The Simulated Message Editor gives access to all available service names in a service hierarchy. This includes the object names as well as the matching service names in messages. This menu item may be grayed out if simulation mode is not enabled.

Recalculate Simulation

Recalculates the simulated status of all objects in the current service hierarchy. This menu item may be grayed out if simulation mode is not enabled.

Set All Simulated Messages to Normal

Sets the simulated message status of all objects in the service hierarchy to normal. The objects change their status color to green. This menu item may be grayed out if simulation mode is not enabled.

Find in Service Hierarchy...

Displays the Find in Service Hierarchy dialog box. You can use this tool to find and locate an object in a service hierarchy.

Service Hierarchy Editor...

Starts the Service Hierarchy Editor. You can use this tool to configure, edit, or delete service hierarchies, although you may find it easier to use the main console for these tasks.

Options...

Displays the Options dialog box where you can configure OVO management servers for use with Service Configuration, where you can change the account password, where you can choose a different UI server, and where you can enable actions for the Service Pages integration.

See also “Help Menu in the Console” on page 18.

Help Menu in the Console

The **Help** menu in the menu bar of the Service Configuration console has the following options:

Service Configuration Help... (F1)

Displays online help for the console.

Contents and Index...

Displays the main online help topic with access to the online help table of contents, index, and full-text search.

Status Calculation Tutorial...

Starts the interactive **status calculation tutorial** that helps you learn more about status calculation. This tutorial is only available when running the Service Configuration console on Windows.

Support...

Accesses the OpenView support web site in a web browser:

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

HP OpenView on the Web...

Accesses the OpenView web site in a web browser:

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

About HP OpenView Service Navigator Value Pack...

Displays the About HP OpenView Service Navigator Value Pack dialog box where you can find information about the version number of Service Configuration.

See also “File Menu in the Console” on page 9.

Property Dialog Box Menus

Property dialog boxes have a menu bar. This menu bar contains the following menu items:

- ❑ File Menu in Property Dialog Boxes
- ❑ Edit Menu in Property Dialog Boxes
- ❑ Actions Menu in Property Dialog Boxes
- ❑ Help Menu in Property Dialog Boxes

File Menu in Property Dialog Boxes

The **File** menu in the menu bar of property dialog boxes has the following option:

Close

Closes the property dialog box.

See also “Edit Menu in Property Dialog Boxes” on page 20.

Edit Menu in Property Dialog Boxes

The **Edit** menu in the menu bar of property dialog boxes has the following option:

Properties...

Displays properties for the associated object. This menu item may be grayed out if no associated object is currently selected.

See also “Actions Menu in Property Dialog Boxes” on page 21.

Actions Menu in Property Dialog Boxes

The **Actions** menu in the menu bar of property dialog boxes has the following options:

Show Object Status Summary...

Displays the Status Summary dialog box for the currently selected associated object. This dialog box contains links to the propagation and calculation rules used by the associated object, and displays information about weighting and mapped OVO messages. This menu item may be grayed out if no associated object is currently selected.

Add Actions... (child objects only)

Opens the Action Editor where you can select one or more action to be associated with the current object.

Add Child Object Rules... (Service Desk integration only)

Opens the Child Object Rule Editor where you can select a child object rule to be associated with the current object. This menu item is only available when the current object is not mapped to a Service Desk object.

Remove

Removes the child object rule or action association from the current object. This menu item may be grayed out if no child object rule or action is currently selected.

See also “Help Menu in Property Dialog Boxes” on page 22.

Help Menu in Property Dialog Boxes

The **Help** menu in the menu bar of property dialog boxes has the following options:

Service Configuration Help... (F1)

Displays online help for the current dialog box.

Contents and Index...

Displays the main help topic with access to the online help table of contents, index, and full-text search.

What's This? (Shift+F1)

Changes the cursor into a question mark cursor. When clicking a field or button in a Service Configuration dialog box, a small window opens that contains a short explanation for the selected item.

Status Calculation Tutorial...

Starts the interactive **status calculation tutorial** that helps you learn more about status calculation. This tutorial is only available when running the Service Configuration console on Windows.

Support...

Accesses the OpenView support web site in a web browser:

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

HP OpenView on the Web...

Accesses the OpenView web site in a web browser:

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

About HP OpenView Service Navigator Value Pack...

Displays the About HP OpenView Service Navigator Value Pack dialog box where you can find information about the version number of Service Configuration.

See also “File Menu in Property Dialog Boxes” on page 20.

Shortcut Menus

shortcut menus (right-click) are available for objects selected in the scope pane or the result pane:

- Shortcut Menu on Service Hierarchies
- Shortcut Menu on Objects
- Shortcut Menu on Service Names in Messages
- Shortcut Menu on Simulated Messages

Shortcut Menu on Service Hierarchies

The shortcut menu on the top-level `Services` object in the Service Configuration console includes the following options:

New Root Object

Opens the New Root Object dialog box where you can create a new root object to be added under the top-level `Services` object.

Add Parent-and-Child Object Rules (Service Desk integration only)

Opens the Parent-and-Child Object Rule Editor where you can select a parent-and-child object rule to be associated with the current service hierarchy.

Reload

Updates the current service hierarchy in the console. For example, objects that were added or deleted by other users or by SPI discovery processes are added to or deleted from the service hierarchy. Any changes you have made to the same service hierarchy will be lost after the hierarchy has been reloaded.

Apply Service Hierarchy Rules (Service Desk integration only)

Executes the service hierarchy rules and updates the current service hierarchy. You are asked to save the current service hierarchy before the rules will be applied.

Save

Saves any changes you have made to the current service hierarchy. This menu item may be grayed out if no changes were made to the current service hierarchy.

Delete Service Hierarchy

Deletes the current service hierarchy. A confirmation message asks you to confirm that you really want to delete the service hierarchy. Once the hierarchy has been deleted, you are prompted to load another service hierarchy or, if you have deleted the last service hierarchy, to create a new one.

Service Hierarchy Properties...

Displays properties of the current service hierarchy, such as the name, description, and the list of OVO management servers that are associated with the service hierarchy. This menu item is only available when the top-level Services object is selected.

See also “Shortcut Menu on Objects” on page 26.

Shortcut Menu on Objects

The shortcut menu on objects selected in the scope pane or in the result pane includes the following options:

Add Child Object...

Opens the Add Child Object dialog box where you can select a child object to be added under the currently selected parent object. This menu item is only available when an object is selected in the service hierarchy.

New Child Object...

Opens the New Child Object dialog box where you can create a new child object to be added under the currently selected parent object. This menu item may be grayed out if no object is currently selected.

Add Child Object Rules... (Service Desk integration only)

Opens the Child Object Rule Editor where you can select a child object rule to be associated with the currently selected object. This menu item is only available when an object is selected and that object is not mapped to a Service Desk object.

Add Parent-and-Child Object Rules... (Service Desk integration only)

Opens the Parent-and-Child Object Rule Editor where you can select a parent-and-child object rule to be associated with the service hierarchy. If a mapped Service Desk object is selected when the editor is opened, the list of rules in the editor is limited to those where the parent filter matches the selected object.

Delete from Parent Object...

Deletes the currently selected object. A confirmation message asks you to confirm that you really want to delete the object.

If the object is not associated with any other parent object, it is deleted from the Service Configuration application.

Exclude from Service Hierarchy...

Excludes the currently selected object from the service hierarchy. Excluded objects do not contribute to the status of their parent objects and are not deployed to Service Navigator. Excluded objects disappear from the console but can be made visible again by selecting **View: Show Excluded Objects** from the console menu bar.

This menu item is only available if the origin of the selected object is generated or discovered.

Include in Service Hierarchy...

Includes the currently selected, excluded object in the service hierarchy. This menu item is only available if the selected object is currently excluded. Select **View: Show Excluded Objects** from the console menu bar to show all currently excluded objects.

Copy between Service Hierarchies

Copies the currently select object and its child objects to the clipboard and opens the Load Service Hierarchy dialog box where you can select the target service hierarchy. This menu item may be grayed out if the top-level *Services* object, a root object, or no object is currently selected.

Paste between Service Hierarchies

Pastes a copied object (and its child objects) from the clipboard into a service hierarchy. This menu item may be grayed out if no object is currently selected or if you have loaded the source service hierarchy.

Show Object Status Summary...

Displays the Status Summary dialog box for the currently selected object. This dialog box contains links to the propagation and calculation rules used by the object, and displays information about weighting and mapped OVO messages.

Add Actions...

Opens the Action Editor where you can select one or more actions to be associated with the current object.

Simulated Messages...

Displays the Simulated Messages dialog box for the currently selected object. This dialog box contains a list of simulated messages that includes the name of the object as well as the matching service names in messages. This menu item may be grayed out if simulation mode is not enabled and no object is currently selected.

Set Simulated Messages to Normal...

Sets the simulated message status of the selected object to normal. The object changes its status color to green. This menu item may be grayed out if simulation mode is not enabled and no object is currently selected.

Object Properties...

Displays properties of the current object.

See also “Shortcut Menu on Service Names in Messages” on page 29.

Shortcut Menu on Service Names in Messages

The shortcut menu on service name strings in the Service Name in Message dialog box includes the following options:

Cut

Cuts the currently selected text from the text entry field. The text can then be pasted at another location in the console.

Copy

Copies the currently selected text to the clipboard and lets you paste it at another location.

Paste

Pastes the text on the clipboard at the currently selected location.

*** Any String**

(Asterisk) Matches any string.

? Any Character

(Question mark) Matches any character.

See also “Shortcut Menu on Objects” on page 26.

Shortcut Menu on Simulated Messages

The shortcut menu on the `Messages` object in the console includes the following options:

Simulated Messages...

Displays the Simulated Messages dialog box for the currently selected object. This dialog box contains a list of simulated messages that includes the name of the object as well as the matching service names in messages. This menu item may be grayed out if simulation mode is not enabled and no object is currently selected.

Set Simulated Messages to Normal...

Sets the simulated message status of the selected object to normal. The object changes its status color to green. This menu item may be grayed out if simulation mode is not enabled and no object is currently selected.

See also “Shortcut Menu on Objects” on page 26.

3 **About Toolbar Buttons**

Console Toolbar

The toolbar of the Service Configuration console contains the following buttons.



Save

Saves any changes you have made to the current service hierarchy.



Save as

Opens the Save As dialog box where you can save the current service hierarchy under a new name.



New Service Hierarchy

Starts the Service Hierarchy Wizard. Use the Service Hierarchy Wizard to create a new service hierarchy.



Reload

Updates the current service hierarchy in the console.



Apply Service Hierarchy Rules

Executes the service hierarchy rules and updates the current service hierarchy. You are asked to save the current service hierarchy before the rules will be applied. (This button is available with the Service Desk integration only.)



Import Data from OVO Management Server

Opens the Import Data from OVO Management Server dialog box where you can select an OVO management server from where you can import OVO data such as users, nodes, and service names in messages.)



Deploy Service Hierarchies

Opens the Deploy Service Hierarchies dialog box where you can select the service hierarchies you want to deploy and the OVO management server where they will be deployed. You can also save the service hierarchies in XML format and deploy them manually.



Add Parent-and-Child Object Rules

Opens the Parent-and-Child Object Rule Editor where you can select a parent-and-child object rule to be associated with the service hierarchy. If a mapped Service Desk object is selected when the editor is opened, the list of rules in the editor is limited to those where the parent filter matches the selected object. (This button is available with the Service Desk integration only.)



Add Child Object

Opens the Add Child Object dialog box where you can select a child object to be added under the currently selected parent object. This button may not be available if no object is currently selected.



Object Properties

Displays properties of the current object. This button may not be available if no object is currently selected.



Show Object Status Summary

Displays the Status Summary dialog box for the currently selected object. This dialog box contains links to the propagation and calculation rules used by the object, and displays information about weighting and mapped OVO messages. This button may not be available if no object is currently selected.



Add Actions

Opens the Action Editor where you can select an action to be associated with the current object. This button may not be available if no object is currently selected.



Delete from Parent Object

Deletes the currently selected object. A confirmation message asks you to confirm that you really want to delete the object.

If the object is not associated with any other parent object, it is deleted from the Service Configuration application.



Help

Displays online help for the console.

See also “Property Dialog Box Toolbar” on page 35.

Property Dialog Box Toolbar

The toolbar of property dialog boxes contains the following buttons.



Close

Closes the property dialog box.



What's This?

Changes the cursor into a question mark cursor. When clicking an item in a Service Configuration dialog box, a small window opens that contains a short explanation for the selected item.



Object Properties

Displays properties for the associated object or action. This menu item may be grayed out if no associated object or action is currently selected.



Show Object Status Summary

Displays the Status Summary dialog box for the currently selected associated object. This dialog box contains links to the propagation and calculation rules used by the associated object, and displays information about weighting and about mapped OVO messages. This button may not be available if no object is currently selected.



Add Actions (child objects only)

Opens the Action Editor where you can select an action to be associated with the current object.



Add Child Object Rules

Opens the Child Object Rule Editor where you can select a child object rule to be associated with the current object. This menu item is only available if the current object is not mapped to a Service Desk object. (This button is available with the Service Desk integration only.)



Remove

Removes the child object rule or action association from the current object. This button may not be available if no child object rule or action is currently selected.

See also “Console Toolbar” on page 32.

4 System-provided Status Rules

System-provided Propagation Rules

Service Configuration comes with the following propagation rules. These rules are system-provided and cannot be edited or deleted.

Unchanged

Propagates the status with no change. For example, a status of Warning equals Warning.

Ignore

Ignores the status of the child object when calculating the status of the parent object. For example, the status of Warning of the child object does not influence the status of the parent object.

Propagate Fixed As (warning)

Always propagates the status of the child object as Warning.

Severity +1

Propagates the status of child objects increased by one severity level. For example, when the child object has a status of Warning, a status of Minor is propagated.

Severity +2

Propagates the status of child objects increased by two severity levels. For example, when the child object has a status of Warning, a status of Major is propagated.

Severity -1

Propagates the status of child objects decreased by one severity level. For example, when the child object has a status of Warning, a status of Normal is propagated.

Severity -2

Propagates the status of child objects decreased by two severity levels. For example, when the child object has a status of Minor, a status of Normal is propagated.

See also “System-provided Calculation Rules” on page 39.

System-provided Calculation Rules

Service Configuration comes with the following calculation rules. These rules are system-provided and cannot be edited or deleted.

Single Threshold 50%

The highest level severity with a percentage that exceeds the threshold of 50% determines the severity of the parent object.

Multiple Threshold 20%, 40%, 60%, 80%

The highest level severity with a percentage that exceeds one of the thresholds determines the severity of the parent object.

Most Critical 0%

The parent object adopts the status of the child object with the highest severity. The threshold for all severities is 0 (zero).

See also “System-provided Propagation Rules” on page 38.

System-provided Status Rules
System-provided Calculation Rules

5 **Command-line Interfaces**

This section describes the command-line interfaces that are available for Service Configuration:

❑ **cadm_ApplyHierarchyRules**

The tool `cadm_ApplyHierarchyRules` lets you apply service hierarchy rules to a given service hierarchy by using the command line. See “`cadm_ApplyHierarchyRules`” on page 44 for details.

❑ **cadm_Deploy**

The tool `cadm_Deploy` lets you deploy service hierarchies to Service Navigator from the command line. See “`cadm_Deploy`” on page 46 for details.

❑ **cadm_DumpHierarchy**

The tool `cadm_DumpHierarchy` is backup tool. It exports a service hierarchy to a file which can then be stored on backup media or be placed under version control. See “`cadm_DumpHierarchy`” on page 49 for details.

❑ **cadm_LoadHierarchy**

The tool `cadm_LoadHierarchy` lets you import service hierarchies that were downloaded with the `cadm_DumpHierarchy` tool. See “`cadm_LoadHierarchy`” on page 52 for details.

❑ **cadmactivate (1M)**

The tool `cadmactivate` activates Service Configuration on the OVO management server. See “`cadmactivate (1M)`” on page 55 for details.

❑ **cadmexport (1M)**

The tool `cadmexport` migrates Service Navigator service data to Service Configuration. See “`cadmexport (1M)`” on page 58 for details.

❑ **cadmsnd (1M)**

The tool `cadmsnd` offers terminal access to the Service Navigator engine via the Service Configuration repository. See “`cadmsnd (1M)`” on page 61 for details.

❑ **cadmunlock (1M)**

The tool `cadmunlock` is a troubleshooting tool. It unlocks the default discovery hierarchy so that other users or processes can modify it. See “`cadmunlock (1M)`” on page 64 for details.

❑ **snvpDataCollector**

The tool `snvpDataCollector` is a troubleshooting tool. It collects data for HP OpenView Self-Healing Services. See “`snvpDataCollector`” on page 66 for details.

cadm_ApplyHierarchyRules

NAME

cadm_ApplyHierarchyRules – Applies service hierarchy rules.

SYNOPSIS

```
cadm_ApplyHierarchyRules <HierarchyName>  
<UserSettingsFile>
```

DESCRIPTION

The command `cadm_ApplyHierarchyRules` applies service hierarchy rules to the Service Desk database. The tool first evaluates and applies all child object rules that are associated with objects in a given service hierarchy. It then evaluates and applies all parent-and-child object rules that are associated the service hierarchy. Objects that match the rules are added to the service hierarchy.

If a rule or a Service Desk object has changed or has been removed since the last time rules were applied, the rule filter may no longer select the objects it previously selected. These objects will then be removed from the service hierarchy. Manually added or discovered objects will also be removed from the hierarchy, if the parent objects are no longer found by the rule.

Manual changes to generated objects are preserved. The service hierarchy rules do, however, add, remove, or change child objects below generated parent objects.

TIP

To apply rules on a regular basis, schedule a task on the computer where the Service Configuration client is installed. This helps you keep your service hierarchies up to date in a changing Service Desk environment.

Note that the application server must be running when executing the `cadm_ApplyHierarchyRules` tool.

The `cadm_ApplyHierarchyRules` tool is by default installed into the following directory. You must change to this directory before you run the tool:

```
C:\Program Files\Hewlett-Packard\OpenView\service
configuration client\bin\
```

Parameters

`cadm_ApplyHierarchyRules` recognizes the following options:

<HierarchyName>

Name of the service hierarchy to which the service hierarchy rules will be applied.

<UserSettingsFile>

Name of the user settings file. The user settings file specifies the Service Desk application server to which the Service Configuration client installation connects.

If called without any options, `cadm_ApplyHierarchyRules` displays text describing its options.

RESTRICTIONS

None.

EXAMPLES

1. Apply service hierarchy rules to the service hierarchy

```
Example_Service_Operation_View:
```

```
cadm_ApplyHierarchyRules.bat
```

```
Example_Service_Operation_View C:\Program
```

```
Files\Hewlett-Packard\OpenView\service configuration
```

```
client\user_settings.xml
```

SEE ALSO

cadm_Deploy

cadm_Deploy

NAME

`cadm_Deploy` – Deploys one or more service hierarchies to Service Navigator.

SYNOPSIS

```
cadm_Deploy [-r] -o <OVOServerName> -p <Password>  
-h <HierarchyName> [<HierarchyName> ...]  
-s <UserSettingsFile>
```

DESCRIPTION

The command `cadm_Deploy` deploys one or more service hierarchies to Service Navigator.

Which parts of a service hierarchy are actually deployed depends on the specified OVO management server: the deployment process filters out any data that is associated with a management server other than the target server. Only data associated with the target server will be deployed.

The deployment process does not deploy graphic files used as icons or backgrounds for objects. You must transfer these files manually to the OVO management server and place them into the directory `/opt/OV/www/htdocs/ito_op/images`.

When deploying service hierarchies with identical root objects (same name and label), Service Configuration prefixes the name of the service hierarchy to the name of the root objects so that the root object is unique within Service Navigator. The labels remain unchanged.

Note that the application server must be running when executing the `cadm_Deploy` tool.

The `cadm_Deploy` tool is by default installed into the following location. You must change to this directory before you run the tool:

```
C:\Program Files\Hewlett-Packard\OpenView\service  
configuration client\bin\
```

Parameters

`cadm_Deploy` recognizes the following options:

<code>-r</code>	Optional. If specified, root objects are also deployed. By default, root objects are not deployed.
<code>-o <OVOServerName></code>	Name of the target OVO management server.
<code>-p <Password></code>	Password of the OVO administrator <code>opc_admin</code> .
<code>-h <HierarchyName></code>	Name of the hierarchy to be deployed. When deploying multiple hierarchies, separate the hierarchy names by spaces.
<code>-s <UserSettingsFile></code>	Name of the user settings file. The user settings file specifies the Service Desk application server to which the Service Configuration client installation connects.

If called without any options, `cadm_Deploy` displays text describing its options.

RESTRICTIONS

None.

EXAMPLES

1. Deploy the service hierarchy `Example_Service_Operation_View` to the OVO management server `server.bbn.hp.com`:

```
cadm_Deploy.bat -o server.bbn.hp.com -p OpC_adm  
-h Example_Service_Operation_View -s "C:\Program  
Files\Hewlett-Packard\OpenView\service configuration  
client\user_settings.xml"
```

2. Deploy the service hierarchies `Example_Service_Operation_View` and `Example_SD_Customer_View` to the OVO management server `server.bbn.hp.com`. Include root objects in the deployment:

```
cadm_Deploy.bat -r -o server.bbn.hp.com -p OpC_adm  
-h Example_Service_Operation_View  
Example_SD_Customer_View -s "C:\Program  
Files\Hewlett-Packard\OpenView\service configuration  
client\user_settings.xml"
```

SEE ALSO

About Deployment

Deploying Service Hierarchies with `cadm_Deploy`

cadmsnd (1M)

cadm_DumpHierarchy

NAME

cadm_DumpHierarchy – Exports a service hierarchy to a file.

SYNOPSIS

```
cadm_DumpHierarchy [-m] [-o] [-s] <HierarchyName>  
<ExportFileName> <UserSettingsFile>
```

DESCRIPTION

The command `cadm_DumpHierarchy` exports a service hierarchy to a file. Depending on which options are specified, the export includes the following additional data:

❑ References to Service Desk objects (-m)

If the service hierarchy includes objects that are mapped to Service Desk objects, you can include the references to these objects in the export file. The references point to the object identifiers (OID) of the Service Desk objects.

Exports that include references to Service Desk OIDs can only be imported into the database from which they were exported, otherwise the import process cannot re-establish the references to the mapped Service Desk objects.

❑ References to OVO data (-o)

You can choose to include references to OVO management servers, OVO users, and OVO nodes in the export file. The references point to the unique name of OVO servers, users, and nodes.

If the export file includes references to OVO data, that data must also be present in the target database where you import the hierarchy. On the target Service Configuration system, configure all OVO management servers and import data from all servers before starting the import using the `cadm_LoadHierarchy` tool.

❑ **Shared objects (-s)**

By default, the `cadm_DumpHierarchy` tool exports all references to shared objects such as actions, status rules, and service hierarchy rules. The references point to the unique name of shared objects. When loading the hierarchy into the target database, the same actions, status rules, and service hierarchy rules must already be present, otherwise the references point to non-existing objects. It is therefore recommended to specify the `-s` option with `cadm_DumpHierarchy`. This exports the shared objects in addition to the references.

Note that the application server must be running when executing the `cadm_DumpHierarchy` tool.

The default location of the `cadm_DumpHierarchy` tool is the following directory. You must change to this directory before you run the tool:

```
C:\Program Files\Hewlett-Packard\OpenView\service  
configuration client\bin\
```

Document type definition for the export file:

```
C:\Program Files\Hewlett-Packard\OpenView\service  
configuration client\examples\sntp_export.dtd
```

Parameters

`cadm_DumpHierarchy` recognizes the following options:

- | | |
|-----------------|---|
| <code>-m</code> | Optional. Exports references to mapped Service Desk objects. The references point to the Service Desk object identifier (OID). |
| <code>-o</code> | Optional. Exports references to OVO management servers, users, and nodes. The references point to the unique name of OVO servers, users, and nodes. |
| <code>-s</code> | Optional. Exports shared objects such as actions, status rules, and service hierarchy rules. The references point to the unique name of shared objects. |

<i><HierarchyName></i>	Name of the hierarchy to be exported.
<i><ExportFileName></i>	Name of the file to export to. The content of the export file is in XML format.
<i><UserSettingsFile></i>	Name of the user settings file. The user settings file specifies the Service Desk application server to which the Service Configuration client installation connects.

If called without any options, `cadm_DumpHierarchy` displays text describing its options.

RESTRICTIONS

None.

EXAMPLES

1. Export the service hierarchy `Example_Service_Operation_View` to the file `HierSvcOpView.xml`:

```
cadm_DumpHierarchy.bat Example_Service_Operation_View  
C:\temp\HierSvcOpView.xml "C:\Program  
Files\Hewlett-Packard\OpenView\service configuration  
client\user_settings.xml"
```

2. Export the service hierarchy `Example_Service_Operation_View` to the file `HierSvcOpView.xml`. Include shared objects and references to OVO data in the export:

```
cadm_DumpHierarchy.bat -o -s  
Example_Service_Operation_View C:\temp\HierSvcOpView.xml  
"C:\Program Files\Hewlett-Packard\OpenView\service  
configuration client\user_settings.xml"
```

SEE ALSO

cadm_LoadHierarchy

cadm_LoadHierarchy

NAME

`cadm_LoadHierarchy` – Loads an exported service hierarchy into the database.

SYNOPSIS

```
cadm_LoadHierarchy [-n <NewHierarchyName>]  
<ImportFileName> <UserSettingsFile>
```

DESCRIPTION

The command `cadm_LoadHierarchy` loads a service hierarchy that has been exported with the tool `cadm_DumpHierarchy` into the Service Configuration database.

The target database must meet the following requirements to successfully import an exported hierarchy:

❑ OVO data

The OVO management servers set up in the source database must also be set up in the target database. On the target Service Configuration system, configure all OVO management servers and import data from all servers before starting the import.

❑ Service Desk objects

If the exported service hierarchy has been exported using the `-m` option, the target database must be identical to the source database. This is because the `-m` option exports references to mapped Service Desk objects using the Service Desk object identifier (OID). The OIDs in the target database must match those of the source database, otherwise the import process cannot re-establish the references to the mapped Service Desk objects.

Note that the application server must be running when executing the `cadm_LoadHierarchy` tool.

The `cadm_LoadHierarchy` tool is by default installed into the following location. You must change to this directory before you run the tool:

```
C:\Program Files\Hewlett-Packard\OpenView\service  
configuration\client\bin\
```

The file to be imported must comply with the following document type definition (DTD):

```
C:\Program Files\Hewlett-Packard\OpenView\service
configuration client\examples\snvp_export.dtd
```

Parameters

`cadm_LoadHierarchy` recognizes the following options:

<code>-n <NewHierarchyName></code>	Optional. Renames the exported hierarchy to <code><NewHierarchyName></code> .
<code><ImportFileName></code>	Name of the file to import. The content of the import file is in XML format. The file must comply with the definitions listed in the <code>snvp_export.dtd</code> .
<code><UserSettingsFile></code>	Name of the user settings file. The user settings file specifies the Service Desk application server to which the Service Configuration client installation connects.

If you are importing hierarchies into a target database that is not the same as the source database, use the application server configuration tool to switch the application server to the target database before executing the `cadm_LoadHierarchy` tool.

If called without any options, `cadm_LoadHierarchy` displays text describing its options.

RESTRICTIONS

None.

EXAMPLES

1. Load the service hierarchy exported to the file `HierSvcOpView.xml` into the database:

```
cadm_LoadHierarchy.bat C:\temp\HierSvcOpView.xml  
"C:\Program Files\Hewlett-Packard\OpenView\service  
configuration client\user_settings.xml"
```

2. Load the service hierarchy exported to the file `HierSvcOpView.xml` and rename the hierarchy to `Backup_Service_Operation_View`:

```
cadm_LoadHierarchy.bat -n Backup_Service_Operation_View  
C:\temp\HierSvcOpView.xml "C:\Program  
Files\Hewlett-Packard\OpenView\service configuration  
client\user_settings.xml"
```

SEE ALSO

cadm_DumpHierarchy

cadmactivate (1M)

NAME

cadmactivate – Activates Service Configuration on the OVO management server

SYNOPSIS

```
cadmactivate [-v] [-h] [-d]
```

DESCRIPTION

The command `cadmactivate` activates Service Configuration on the OVO management server. After Service Configuration has been activated, all configuration input into the Service Navigator service engine is redirected to the Service Configuration server. Service Configuration can be deactivated again if required. Activation must be performed *after* the OVO management server has been set up in Service Configuration and a default discovery hierarchy has been created.

The tool first checks the following prerequisites:

❑ application server

`cadmactivate` checks which application server and user is used by the Service Configuration connector for OVO by reading the connector's configuration file `/opt/OV/sd/common/user_settings.xml` file. It then verifies that the application server is running and that the user can connect to it.

❑ OVO management server

`cadmactivate` checks that the OVO management server has been set up in Service Configuration and that a service hierarchy has been created where this server functions as discovery server.

When all prerequisites are met, `cadmactivate` stops the OVO management server processes and updates the OVO configuration settings file with settings for default service names in messages and for the socket used by the deployment processes. It then updates the local OpenView registry (LRF) to include the `seadapter` process in the `ovstart`, `ovstop`, and `ovstatus` sequences, and then starts the OVO management server processes. Finally, `cadmactivate` configures a service for the deployment process.

The `seadapter` process can be managed with the NNM process management tools `ovstatus`, `ovstart`, and `ovstop`.

The tool `cadmactivate` always reports trace information to standard out and to the trace logfile `/var/opt/OV/log/cadmactivate.trace`.

Parameters

Options:

- v Version. Prints the version number and exits.
- h Help. Prints the help text and exits.
- d Deactivate. Deactivates the Service Navigator Value Pack on the OVO management server.

If called without any options, `cadmactivate` activates Service Configuration on the OVO management server.

EXIT VALUES

This command exits with value 1 if an error occurs and 0 in all other cases.

RESTRICTIONS

This command can only be issued by the root user.

EXAMPLES

1. Activate Service Configuration:
`/opt/OV/bin/OpC/cadmactivate`
2. Deactivate Service Configuration:
`/opt/OV/bin/OpC/cadmactivate -d`

SEE ALSO

HP OpenView Service Configuration for Service Navigator Installation Guide

cadmexport (1M)

cadmsnd (1M)

cadmunlock (1M)

cadmexport (1M)

NAME

`cadmexport` – Migrates Service Navigator configuration files to Service Configuration

SYNOPSIS

```
cadmexport [-v] [-h]
```

DESCRIPTION

The tool `cadmexport` migrates the content of the Service Navigator service engine to Service Configuration. Migrating Service Navigator data includes the migration of the service configuration data itself as well as any logging information. The content of the following Service Navigator files are migrated:

```
/etc/opt/OV/share/conf/OpC/mgmt_sv/opcsvcm/services
```

```
/etc/opt/OV/share/conf/OpC/mgmt_sv/opcsvcm/loggings
```

Before starting the migration process, ensure that the Service Configuration server (the application server) processes are running and that the content of the Service Navigator service engine does not change while it is being migrated. It is recommended that you do not use the command `opcservice` during the migration and that you stop any service discovery processes initiated by HP OpenView Smart Plug-ins (SPIs). Note that you must activate Service Configuration on the OVO management server using the `cadmactivate(1M)` tool before you can start the migration process.

Note that depending on the size and complexity of existing service configurations, the export process can be very memory-intensive and can take a long time. By default, successfully migrated data is saved incrementally, that is after 100 objects have been processed. You can decrease the save interval by adjusting the value for the variable `SEADAPTER_INCREMENTAL_COMMIT_POINT` in the OVO configuration settings file. Remember to restart the `seadapter` process after you have changed the OVO configuration. To help you monitor the progress of the export process, the command prints a period (.) for every successful incremental save (default 100 objects).

The tool creates backup copies of the Service Navigator services and loggings files before processing them:

```
/etc/opt/OV/share/conf/OpC/mgmt_sv/opcsvcm/exported/\
services.YYYYMMDDhhmmss
```

```
/etc/opt/OV/share/conf/OpC/mgmt_sv/opcsvcm/exported/\
loggings.YYYYMMDDhhmmss
```

`cadmexport` informs you about the progress of the migration with informational messages. It first migrates the content of the services file, then the content of the loggings file.

The migrated data is saved into the default service hierarchy of the OVO management server. This is the service hierarchy where the OVO server functions as discovery server. You can then copy and paste object branches from the migrated service hierarchy to other service hierarchies as required. See the *Service Configuration for Service Navigator Concepts Guide* for information about the organization of the resulting service hierarchy.

Parameters

Options:

- v Version. Prints the version number and exits.
- h Help. Prints the help text and exits.

If called without any options, `cadmexport` starts the migration process.

EXIT VALUES

This command exits with value 1 if an error occurs and 0 in all other cases. Errors and warnings are written to the error log file `/opt/OV/sd/common/logfile/logclient.txt`.

RESTRICTIONS

This command can only be issued by the root user.

EXAMPLES

```
/opt/OV/bin/OpC/cadmexport
```

SEE ALSO

HP OpenView Service Configuration for Service Navigator Installation Guide

cadmactivate (1M)

cadmsnd (1M)

cadmunlock (1M)

cadmsnd (1M)

NAME

cadmsnd – Service hierarchy deployment to HP OpenView Service Navigator

SYNOPSIS

```
cadmsnd [-v] [-h] [-t] [-s]
```

DESCRIPTION

The command `cadmsnd` is a client program that allows direct, terminal-like access to the HP OpenView Service Navigator service engine (`opcsvcm`). `cadmsnd` reads XML operations from standard in and writes XML results from the service engine to standard out.

The input that `opcsvcterm` accepts is specified in the service engine `operations.dtd` DTD. The output complies with the `results.dtd` DTD. All DTDs can be found on the management server in the following location:

```
/etc/opt/OV/share/conf/OpC/mgmt_sv/dtds/operations.dtd
```

```
/etc/opt/OV/share/conf/OpC/mgmt_sv/dtds/results.dtd
```

The `inetd` process starts `cadmsnd` by default in secure mode on port 7280. See the Service Configuration documentation for information about changing the default port number.

Parameters

Options:

- v Version. Prints the version number and exits.
- h Help. Prints the help text and exits.
- t Trace. Traces additional information to standard error.
- s Secure. Operates in secure mode. (This is used when `cadmsnd` runs as a service of the `inetd` process.)

EXIT VALUES

If `cadmsnd` cannot establish a connection to the service engine, the command exists with value 1 and prints a corresponding `<Error>` tag. In all other cases, the command exists with value 0 and returns the corresponding XML output. Errors are also written to the OVO error log file on the management server:

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

RESTRICTIONS

This command can only be issued by the root user. Only valid XML operations according to the `operations.dtd` DTD can be entered into `cadmsnd`.

EXAMPLES

1. Interactive use:

```
/opt/OV/bin/OpC/cadmsnd
<Operations><List><All/></List></Operations>
<Results>
  <Services>
    ...
  </Services>
</Results>
```

2. Let `cadmsnd` read from a file exported from Service Configuration:

```
/opt/OV/bin/OpC/cadmsnd < Hierarchy.xml
<Results>
  <OK/>
</Results>
```

SEE ALSO

HP OpenView Service Configuration for Service Navigator User's Guide

cadmactivate (1M)

cadmexport (1M)

cadmunlock (1M)

cadmunlock (1M)

NAME

cadmunlock – Unlocks the default discovery service hierarchy of Service Configuration

SYNOPSIS

```
cadmunlock [-v] [-h]
```

DESCRIPTION

The tool `cadmunlock` is a troubleshooting tool which unlocks the default discovery hierarchy in case another user has locked it. This is useful when, for example, the `cadmexport` process or discovery processes pause, or the `opcservice` process hangs. Check the `cadmexport` log file `/opt/OV/sd/common/logfile/logclient.txt`. If the discovery hierarchy is locked for no apparent reason, you can unlock it using the `cadmunlock` tool.

Use the unlock tool carefully. If another user has made any unsaved changes to the default discovery hierarchy and you then you unlock the hierarchy, these changes will be lost. In Service Configuration, all console users can view the same service hierarchy at the same time. However, the user who first makes any changes to a service hierarchy locks the service hierarchy to prevent other users from making changes at the same time. This does not affect the other users or processes as long as they only *view* the service hierarchy. However, as soon as another user or process tries to modify the locked service hierarchy, they will not be able to do so because it is locked.

Parameters

Options:

- v Version. Prints the version number and exits.
- h Help. Prints the help text and exits.

If called without any options, `cadmunlock` unlocks the default discovery service hierarchy in Service Configuration.

EXIT VALUES

This command exits with value 1 if an error occurs and 0 in all other cases.

RESTRICTIONS

This command can only be issued by the root user.

EXAMPLES

```
/opt/OV/bin/OpC/cadmunlock
```

SEE ALSO

HP OpenView Service Configuration for Service Navigator Installation Guide

cadmactivate (1M)

cadmexport (1M)

cadmsnd (1M)

snvpDataCollector

NAME

snvpDataCollector – Collects Service Configuration data for HP OpenView Self-Healing Services

SYNOPSIS

```
snvpDataCollector -t -d -x
```

DESCRIPTION

The `snvpDataCollector` tool collects data for HP OpenView Self-Healing Services. Data is collected on the OVO management server, the Service Configuration console, the Service Desk application server, and the Service Pages server.

The tool runs on UNIX and Windows platforms. It requires JRE and the Self-Healing Services client installed and configured on the system where you plan to collect data.

Parameters

Options:

- | | |
|----|--|
| -t | Task file. Name of the task file that lists the data that will be gathered. |
| -d | Output directory. Absolute path of the output directory where collected files are stored. If the directory does not yet exist, it will be created. |
| -x | Output file. Absolute path to the output file generated by the data collector. The output file is in XML format. |

If called without any options, `snvpDataCollector` displays text describing its options.

EXIT VALUES

This command exits with value 1 if an error occurs and 0 in all other cases.

RESTRICTIONS

This command can only be issued by the root user (UNIX) or the administrator (Windows).

EXAMPLES

1. Start data collection on the OVO management server on HP-UX:

```
/opt/OV/support/dc/snvp/bin/snvpDataCollector.sh  
-t /opt/OV/support/dc/snvp/conf/snvpTaskFile.xml  
-d /tmp/snvp -x /tmp/snvp/dcoutput.xml
```

2. Start data collection on the application server running on Windows:

```
"C:\Program Files\Hewlett-Packard\OpenView\support\dc  
\snvp\bin\snvpDataCollector.bat"  
-t "C:\Program Files\Hewlett-Packard\OpenView\support\dc  
\snvp\conf\snvpTaskFile.xml" -d C:\temp\snvp  
-x C:\temp\snvp\dcoutput.xml
```

6 **About Troubleshooting**

Getting More Information

For troubleshooting information not included in this section, see the following resources:

- ❑ **Service Configuration Release Notes**
Check the Service Configuration release notes for known problems and workarounds.
- ❑ **HP OpenView Operations for UNIX**
See the OVO documentation for troubleshooting tips for OVO.
- ❑ **HP OpenView Service Desk**
See the Service Desk documentation for troubleshooting tips for Service Desk.
- ❑ **Troubleshooting the Service Desk Integration**
If you encounter problems with the Service Pages and the Service Desk data form integration for the OVO operator, see the Service Desk Integration Guide.

See also “Troubleshooting Service Configuration” on page 71.

Troubleshooting Service Configuration

These sections describe how to troubleshoot Service Configuration:

- ❑ “Preventing Problems” on page 72
- ❑ “Identifying the Installed Version of Service Configuration” on page 73
- ❑ “Analyzing Symptoms” on page 74
- ❑ “Deleting the Content of the Service Engine” on page 75
- ❑ “Deleting the Cache” on page 76
- ❑ “Troubleshooting the Discovery Processes” on page 77
- ❑ “Solving Specific Problems” on page 78
- ❑ “About Log Files” on page 84
- ❑ “About Tracing” on page 85

See also “Getting More Information” on page 70.

Preventing Problems

To isolate problems, recover from problems, and prevent problems, follow these general guidelines:

❑ **Installation requirements.**

Make sure that your Service Configuration installation meets the hardware, software, and configuration requirements. For a list of hardware and software requirements, see the *Service Configuration for Service Navigator Installation Guide*.

❑ **Required patches.**

Make sure that all required patches are correctly installed.

❑ **Product files**

Do not modify Service Configuration product files without first making backup copies of the original files.

❑ **System resources**

Make sure that you are not using up too much of your system resources by importing data from OVO too frequently.

See also “Analyzing Symptoms” on page 74.

Identifying the Installed Version of Service Configuration

To identify the installed version of Service Configuration, do the following:

❑ **Service Navigator Value Pack product version**

Select **Help: About HP OpenView Service Navigator Value Pack...** from the menu bar of the main console. The About HP OpenView Service Navigator Value Pack dialog box opens and displays the version number of your installation.

❑ **Service Navigator Value Pack component version**

Each component of Service Configuration has an individual build version. Hewlett-Packard support staff may instruct you to extract the versions of individual components.

See also “Analyzing Symptoms” on page 74.

Analyzing Symptoms

When you encounter a symptom associated with a problem, make a note of all associated information:

❑ **Scope**

What is affected?

- Distinguish between application server and client problems.
- Distinguish between OVO and Service Navigator problems and Service Configuration problems.
- Distinguish between the Service Navigator operator console and the Service Configuration console.

❑ **Context**

What has changed?

Determine if anything has changed on your network or with the product configuration:

- Hardware
- Software
- Patches
- Files
- Security
- Configuration
- Utilization

❑ **Duration**

How long, and how often? Is the problem consistent (fails every time) or intermittent (fails only sometimes)?

See also “Preventing Problems” on page 72.

Deleting the Content of the Service Engine

If you want to delete all Service Configuration content in the service engine, type the following on the OVO management server:

```
echo "\
  <Operations>\
    <Remove>\
      <ServiceRefs>
        <ServiceRef>69970093-C777-494C-BE61-\
          E9CDBFF99582</ServiceRef>\
      </ServiceRefs>\
    </Remove>\
  </Operations>" | cadmsnd
```

The system should reply as follows to indicate successful completion of the command:

```
<?xml version='1.0' ?>
  <Results>
    <OK/>
  </Results>
```

See also “Preventing Problems” on page 72.

Deleting the Cache

Whenever the Service Configuration connector for OVO, the Service Configuration client, or the application server do not behave as expected, for example after having installed the latest Service Desk service pack, delete the cache to stop the software reading the old configuration. To delete the Service Configuration cache, delete the contents of the following directories:

❑ **Service Configuration connector for OVO**

`/opt/OV/sd/common/cache`

❑ **Service Configuration client**

`C:\Program Files\Hewlett-Packard\OpenView\service configuration client\cache`

❑ **Application server**

`C:\Program Files\Hewlett-Packard\OpenView\service desk 4.5\server\cache`

See also “Preventing Problems” on page 72.

Troubleshooting the Discovery Processes

If you encounter one of the following problems with the discovery hierarchy, use the workarounds described below:

❑ **Discovery hierarchy is locked.**

Do not edit the discovery hierarchy while SPI discovery processes are running. By editing the hierarchy, you lock it so that discovery processes cannot write the discovered data into the hierarchy. The discovery process will wait until the hierarchy is unlocked and then write the new data into the hierarchy. This may cause significant delays in your discovery schedules.

You can also force Service Configuration to unlock the discovery hierarchy using the troubleshooting tool `cadmunlock` on the OVO management server. See the man page `cadmunlock(1M)` for more information about this tool.

❑ **Seadapter process hangs.**

Depending on the size and complexity of the discovered service configuration, the `seadapter` process can consume a lot of memory and can take a long time. By default, successfully imported data is saved incrementally, that is after 100 objects have been processed. You can decrease the save interval by adjusting the value for the variable `SEADAPTER_INCREMENTAL_COMMIT_POINT` in the OVO configuration settings file. Remember to restart the `seadapter` process after you have changed the OVO configuration. To help you monitor the progress of the import process, the process prints a period (.) for every successful incremental save (default 100 objects).

Solving Specific Problems

This section explains some specific problems that you may encounter when working with Service Configuration:

- ❑ “Solving Problems Related to Insufficient Memory” on page 79
- ❑ “Solving Problems Related to Missing Labels” on page 81
- ❑ “Solving Problems Related to Foreign Key Violations” on page 82
- ❑ “Solving Problems Related to Service Hierarchy Uploads by SPIs” on page 83

Solving Problems Related to Insufficient Memory

Service Configuration is a memory intensive application. Problems may occur simply due to the exhaustion of resources.

You may receive messages from Service Configuration warning you that there is not enough memory available to complete an operation. This affects in particular the following operations:

- Duplicating a service hierarchy
- Saving a service hierarchy under a new name
- Pasting a large branch of a service hierarchy
- Deleting a service hierarchy
- Deploying a service hierarchy
- Importing data from OVO

To increase the amount of available memory:

1. Stop or cancel the operation and exit the Service Configuration console.
2. Edit the client configuration file using your favorite text editor. This file is located in the following directory on the client system:

```
\Program Files\Hewlett-Packard\OpenView\service  
configuration client\bin\cadm_start.cfg
```

3. Increase the amount of memory allocated to the client by increasing the number following the `-Xmx` parameter. The default amount of memory allocated to the Service Configuration client is 500 MB.

NOTE

The higher the number you choose, the less often Java performs a garbage collection which could result in an overall loss of performance.

4. Save the client configuration file and start the Service Configuration console.

TIP

If you use the `cadm_start.bat` file to start the Service Configuration console, you should also adapt the memory parameter in the batch file.

See also “Solving Problems Related to Missing Labels” on page 81.

Solving Problems Related to Missing Labels

The service engine adapter generates error messages similar to the following when processing service configurations with missing labels:

```
Error: For view object the following fields are required:  
label.
```

```
Error: For program action the following fields are required:  
label.
```

A more detailed error message may be found in the seadapter log file:

```
/opt/OV/sd/common/logfile/logclient.txt
```

This is because objects and actions must have a label in Service Configuration while Service Navigator does not have this requirement.

To solve problems related to missing labels:

There are a short-term and a long-term solution for this problem. To solve this problem permanently, correct your XML configuration files by assigning labels to all services and actions.

To solve this problem quickly, enable Service Navigator compatibility mode:

1. Enable compatibility mode:

- *OVO 7.1*
 - a. Edit the opcsvinfo file on the OVO management server:

```
/opt/OV/bin/OpC/install/opcsvinfo
```
 - b. Set the compatibility parameter to true and save the file:

```
SEADAPTER_FILL_EMPTY_LABELS TRUE
```

- *OVO 8.0*

Type the following at the command line:

```
ovconfchg -ovrg server -ns opc -set \  
SEADAPTER_FILL_EMPTY_LABELS TRUE
```

2. Restart the seadapter process:

```
ovstop seadapter; ovstart seadapter
```

See also “Solving Problems Related to Foreign Key Violations” on page 82.

Solving Problems Related to Foreign Key Violations

You may receive JDBC errors similar to the following:

```
JDBC error 2291: ORA-02291: integrity constraint  
(SYSTEM.CVN_PRU_OID_FK) violated - parent key not found,  
SQL state: 23000 for query: UPDATE cadm_objects
```

This error indicates that the Service Configuration console is connecting to a Service Desk application server where Service Configuration is not installed.

TIP

The About Service Navigator Value Pack dialog box shows the account and UI server that are used for the current connection.

See also “Solving Specific Problems” on page 78.

Solving Problems Related to Service Hierarchy Uploads by SPIs

If you are uploading service hierarchies into Service Navigator using Smart Plug-ins (SPIs), such as OSSPI and WINOSSPI, you may receive errors after installing the Service Configuration Connector on the OVO server.

The service engine adapter (`seadapter`) requires the file `service.dtd` to check the correctness of a service hierarchy. When an SPI generates service hierarchy XML that does not specify the complete path to `service.dtd`, the `seadapter` cannot find the file. An error appears in the `seadapter` trace file, for example:

```
Parse error occurred -  
/var/opt/OV/share/ossapi/tmp/service.dtd  
(No such file or directory)
```

For more information on tracing, see “Tracing for the `seadapter` and for `cadmexport`” on page 90.

To solve the problem, create a symbolic link to the actual location of the `service.dtd` file. For example:

```
cd /var/opt/OV/share/ossapi/tmp  
  
ln -s /etc/opt/OV/share/conf/OpC/mgmt_sv/dtds/service.dtd  
service.dtd
```

About Log Files

Service Configuration logs errors in the following files:

- ❑ **Database configuration wizard:** logdatabase.txt
 - Windows: C:\Program Files\Hewlett-Packard\OpenView\service desk 4.5\server\log
 - UNIX: /opt/OV/sd/server/log
- ❑ **Application server:** logserver.txt
 - Windows: C:\Program Files\Hewlett-Packard\OpenView\service desk 4.5\server\log
 - UNIX: /opt/OV/sd/server/log
- ❑ **Service Configuration client:** (Windows only)
 - *Database-related errors:*
 - C:\Program Files\Hewlett-Packard\OpenView\service configuration client\log\logclient.txt
 - *Console-related errors:*
 - C:\Program Files\Hewlett-Packard\OpenView\service configuration client\Cadm_ui.log
- ❑ **Service Desk client:** (Windows only)
 - C:\Documents and Settings\\Application Data\Hewlett-Packard\OpenView\Service Desk\log\logclient.txt
- ❑ **Service engine adapter for OVO:** (UNIX only)
 - /opt/OV/sd/common/log/logclient.txt
 - This is also the log file for the Service Configuration connector for OVO.

See also “About Tracing” on page 85.

About Tracing

To help HP support personnel investigate the cause of problems, Service Configuration provides problem tracing. Trace log files can help pinpoint when and where problems occur (for example, if processes or programs abort, performance is greatly reduced, or unexpected results appear).

CAUTION

Be aware that tracing can severely affect performance and should therefore only be enabled when guided by HP support personnel.

The following sections describe how to enable tracing for Service Configuration and list the location of the generated trace files so that you can forward them to HP support personnel for evaluation:

- Tracing for the Application Server and the Service Configuration Client
- Tracing for the Service Configuration Console
- Tracing for cadmactivate
- Tracing for cadmsnd
- Tracing for the seadapter and for cadmexport
- Tracing for Service Pages

See also “About Log Files” on page 84.

Tracing for the Application Server and the Service Configuration Client

To trace database-related calls in the application server and the Service Configuration client, activate tracing as described below:

❑ Application Server

Add the following text to the server XML configuration file `server_settings.xml`:

```
<GROUP NAME="JANUS">
  <PROPERTY NAME="TRACE">true</PROPERTY>
  <PROPERTY NAME="TRACE_SERVER">true</PROPERTY>
  <PROPERTY NAME="TRACE_FILE">c:\temp\trace.txt</PROPERTY>
</GROUP>
```

❑ Service Configuration Client

Add the following text to the client XML configuration file: `user_settings.xml`:

```
<GROUP NAME="JANUS">
  <PROPERTY NAME="TRACE">true</PROPERTY>
  <PROPERTY NAME="TRACE_DEPENDENCIES">true</PROPERTY>
  <PROPERTY NAME="TRACE_FILE">c:\temp\trace.txt</PROPERTY>
</GROUP>
```

The trace options have the following meaning:

TRACE

The option TRACE generates global trace information.

TRACE_DEPENDENCIES

The option TRACE_DEPENDENCIES handles the dependency management of a service hierarchy. Adding and (recursive) removing of child objects can be verified.

TRACE_SERVER

The option TRACE_SERVER outputs all database statements that are done to save a service hierarchy. They are shown after they have been sorted for foreign key consistency.

`TRACE_FILE`

If `TRACE_FILE` is specified, the trace information is logged there. Otherwise it is written to standard out. The trace file is replaced whenever a new process starts using this configuration.

As multiple instances of one service hierarchy can exist in the process space at the same time, they are enumerated at creation time and this information is shown in the trace to allow differentiating between them.

See also “Tracing for the Service Configuration Console” on page 88.

Tracing for the Service Configuration Console

By default, the Service Configuration console logs all errors in the file `Cadm_ui.log`. You can change the log file or specify a different trace level by adapting Java properties in the console startup script:

❑ To change the logfile

Add the Java property `TRACE_FILE` with the path to your logfile to the console startup script. The logfile must be in the path of the Java executable for the console.

❑ To specify the trace level

To also log warning or informational messages, add the Java property `SEVERITY_TRACE_LEVEL` with the trace level to the console startup script. Possible values for trace levels:

- 0 — Nothing is written to the trace file.
- 1 — Errors are written to the trace file. This is the default.
- 2 — Errors and warnings are written to the trace file.
- 3 — All messages are written to the trace file. This includes error, warning, and informational messages.

Example: To write all trace messages to the Service Desk client log file, the Service Configuration startup script must contain the following line:

```
java.exe -DTRACE_FILE="C:\Documents and Settings\clschmid\
Application Data\Hewlett-Packard\OpenView\Service Desk\log
\logclient.txt" -DSEVERITY_TRACE_LEVEL=3 ...
```

See also “Tracing for `cadmactivate`” on page 89.

Tracing for `cadmactivate`

The command line tool `cadmactivate` activates Service Configuration on the OVO management server. It logs each activation step in the following file on the OVO management server:

```
/var/opt/OV/log/cadmactivate.trace
```

The status or result of each step is also sent to standard out.

See the man page `cadmactivate(1M)` for more information about this tool.

See also “Tracing for `cadmsnd`” on page 89.

Tracing for `cadmsnd`

The command line tool `cadmsnd` provides terminal-like access to the Service Navigator service engine on the OVO management server. The tool lets you manually deploy service hierarchies.

To retain a record of the `cadmsnd` transactions, start the tool with the `-t` trace option in a terminal window and redirect the output to a file. For example:

```
/opt/OV/bin/OpC/cadmsnd -t < <YourFile.xml> \  
> <TraceFile.txt>
```

See also “Tracing for the seadapter and for `cadmexport`” on page 90.

Tracing for the seadapter and for cadmexport

Tracing for the seadapter (and the command line tool `cadmexport`) can be controlled by setting trace options in the OVO configuration settings file on the OVO management server. When enabled, trace information is logged into the following trace file:

```
/var/opt/OV/log/seadapter.trace
```

The following options are available; they accept the values `TRUE` and `FALSE`:

`SEADAPTER_MAIN_TRACE`

Traces the server, for example client connections to the server.

`SEADAPTER_SOCKET_TRACE`

Traces the file system socket `opcsvcn`. Generates detailed output.

`SEADAPTER_PARSER_TRACE`

Traces all XML-relevant operations. Generates detailed output.

`SEADAPTER_MODEL_TRACE`

Traces all calls to the business logic.

To enable tracing for the seadapter and for cadmexport:

1. Set the trace options:

- *OVO 7.1*

Edit the `/opt/OV/bin/OpC/install/opcsvinfo` file on the OVO management server and set one or more trace options, for example:

```
SEADAPTER_MAIN_TRACE TRUE
```


- *OVO 8.0*

Use the *ovconfchg(1)* command line tool to set trace options, for example:

```
ovconfchg -ovrg server -ns opc -set \  
SEADAPTER_MAIN_TRACE TRUE
```

2. Setting or changing any of the trace options requires a restart of the seadapter process:

```
ovstop seadapter; ovstart seadapter
```

See also “Tracing for Service Pages” on page 92.

Tracing for Service Pages

You can enable and disable tracing by adding a trace option to the web server application file on the Service Pages web server.

The trace output is written to a log file in the Service Pages home directory:

```
[Service Pages home]\Cadm_snssp_logging.txt
```

To enable tracing for the Service Pages web server:

1. Locate the web server application file on your Service Pages web server:

```
<Install Dir>\webapps\sd-sp45\WEB-INF\web.xml
```

```
<Install Dir> on Windows is usually c:\Program Files\  
Hewlett-Packard\OpenView\service desk 4.5\service pages\
```

2. Add the following lines to the web.xml file and adjust the value for tracing as required:

```
<context-param>  
  <param-name>tracing</param-name>  
  <param-value>OnOrOff</param-value>  
  <description>Change OnOrOff as required</description>  
</context-param>
```

3. Save the web.xml file and restart the web server.

See also “Tracing for the Application Server and the Service Configuration Client” on page 86.

Maintaining Service Configuration

You should download service hierarchies as part of your standard maintenance or backup routine. Also, before you significantly change your service hierarchies, you should download them or back up your database. To back up your configuration, see the documentation supplied by the database vendor.

See also “Downloading Service Hierarchies” on page 93.

Downloading Service Hierarchies

Use the tool `cadm_DumpHierarchy` to periodically download your service hierarchies to files. You can then store the files on backup media or place them under version control.

To download a service hierarchy:

1. In the Service Configuration console, select **File: Save** to save the service hierarchy before downloading it.
2. Make sure the Service Desk application server is running.
3. Execute the tool `cadm_DumpHierarchy`:

```
cadm_DumpHierarchy [-m] [-o] [-s] <HierarchyName>  
<FileName> <UserSettingsFile>
```

For example:

```
cadm_DumpHierarchy Example_Service_Operation_View  
C:\temp\HierSvcOpView.xml "C:\Program  
Files\Hewlett-Packard\OpenView\service configuration  
client\user_settings.xml"
```

See “`cadm_DumpHierarchy`” on page 49 for more information about the tool and its options.

The generated export file complies with the `snvp_export.dtd`.

Uploading Service Hierarchies

Use the tool `cadm_LoadHierarchy` to upload exported service hierarchies into the target database.

Downloads that were created with the `-m` option of `cadm_DumpHierarchy`, can only be uploaded into the database from where they were exported. This is because the download includes references to Service Desk object identifiers (OIDs) that are unique.

To upload a service hierarchy:

1. Make sure the application server is configured to connect to the target database.
2. If the download was created with the `-o` option of `cadm_DumpHierarchy`, configure all OVO management servers of the source system on the target Service Configuration system and import data from all servers.

3. Make sure all shared objects that are referenced in the download data are also available on the target system. This applies to referenced actions, status rules, and service hierarchy rules.

(If the download was created with the `-s` option of `cadm_DumpHierarchy`, this step is not necessary because the download data already includes all shared objects in addition to the object references.)

4. Execute the tool `cadm_LoadHierarchy`:

```
cadm_LoadHierarchy [-n <NewHierarchyName>] <FileName>  
<UserSettingsFile>
```

For example:

```
cadm_LoadHierarchy C:\temp\HierSvcOpView.xml "C:\Program  
Files\Hewlett-Packard\OpenView\service configuration  
client\user_settings.xml"
```

See “`cadm_LoadHierarchy`” on page 52 for more information about the tool and its options.

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