

HP OpenView Operations

Java GUI Operator's Guide

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Printing History

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Manual updates may be issued between editions to correct errors or document product changes. To ensure that you receive the updated or new editions, you should subscribe to the appropriate product support service. See your HP sales representative for details.

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Conventions

The following typographical conventions are used in this manual.

Table 1 **Typographical Conventions**

Font	Meaning	Example
<i>Italic</i>	Book or manual titles, and man page names	Refer to the <i>OVO Administrator's Reference</i> and the <i>opc(1M)</i> manpage for more information.
	Emphasis	You <i>must</i> follow these steps.
	Variable that you must supply when entering a command	At the prompt, enter rlogin <i>username</i> .
	Parameters to a function	The <i>oper_name</i> parameter returns an integer response.
Bold	New terms	The HTTPS agent observes...
Computer	Text and other items on the computer screen	The following system message displays: Are you sure you want to remove current group?
	Command names	Use the <code>grep</code> command ...
	Function names	Use the <code>opc_connect()</code> function to connect ...
	File and directory names	<code>/opt/OV/bin/OpC/</code>
	Process names	Check to see if <code>opcmona</code> is running.
	Window/dialog-box names	In the Add Logfile window ...
	Menu name followed by a colon (:) means that you select the menu, then the item. When the item is followed by an arrow (->), a cascading menu follows.	Select Actions: Filtering -> All Active Messages from the menu bar.

Table 1 **Typographical Conventions (Continued)**

Font	Meaning	Example
Computer Bold	Text that you enter	At the prompt, enter ls -l
Keycap	Keyboard keys	Press Return .
[Button]	Buttons in the user interface	Click [OK].

OVO Documentation Map

HP OpenView Operations (OVO) provides a set of manuals and online help that help you to use the product and to understand the concepts underlying the product. This section describes what information is available and where you can find it.

Electronic Versions of the Manuals

All the manuals are available as Adobe Portable Document Format (PDF) files in the documentation directory on the OVO product CD-ROM.

With the exception of the *OVO Software Release Notes*, all the manuals are also available in the following OVO web-server directory:

```
http://<management_server>:3443/ITO_DOC/<lang>/manuals/*.pdf
```

In this URL, *<management_server>* is the fully-qualified hostname of your management server, and *<lang>* stands for your system language, for example, C for the English environment and japanese for the Japanese environment.

Alternatively, you can download the manuals from the following website:

```
http://ovweb.external.hp.com/lpe/doc_serv
```

Watch this website regularly for the latest edition of the OVO Software Release Notes, which gets updated every 2-3 months with the latest news such as additionally supported OS versions, latest patches and so on.

OVO Manuals

This section provides an overview of the OVO manuals and their contents.

Table 2 **OVO Manuals**

Manual	Description	Media
<i>OVO Installation Guide for the Management Server</i>	<p>Designed for administrators who install OVO software on the management server and perform the initial configuration.</p> <p>This manual describes:</p> <ul style="list-style-type: none"> • Software and hardware requirements • Software installation and de-installation instructions • Configuration defaults 	Hardcopy PDF
<i>OVO Concepts Guide</i>	Provides you with an understanding of OVO on two levels. As an operator, you learn about the basic structure of OVO. As an administrator, you gain an insight into the setup and configuration of OVO in your own environment.	Hardcopy PDF
<i>OVO Administrator's Reference</i>	Designed for administrators who install OVO on the managed nodes and are responsible for OVO administration and troubleshooting. Contains conceptual and general information about the OVO DCE/NCS-based managed nodes.	PDF only
<i>OVO DCE Agent Concepts and Configuration Guide</i>	Provides platform-specific information about each DCE/NCS-based managed-node platform.	PDF only
<i>OVO HTTPS Agent Concepts and Configuration Guide</i>	Provides platform-specific information about each HTTPS-based managed-node platform.	PDF only
<i>OVO Reporting and Database Schema</i>	Provides a detailed description of the OVO database tables, as well as examples for generating reports from the OVO database.	PDF only
<i>OVO Entity Relationship Diagrams</i>	Provides you with an overview of the relationships between the tables and the OVO database.	PDF only

Table 2 **OVO Manuals (Continued)**

Manual	Description	Media
<i>OVO Java GUI Operator's Guide</i>	Provides you with a detailed description of the OVO Java-based operator GUI and the Service Navigator. This manual contains detailed information about general OVO and Service Navigator concepts and tasks for OVO operators, as well as reference and troubleshooting information.	PDF only
<i>Service Navigator Concepts and Configuration Guide</i>	Provides information for administrators who are responsible for installing, configuring, maintaining, and troubleshooting the HP OpenView Service Navigator. This manual also contains a high-level overview of the concepts behind service management.	Hardcopy PDF
<i>OVO Software Release Notes</i>	Describes new features and helps you: <ul style="list-style-type: none">• Compare features of the current software with features of previous versions.• Determine system and software compatibility.• Solve known problems.	PDF only
<i>OVO Supplementary Guide to MPE/iX Templates</i>	Describes the message source templates that are available for the MPE/iX managed nodes. This guide is not available for OVO on Solaris.	PDF only
<i>Managing Your Network with HP OpenView Network Node Manager</i>	Designed for administrators and operators. This manual describes the basic functionality of the HP OpenView Network Node Manager, which is an embedded part of OVO.	Hardcopy PDF
<i>OVO Database Tuning</i>	This ASCII file is located on the OVO management server at the following location: /opt/OV/ReleaseNotes/opc_db.tuning	ASCII

Additional OVO-related Products

This section provides an overview of the OVO-related manuals and their contents.

Table 3 Additional OVO-related Manuals

Manual	Description	Media
<p>HP OpenView Operations for UNIX Developer's Toolkit</p> <p>If you purchase the HP OpenView Operations for UNIX Developer's Toolkit, you receive the full OVO documentation set, as well as the following manuals:</p>		
<p><i>OVO Application Integration Guide</i></p>	<p>Suggests several ways in which external applications can be integrated into OVO.</p>	<p>Hardcopy PDF</p>
<p><i>OVO Developer's Reference</i></p>	<p>Provides an overview of all the available application programming interfaces (APIs).</p>	<p>Hardcopy PDF</p>
<p>HP OpenView Event Correlation Designer for NNM and OVO</p> <p>If you purchase HP OpenView Event Correlation Designer for NNM and OVO, you receive the following additional documentation. Note that HP OpenView Event Correlation Composer is an integral part of NNM and OVO. OV Composer usage in the OVO context is described in the OS-SPI documentation.</p>		
<p><i>HP OpenView ECS Configuring Circuits for NNM and OVO</i></p>	<p>Explains how to use the ECS Designer product in the NNM and OVO environments.</p>	<p>Hardcopy PDF</p>

OVO Online Information

The following information is available online.

Table 4 **OVO Online Information**

Online Information	Description
HP OpenView Operations Administrator's Guide to Online Information	Context-sensitive help system contains detailed help for each window of the OVO administrator Motif GUI, as well as step-by-step instructions for performing administrative tasks.
HP OpenView Operations Operator's Guide to Online Information	Context-sensitive help system contains detailed help for each window of the OVO operator Motif GUI, as well as step-by-step instructions for operator tasks.
HP OpenView Operations Java GUI Online Information	HTML-based help system for the OVO Java-based operator GUI and Service Navigator. This help system contains detailed information about general OVO and Service Navigator concepts and tasks for OVO operators, as well as reference and troubleshooting information.
HP OpenView Operations Man Pages	<p>Manual pages available online for OVO. These manual pages are also available in HTML format.</p> <p>To access these pages, go to the following location (URL) with your web browser:</p> <p><code>http://<management_server>:3443/ITO_MAN</code></p> <p>In this URL, the variable <code><management_server></code> is the fully-qualified hostname of your management server. Note that the man pages for the OVO HTTPS-agent are installed on each managed node.</p>

About OVO Online Help

This preface describes online documentation for the HP OpenView Operations (OVO) Motif and the Java operator graphical user interfaces (GUIs).

Online Help for the Motif GUI

Online information for the HP OpenView Operations (OVO) Motif graphical user interface (GUI) consists of two separate volumes, one for operators and one for administrators. In the operator's volume you will find the HP OpenView OVO Quick Start, describing the main operator windows.

Types of Online Help

The operator and administrator volumes include the following types of online help:

❑ **Task Information**

Information you need to perform tasks, whether you are an operator or an administrator.

❑ **Icon Information**

Popup menus and reference information about OVO icons. You access this information with a right-click of your mouse button.

❑ **Error Information**

Information about errors displayed in the OVO Error Information window. You can access context-sensitive help when an error occurs. Or you can use the number provided in an error message to perform a keyword search within the help system.

❑ **Search Utility**

Index search utility that takes you directly to topics by name.

❑ **Glossary**

Glossary of OVO terminology.

- ❑ **Help Instructions**

Instructions about the online help system itself for new users.

- ❑ **Printing Facility**

Printing facility, which enables you to print any or all topics in the help system. (An HP LaserJet printer or a compatible printer device is required to print graphics.)

To Access Online Help

You can access the help system in any of the following ways:

- ❑ **F1 Key**

Press **F1** while the cursor is in any active text field or on any active button.

- ❑ **Help Button**

Click [Help] at the bottom of any window.

- ❑ **Help Menu**

Open the drop-down Help menu from the menu bar.

- ❑ **Right Mouse Click**

Click a symbol, then right-click the mouse button to access the Help menu.

You can then select task lists, which are arranged by activity, or window and field lists. You can access any topic in the help volume from every help screen. Hyperlinks provide related information on other help topics.

You can also access context-sensitive help in the Message Browser and Message Source Templates window. After selecting Help: On Context from the menu, the cursor changes into a question mark, which you can then position over the area about which you want help. When you click the mouse button, the corresponding help page is displayed in its help window.

Online Help for the Java GUI and Service Navigator

The online help for the HP OpenView Operations (OVO) Java graphical user interface (GUI), including Service Navigator, helps operators to become familiar with and use the OVO product.

Types of Online Help

The online help for the OVO Java GUI includes the following information:

- ❑ **Tasks**

Step-by-step instructions.

- ❑ **Concepts**

Introduction to the key concepts and features.

- ❑ **References**

Detailed information about the product.

- ❑ **Troubleshooting**

Solutions to common problems you might encounter while using the product.

- ❑ **Index**

Alphabetized list of topics to help you find the information you need, quickly and easily.

Viewing a Topic

To view any topic, open a folder in the left frame of the online documentation window, then click the topic title. Hyperlinks provide access to related help topics.

Accessing the Online Help

To access the help system, select `Help: Contents` from the menu bar of the Java GUI. A web browser opens and displays the help contents.

NOTE

To access online help for the Java GUI, you must first configure OVO to use your preferred browser.

Preface

The HP OpenView Java-based graphical user interface (Java GUI) includes the following components:

❑ **HP OpenView Operations**

Centralized operations and problem-management product for distributed multi-vendor systems.

❑ **Service Navigator**

Add-on to OVO that enables you to manage your information technology (IT) environment while focusing on the IT services you provide. Service Navigator may not be installed on your system.

What's New

The Java GUI includes the following new features:

❑ **Configuring backup management servers for the Java GUI**

Java GUI clients now try to connect by default three times to the current management server. If all reconnect attempts fail, the Java GUI contacts the next backup management server in the list and tries to establish a connection. Your OVO administrator can configure the number of reconnect attempts as well as the number and order of backup management servers.

❑ **Proxy configuration for the HTTPS-based Java GUI**

For the HTTPS-based Java GUI to communicate with an OVO management server through a firewall, you can now configure one or more proxy servers in several different ways, in addition to setting the proxy with `ovconfchg`:

- `ito_op` startup script
- `itopr` file
- Login dialog box
- `ito_for_activator.html` file for Java GUI applets

See “Configuring the HTTPS-based Java GUI Connection through Firewalls” on page 296 for more information.

❑ **Sending information messages to other OVO users**

You can now share important information with other OVO users by sending information messages to them (`File: Send Message to Operator(s)`). Messages addressed to you are displayed in the OVO Communication dialog box. See “Sending Information Messages” on page 252 for more information.

❑ **Custom image in Progress dialog box**

The image of the sawing lumberjack in the Progress dialog box can now be replaced by placing a custom image `customImg.gif` in your home directory. See “To Customize the Progress Dialog Box” on page 261 for more information.

❑ **Alignment of column content in Java GUI Message Browser**

Since many message fields can contain numerical values, left/right alignment of column content has been added. Column content can now be aligned through a popup menu in the Message Browser opened on the message browser headline.

❑ **Customize Browser Layout through popup menu in Message Browser**

Until now the ability to customize the browser layout was available only through the main menu (View: Customize Message Browser Columns...). To speed up the task of customizing the browser layout, the Customize Message Browser Column dialog box can now be opened directly from the popup menu that opens on the message browser headline.

❑ **Message field sorting enhanced to support numerical data**

Message sorting was based on lexicographical order which lead to a wrong order of fields with numerical values. These fields are now sorted correctly. Numerical values can be integer values or floating point numbers; scientific notation is also supported.

❑ **Proxy authentication in Java GUI**

The Java GUI now supports proxy authentication for the embedded web browser. The user name and password for the proxy authentication are set in the Embedded Web Browser Settings dialog box. See “About the Preferences Dialog Box” on page 450 for more information.

❑ **Java GUI Key Accelerators**

In addition to key mnemonics, the Java GUI now also supports commonly used key accelerators for repetitive tasks. See “Java GUI Key Accelerators” on page 355 for the list of the new key accelerators.

❑ **Different number of messages for active and history message browser**

The Java GUI can limit the number of messages loaded into message browsers. Until now there was a single limit for all message browsers, now there are two limits; one for active and one for history message browsers.

Both limits can be set in the General tab of the Preferences dialog box. See “About the Preferences Dialog Box” on page 450 for more information.

❑ **Ability to use global Java GUI property files**

Java GUI global settings can be enabled and configured with the configuration tool on the management server. Global settings are applied to all Java GUI clients connecting to that management server. See “Using Global Java GUI Property Files” on page 192 for more information.

❑ **Saving the Java GUI settings while using the global Java GUI settings**

Now it is possible to create and modify configuration files to share among all users while the Java GUI global settings are enabled.

The allowed users can save the settings files in their home directories without affecting the global settings files. They can copy these Java GUI settings files to the sharepoint for global use. Refer to the *OVO Administrator’s Reference* guide for more information.

❑ **Ability to cancel loading of history messages**

Opening a filtered history message browser can take a long time to complete because history messages are retrieved from the database and not from cache. During the download, the Java GUI cannot be used. If you want to access the Java GUI during a history message download, you can now cancel the download without having to close the Java GUI.

❑ **Popup and menu item for creating a new history filter on the selected message**

The Java GUI now offers a menu item for creating a new history filter on a selected message. The menu item can be accessed in one of the following ways:

- By performing a right-click on the selected message (popup menu).
- By selecting **Actions: Messages** from the menu bar.

❑ **Displaying URLs as hyperlinks in message browser columns and the Message Properties dialog box**

The Java GUI now displays URLs as hyperlinks in all message browser columns with exception of Flags, Severity and the time related message fields, such as ‘time received’ and ‘time created’.

URLs are also displayed as hyperlinks in the message, instruction and annotation text items of the Message Properties dialog box.

All URL texts must start with "http://" to be displayed as hyperlinks.

❑ **Forward Manager field in Java GUI**

A Forwarding Manager field is now available in the Java GUI. You can find this field in the Message Properties dialog and in the message browser if selected in the Customize Message Browser dialog. It is also possible to save browser settings, such as alignment and sort order for the Forward Manager column.

❑ **HTTPS-based Java GUI Support**

Now it is possible to establish a secured link from Java GUI to the OVO/UNIX management server. This functionality is provided with the HTTPS-based Java GUI, that is the Java GUI which uses a HTTPS protocol with Secure Socket Layer (SSL) encryption for communication with the OVO management server. The SSL encryption is based on the Core functionality components.

The HTTPS- based Java GUI configuration and usage instructions are detailed in “Using Secure HTTPS-based Java GUI Communication” on page 193 and “Configuring Secure HTTPS-based Java GUI Communication” on page 288.

Organization

This guide is intended for operators who perform daily tasks using the Java GUI:

- ❑ **Chapter 1. About Daily Tasks**
Brief description of the concept, functionality, and structure of OVO.
- ❑ **Chapter 2. Performing Daily Tasks**
Step-by-step instructions for using OVO.
- ❑ **Chapter 3. About Service Navigator**
Brief description of the concept, functionality, and structure of Service Navigator.
- ❑ **Chapter 4. Performing Daily Tasks with Service Navigator**
Step-by-step instructions for using Service Navigator.
- ❑ **Appendix A. Troubleshooting**
Solutions to common problems you may encounter when using OVO or Service Navigator.
- ❑ **Appendix B. References**
Detailed information to help you maximize your use of OVO and Service Navigator.
- ❑ **Glossary**
Definitions of terms used in OVO and Service Navigator.
- ❑ **Index**
Alphabetized cross-references enable you to find topics, procedures, and reference material quickly and easily.

1 About Daily Tasks

In this Chapter

This chapter describes some of the daily tasks performed by operators of HP OpenView Operations (OVO).

Who Should Read this Chapter

Although this chapter is designed primarily for OVO operators, OVO administrators should also read it to familiarize themselves with the working environment and problem solving processes of OVO operators.

What this Chapter Does

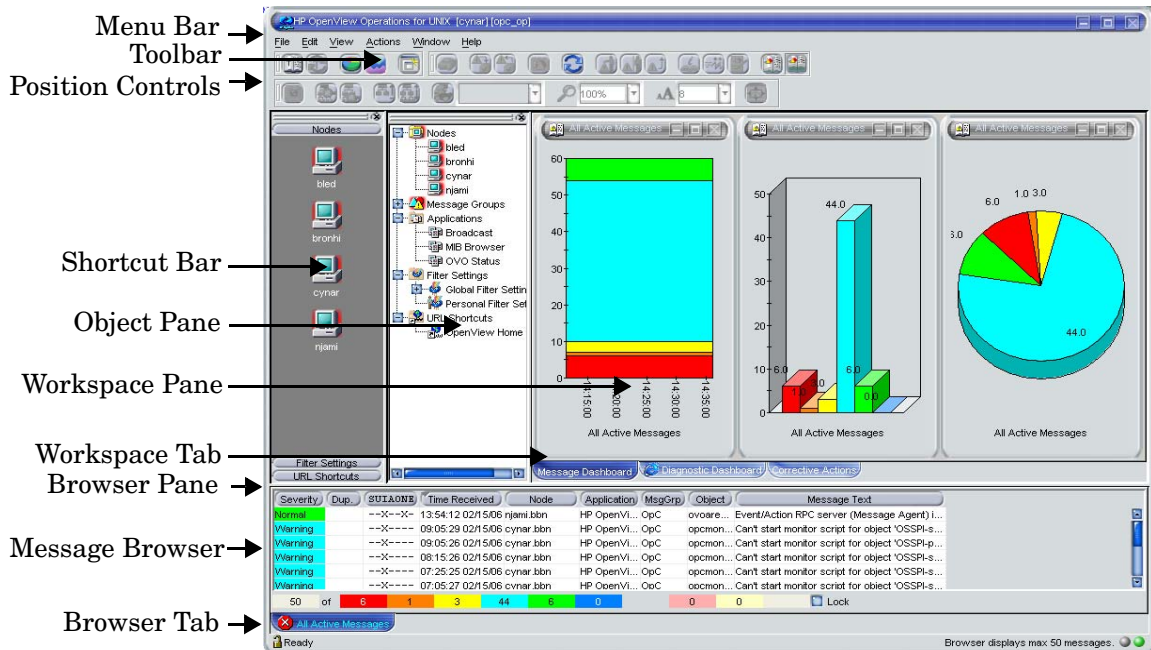
This chapter is organized as follows:

- ❑ **Tour of the OVO Java GUI**
 - About the Shortcut Bar
 - About the Object Pane
 - About the Workspace Pane
 - About the Browser Pane
 - About Integrated Web Browsers
 - About the Menu Bar
 - About the Toolbar
 - About the Position Controls
 - Types of Popup Menus
- ❑ **About the Problem Solving Process**
 - Detecting Problems in Your Environment
 - Investigating Problems in Your Environment
 - Solving Problems in Your Environment
 - Documenting Solutions in Your Environment
- ❑ **Customizing Your Environment**

Tour of the OVO Java GUI

When you start the OVO Java GUI, you will see the main window, as shown in Figure 1-1.

Figure 1-1 Main Window of the OVO Java GUI



The main window of the Java GUI is divided into four main areas:

❑ Shortcut Bar

Top-left pane provides you with shortcuts to frequently used objects. For details, see “About the Shortcut Bar” on page 41.

❑ Object Pane

Top-middle pane displays the structure of your managed environment. For details, see “About the Object Pane” on page 43.

❑ **Workspace Pane**

Top-right pane contains multiple tabs, each containing one workspace. For details, see “About the Workspace Pane” on page 53.

❑ **Browser Pane**

Bottom pane provides you with quick access to the latest messages. For details, see “About the Browser Pane” on page 63.

The top of the Java GUI contains the following navigation tools:

❑ **Menu Bar**

Top row of pulldown menus. For an overview, see “About the Menu Bar” on page 78.

❑ **Toolbar**

Row of icons just below the menu bar. For an overview, see “About the Toolbar” on page 79.

❑ **Position Controls**

Narrow band of horizontal bars just below the toolbar. For an overview, see “About the Position Controls” on page 81.

By default, the position controls are not visible. To find out how to switch them on and off, see “Showing and Hiding the Position Controls” on page 171.

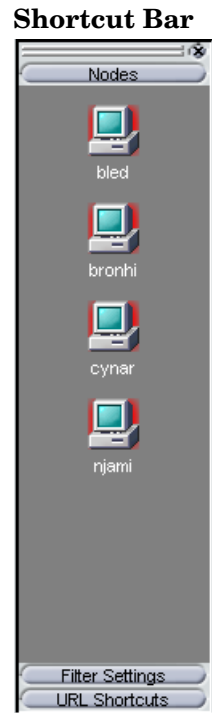
NOTE

For details about popup menus in each of the four main areas of the Java GUI, see “Types of Popup Menus” on page 82.

About the Shortcut Bar

The shortcut bar is the first pane below the toolbar and position controls, as shown in Figure 1-2.

Figure 1-2



From the shortcut bar, you use popup menus to perform all operations that are available from the object pane (for example, start applications, open a new filtered message browser, get service graphs, and so on). This quick access is very useful if there are many objects in the object pane.

NOTE

For details about popup menus in the shortcut bar, see “About the Shortcut Bar Popup Menu” on page 83. To find out how to customize the shortcut bar, see “Moving Panes and Areas” on page 172, “Showing and Hiding Panes and Areas” on page 173, and “Customizing the Shortcut Bar” on page 176.

Service icons in the shortcut bar can also display service labels with textual information and images that give you more information about the objects at a glance. The status of the icons and service labels information is updated at every refresh interval.

By default, the following shortcut groups (gray buttons) are created:

❑ **Nodes**

Systems, printers, or any other elements in the network environment. For details, see “About Nodes” on page 45.

❑ **Services**

If Service Navigator is installed and configured, maps problems with messages associated with affected services.

❑ **Filter Settings**

Enables you to create and access message filters quickly and easily. For details, see “About Filter Settings” on page 50.

❑ **URL Shortcuts**

Enables you to update and start URL applications. For details, see “About URL Shortcuts” on page 52.

You can also add other shortcut groups, such as the following:

❑ **Message Groups**

Message groups for which you are responsible. For details, see “About Message Groups” on page 47.

❑ **Applications**

Scripts or programs that have been integrated into OVO. For details, see “About Applications” on page 49.

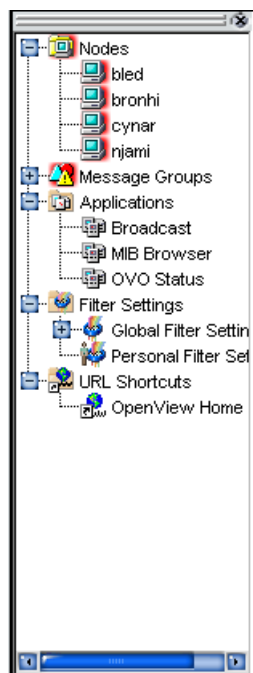
All shortcuts are saved in a console settings file. For details, see “Saving Console Settings” on page 167.

About the Object Pane

The object pane is the second pane below the toolbar and position controls, as shown in Figure 1-3. This pane contains the object tree, a hierarchical tree diagram designed to help you navigate to different elements within your managed environment.

Figure 1-3

Object Pane



The object tree contains the following branches:

❑ **Nodes**

Systems, printers, or any other element in the network environment. For details, see “About Nodes” on page 45.

❑ **Message Groups**

Message groups for which a particular operator is responsible. For details, see “About Message Groups” on page 47.

❑ **Applications**

Scripts or programs that have been integrated into OVO. For details, see “About Applications” on page 49.

❑ **Services**

If Service Navigator is installed and configured, maps problems with messages associated with affected services.

❑ **Filter Settings**

Enables you to create and access message filters quickly and easily. For details, see “About Filter Settings” on page 50.

❑ **URL Shortcuts**

Enables you to start URL applications. For details, see “About URL Shortcuts” on page 52.

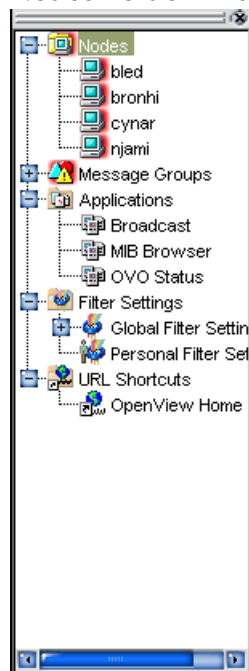
NOTE

You can search for specific items in the object tree with a basic or advanced search function. For details, see “Searching the Object Pane” on page 104.

About Nodes

In the object tree, the node icons in the `Nodes` folder represent the **managed nodes of a particular operator**. Managed nodes can be systems, printers, or any other element in the network environment. As shown in Figure 1-4, the `Nodes` folder in the object tree contains an icon for each node, collection of nodes (called a node layout group), or external node for which you are responsible. The external node represents a range of nodes from which external events are integrated into OVO.

Figure 1-4 Nodes Folder in the Object Tree



About Node Layout Groups

Within the object tree, icons in the `Nodes` folder can represent folders or collections of nodes. For example, all nodes located in a single building or all nodes serving a similar purpose can be grouped together and represented by a single node layout group icon. Clicking on the plus sign (+) next to the folder opens the folder and displays the individual nodes of the layout group.

About Node Colors

Node icons are displayed in colors that correspond to the highest severity of any message received from that node. For example, the node icon turns red when the affected node has at least one unacknowledged critical message. After all critical messages have been acknowledged, the node icon changes color to indicate the highest severity level of the remaining messages. The status of other map applications (for example, the IP Map) is not included.

Depending on how OVO is configured, folder icons are displayed in colors corresponding to the highest severity message of any of its components. For example, if the folder icon is cyan, there must be at least one element with the status of `Warning` in an underlying layer.

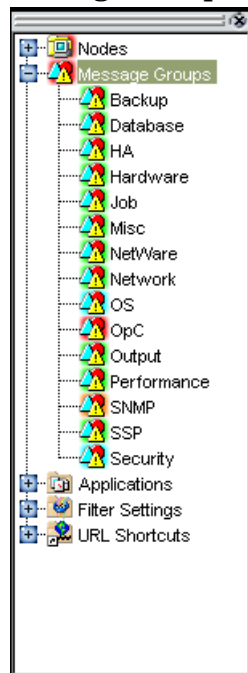
For information about message colors, see the following:

- ❑ “About Message Group Colors” on page 48
- ❑ “About Message Colors” on page 67
- ❑ “About Message Severity Coloring” on page 113
- ❑ “About Message Fields” on page 475

About Message Groups

The Message Groups folder in the object tree contains icons representing the message groups for which you are responsible, as shown in Figure 1-5. In this folder, you can review the status of each group, and select specific groups for message review. OVO uses message groups to combine management information about similar or related managed objects under a chosen name, and provide status information on a group level.

Figure 1-5 Message Groups Folder in the Object Tree



About Message Group Colors

As in the `Nodes` folder, the color of a particular icon in the `Message Groups` folder represents the current status of that group. A change in the color of an icon in the `Message Groups` folder indicates a change in status of a managed node within your operator environment.

For more information about message colors, see the following:

- ❑ “About Message Colors” on page 67
- ❑ “About Message Severity Coloring” on page 113
- ❑ “About Message Fields” on page 475

Organizing Message Groups

Messages are organized into groups to simplify message management, and to let you do your work in a task-oriented way. For example, one operator can be responsible for backups and output, and another operator can be responsible for network, operating system, and security aspects of message management.

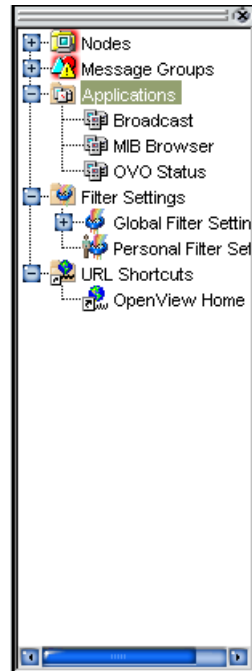
You can reduce the number of messages in the message browser by selecting the required message group from the `Message Group` folder, and opening a filtered message browser. Then only messages in that message group are displayed.

About Applications

The Applications folder in the object tree contains icons for the scripts or programs that have been integrated into OVO, as shown in Figure 1-6. You can start any integrated application from this folder.

Figure 1-6

Applications Folder in the Object Tree



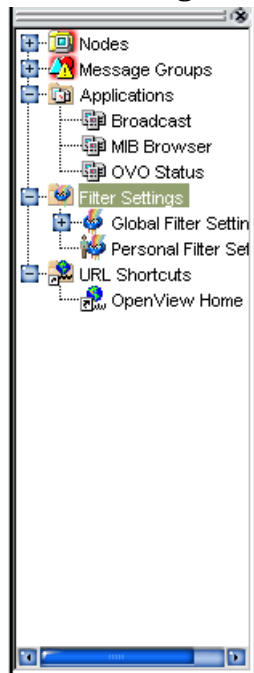
The OVO administrator first examines your environment, then determines which applications you need to maintain it. Each application has predefined startup attributes, including a list of the managed nodes for individual operators.

Applications can also be programs or services running in the environment (for example, the UNIX `df` or `bdf` commands). You could be responsible for controlling the amount of free disk space on a system. To maintain sufficient disk space on a system, you respond to messages issued by the OVO monitor agent, and send controlling commands, such as `df` or `bdf`.

About Filter Settings

The `Filter Settings` folder in the object tree contains icons for global and personal message filters, as shown in Figure 1-7.

Figure 1-7 Filter Settings Folder in the Object Tree



From the `Filter Settings` folder, you can create and access message filters quickly and easily. For example, if you want to see all messages that could show a possible problem in the `Performance` area, you would create a filter that shows all warnings, all minor, major, and critical messages, and all unknown messages within the message group `Performance`. You would then save the new filter. Later, to see the messages in your new filter, you could open a filtered message browser, and apply your filter settings to it.

NOTE

Only OVO administrators are allowed to create global filters. As an operator, you can add filters to the `Personal Filters` folder only.

To access a filtered message browser, you select the Filter Settings group from one of two locations:

❑ **Shortcut Bar**

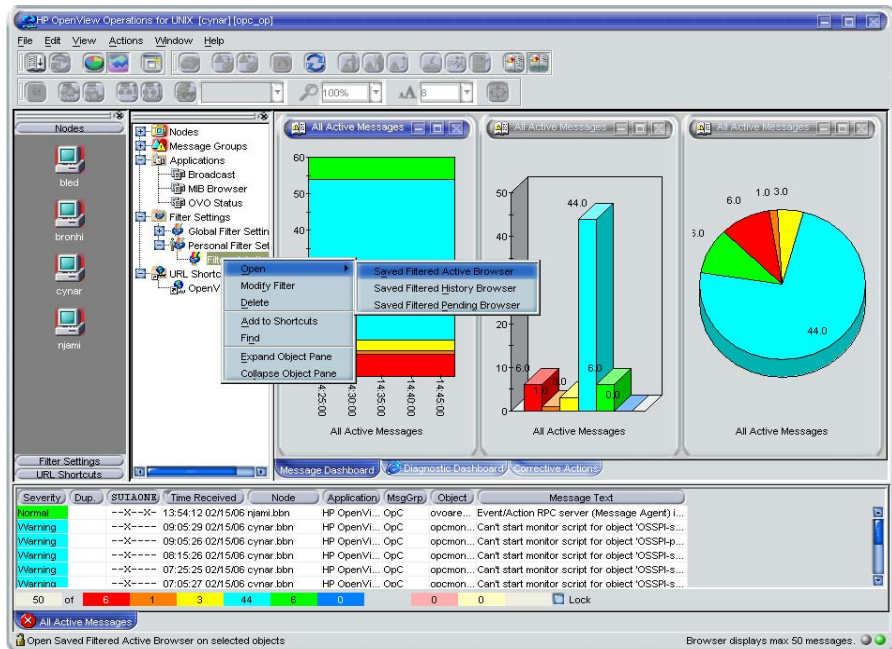
For details, see “About the Shortcut Bar” on page 41.

❑ **Object Pane**

For details, see “About the Object Pane” on page 43.

Figure 1-8 shows personal filters in the Filter Settings area of the object pane.

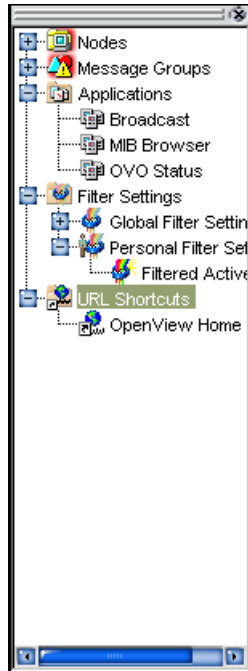
Figure 1-8 Personal Filters in the Filter Settings Area of the Object Pane



About URL Shortcuts

The URL Shortcuts folder in the object tree contains icons for operator-defined URL shortcuts, as shown in Figure 1-9.

Figure 1-9 URL Shortcuts Folder in the Object Tree



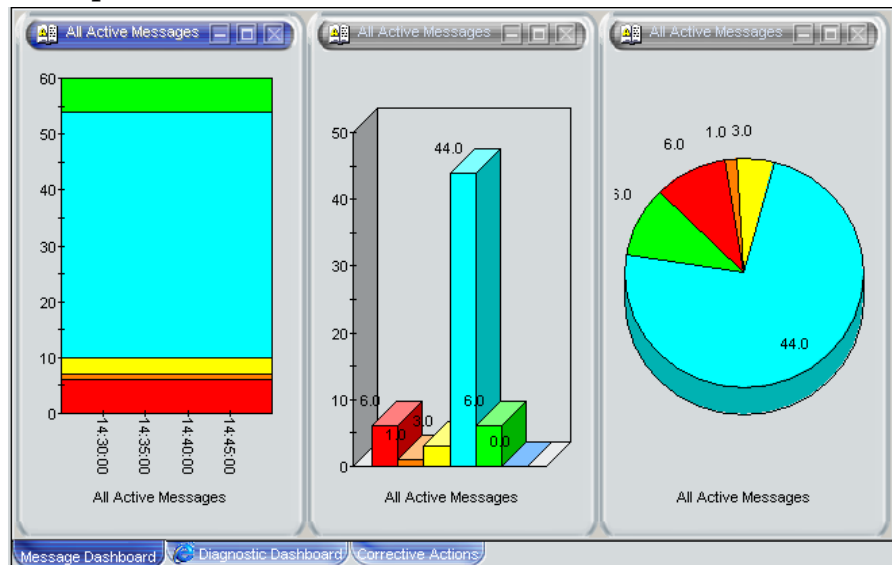
You may have a variety of URLs provided by your OVO administrator. The URL Shortcuts folder enables you to define new shortcuts to URLs that you use frequently. These shortcuts are saved in your personal console sessions files.

About the Workspace Pane

The workspace pane is the third pane below the toolbar, as shown in Figure 1-10. The workspace pane has multiple tabs, each containing one workspace.

Figure 1-10

Workspace Pane



NOTE

For details about popup menus in the workspace pane, see “About the Workspace Pane Popup Menu” on page 85.

By default, the workspace pane contains the following tabbed workspaces:

❑ Message Dashboard

Shows message severity in one of two formats. For details, see “Viewing Message Severity in the Message Dashboard” on page 124.

- ❑ **Services**

Displays only if Service Navigator is installed and configured. For details, see “About the Services Workspace” on page 56.

- ❑ **Diagnostic Dashboard**

For details, see “About the Diagnostic Dashboard Workspace” on page 57.

- ❑ **Corrective Actions**

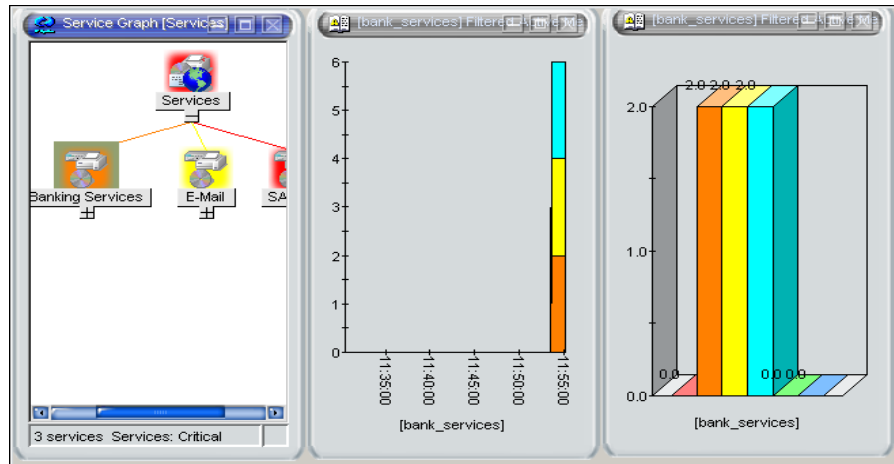
For details, see “About the Corrective Actions Workspace” on page 58.

You can also define your own workspaces, each of which can contain the following:

- ❑ Application output windows
- ❑ Graphs and charts
- ❑ Message browsers
- ❑ Web browsers

Figure 1-11 shows a workspace with a service graph, history graph, and bar chart.

Figure 1-11 Workspace with Graphs and Charts



To logically organize your work, you can define different workspaces for different tasks:

Normal Workspaces

Can contain message browsers, graphs, charts, application outputs, and non-ActiveX web browsers.

ActiveX Workspaces

Can contain only Microsoft Internet Explorer web browsers.

About the Message Dashboard Workspace

You can view message severity in a current state chart or a history chart in the `Message Dashboard` tab of the workspace pane. For details, see “Viewing Message Severity in the Message Dashboard” on page 124.

About the Services Workspace

The `Services` tab is present only if Service Navigator is installed. If Service Navigator is installed, the `Services` tab contains a service graph showing the hierarchical organization of your services and subservices. You can use this tab to start root-cause and impacted-service analyses. For more information about Service Navigator, see Service Navigator documentation.

About the Diagnostic Dashboard Workspace

The Diagnostic Dashboard tab is reserved for other OpenView applications that integrate with OVO.

For example, the following applications provide integration points for OVO:

❑ Performance

HP OpenView Performance for Windows is a scalable, distributed network performance management tool that improves network operations, staff efficiency, and network TCO (total cost of ownership). This tool provides a clear historical view through out-of-the-box reports, as well as insightful capacity planning through trend threshold reports.

❑ Network Neighbor View

The NNM Neighbor Connectivity view shows the neighboring connector devices expanding outward from a node.

❑ Network Path

HP Network Path provides detailed status and performance information about static and dynamic network paths. Path monitoring allows relevant path analysis, based on the applications and protocols in use, and supports duplicate IP and firewall environments.

❑ Internet Services

HP OpenView Internet Services enables enterprises that operate business-critical Internet services (for example, POP3, SMTP, HTTP, HTTPS, FTP, DNS, and so on) to meet their customer needs with 24x7 availability and performance levels that meet or exceed their defined service-level objectives.

Through trend reports and baselines, Internet Services can communicate early warnings to customers before their business is affected. It can also immediately determine which service component is exceeding threshold, and thereby identify the root cause of the problem. With Internet Services, customer care personnel can share with their customers summarized and detailed reports on service-level compliance.

About the Corrective Actions Workspace

The `Corrective Actions` tab enables you to maintain a current and accurate overview of the computing environment by reviewing the status and results of actions. The status of an action is defined as the availability and current state of the action.

The status indicates whether an action:

- Has been configured for the message
- Is still running
- Has been successfully completed
- Has failed

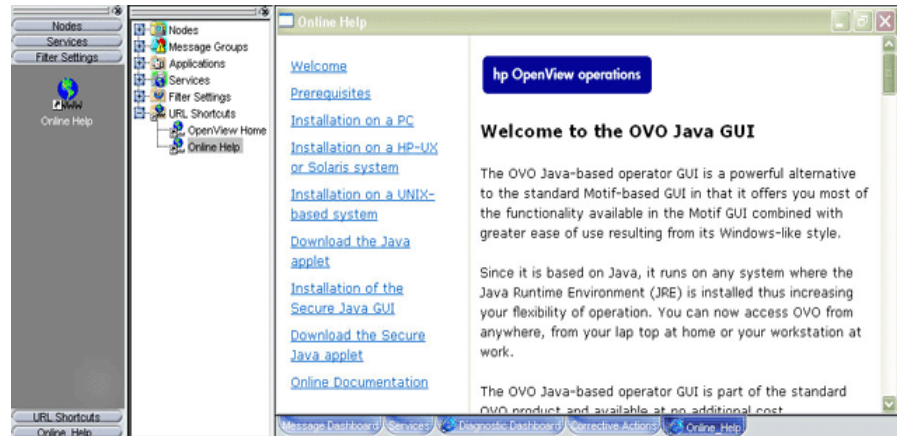
For more information about reviewing action status in the `Corrective Actions` workspace, see “Evaluating Action Results in the `Corrective Actions` Workspace” on page 137.

About the Online Help Workspace

The Online Help workspace contains online documentation for all installed OpenView applications. Figure 1-12 shows how to start the OVO online help in the Online Help workspace from the shortcut bar.

Figure 1-12

Starting Online Help from the Shortcut Bar



NOTE

Online Help workspace is not an operator default assigned by the system; it can be defined by the OVO administrator on the OVO management server. For more information, see “Operator Defaults Assigned by the OVO Administrator” on page 164.

Updating the Current Workspace

Updating the current workspace only applies to applications that are based on evaluating message-related variables. For example, from the `URL Shortcuts` folder, you can define URLs that include message-related variables, then select a message and start the application. When you choose a different message and update the URL application, the message-related variables are re-evaluated based on the currently selected message. You launch the update from a button in the browser pane or the workspace pane of the Java GUI.

NOTE

Updating the current workspace works only if the workspace supports Microsoft Internet Explorer ActiveX controls or the embedded web browser.

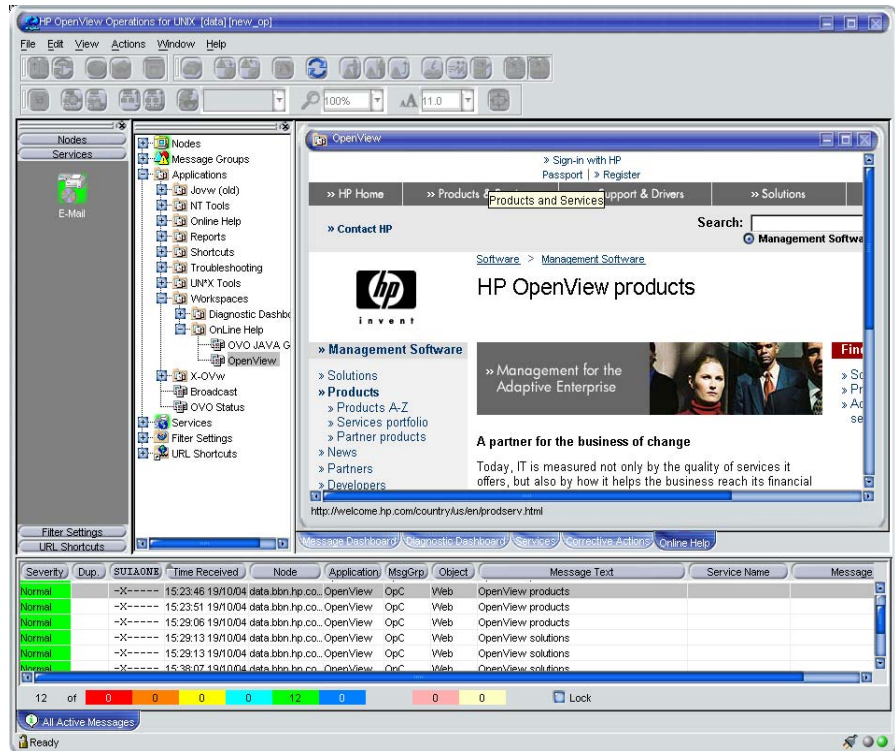
For example, you could set up an application with the following URL:

```
http://www.openview.hp.com/$OPC_MSG.TEXT[2]
```

In this example, messages are sent that include the words `products` or `solutions` as the second word in the message text.

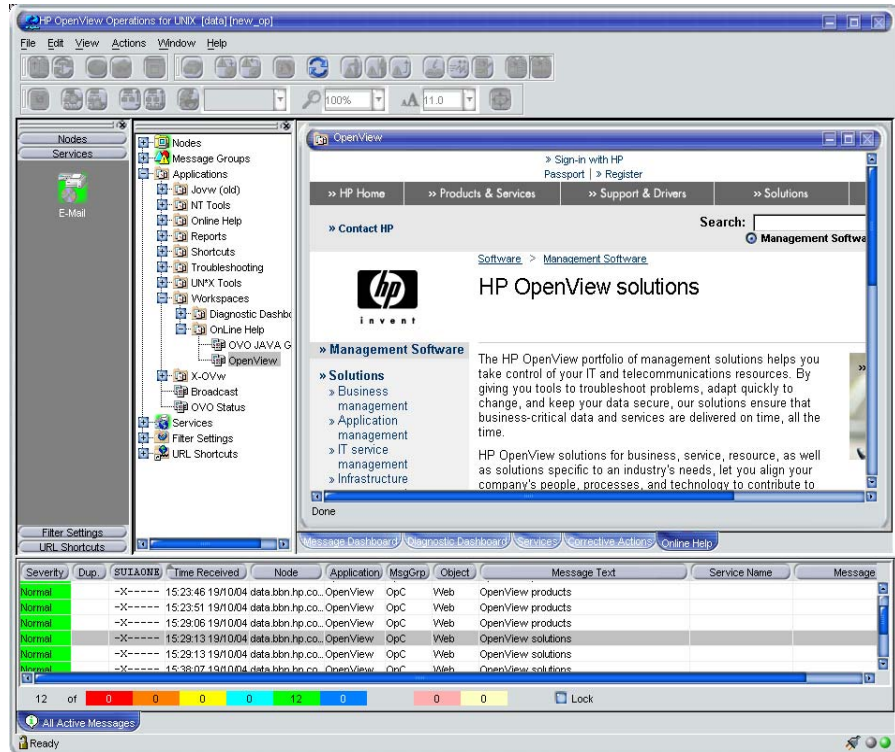
In Figure 1-13, the first message, products, is selected, and the URL application is started.

Figure 1-13 Updating an URL Application for “products”



In Figure 1-14, the second message, solutions, is selected, and the update button is pressed. The URL application is updated with the new message text in the URL.

Figure 1-14 Updating an URL Application for “solutions”



As a result, the following page is loaded:

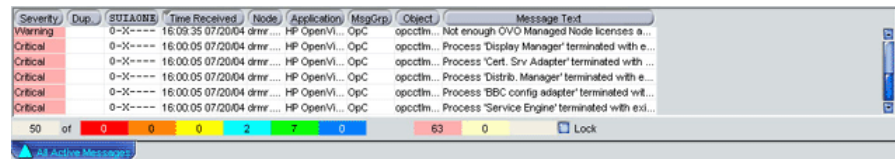
<http://www.openview.hp.com/solutions>

About the Browser Pane

The browser pane is the pane at the bottom of the Java GUI, as shown in Figure 1-15.

Figure 1-15

Browser Pane



The browser pane can have multiple tabs, each containing one message browser. Each tab displays an icon before the name that shows the severity of the most critical message in that message browser. You can change the properties (name, description) of each tab, or delete the tab entirely, along with the corresponding message browser.

NOTE

For an explanation of the critical coloring in the browser pane, see “About Message Fields” on page 475. For details about popup menus in the browser pane, see “About the Browser Pane Popup Menu” on page 87.

The browser pane provides you with quick access to the latest messages. You can easily identify the severity of messages in the browser pane through severity icons on the tabs. You can also switch between different message browsers.

By default, when you start the Java GUI, an All Active Messages message browser is opened in the browser pane. With the first button in the toolbar, you can switch the browser between the browser pane and the workspace pane. For example, you could switch one message browser to the workspace pane, and continue to work there. You could also create a new message browser, then move it to the browser pane so you can always access important messages.

The browser pane is visible by default. You can hide it by deselecting View: Browser Pane in the menu bar. You can make the browser pane visible again by re-selecting this option.

Figure 1-16 shows the browser pane with three message browsers (indicated by tabs).

Figure 1-16 Three Message Browsers in Browser Pane

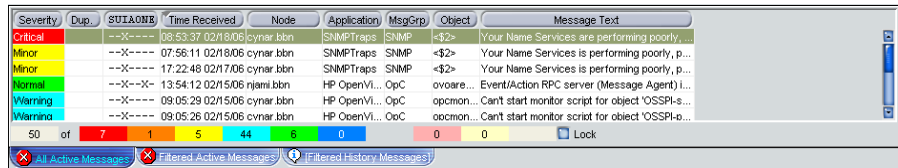
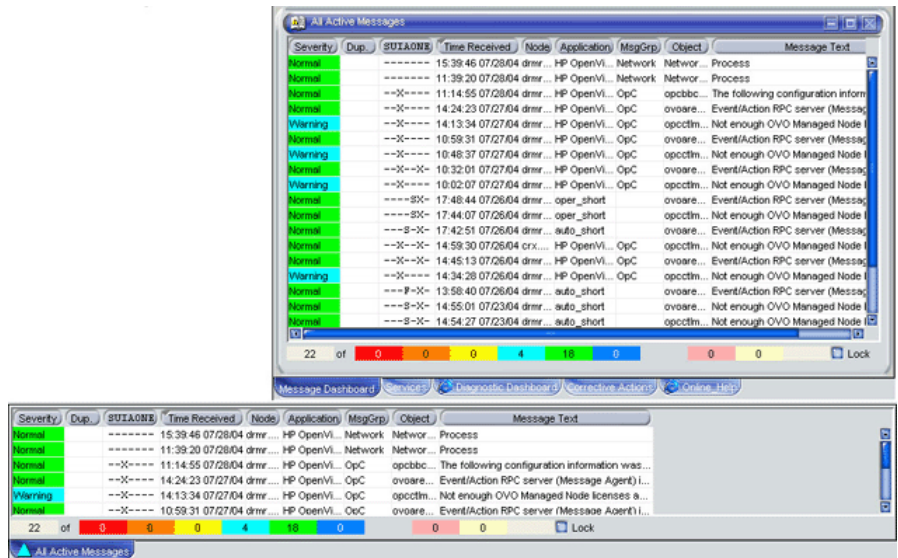


Figure 1-17 shows one message browser moved from the browser pane to the workspace pane.

Figure 1-17 One Message Browser Moved to the Workspace Pane



About the Message Browser

OVO provides information about your managed environment through messages displayed in the message browser. A message represents an event that has occurred on a node within the managed environment (for example, a status change or a threshold violation) generated by the agents running on the node.

The message browser can also display GIF and JPEG images, and URLs as hyperlinks. The images and URLs can be displayed in all fields except in the Severity column, Flags column, and in date and time related columns. All URL texts must start with "http://" to be displayed as hyperlinks.

Figure 1-19 shows the message headline portion of the message browser.

The active message browser, as shown in Figure 1-18, is your unique GUI client (that is, of all active messages for which you are responsible). OVO collects messages from the managed nodes of the message groups assigned to you, and delivers them to your GUI client.

NOTE

Images in the message browser are available only if previously configured by the OVO administrator.

Figure 1-18

Active Messages Browser

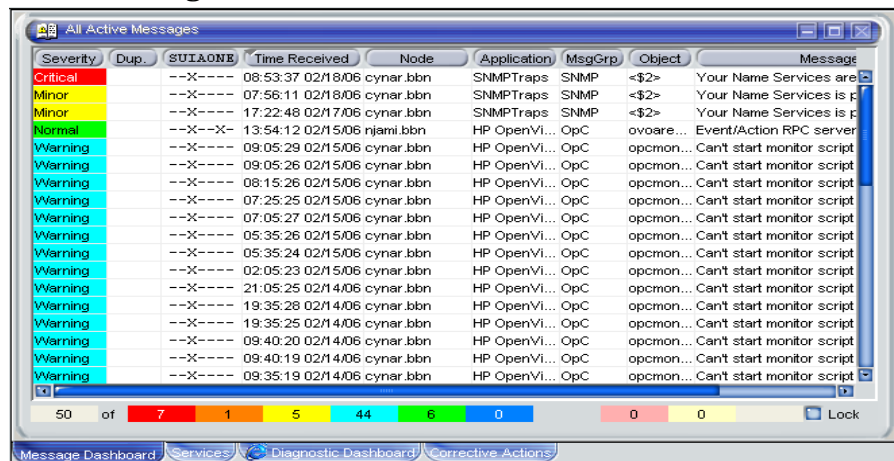


Figure 1-19

Message Browser Headline



To provide you with additional information that will help you solve problems, messages are characterized by attributes summarized in the message browser.

About Message Colors

You use message browsers to review and manage messages, and to guide problem resolution. Incoming messages are displayed with preconfigured attributes and with status information. As with the Nodes and Message Groups folders, the status of a message in the message browsers is indicated by a color, which displays in the Severity column, with red denoting the highest severity level (Critical).

OVO can also be configured to color the entire message line in the browser to provide at-a-glance classification of message severity. For details, see “To Customize the Color Preferences for the Message Browser” on page 287.

To provide you with an even better overview of critical messages, the tabs in the browser pane contain an icon that shows the severity of the most critical message in the corresponding message browser. If the most critical message has a severity of Normal, the tab contains the icon for Normal. The currently selected tab in the browser pane is indicated by a blue background color, as shown in Figure 1-20.

Figure 1-20

Most Critical Coloring of Browser Pane Tabs

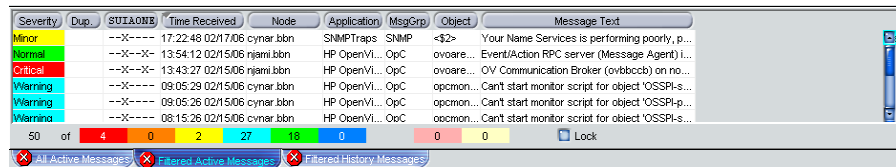
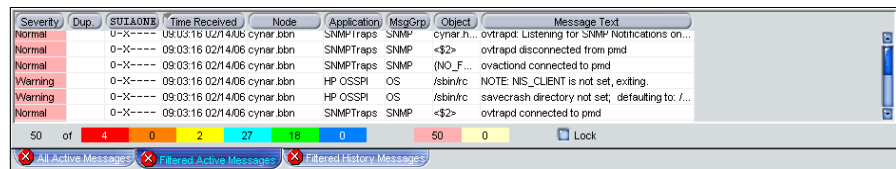


Figure 1-21 shows coloring that is changed after all critical and major messages were unacknowledged in the filtered history message browser.

Figure 1-21

Color Change After Messages Unacknowledged

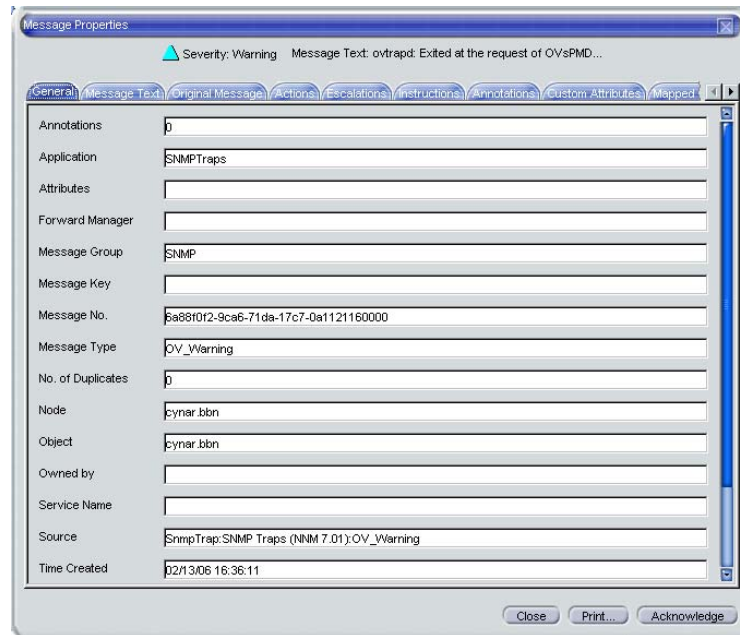


About Messages

You can look at all the details of a single message, and initiate an operator-initiated action to resolve the event that triggered the message. Or OVO can perform an automatic action for you. If necessary, you can restart actions any time, or even stop the execution. You can also print messages, and prepare message reports. In addition, the OVO annotation facility lets you document your actions, and review previous actions in detail. Finally, you can acknowledge messages for which actions have been completed in the message browser.

Double-clicking any message in any of the browsers displays the Message Properties dialog box, as shown in Figure 1-22.

Figure 1-22 Message Properties Dialog Box



This dialog box contains details of the chosen message, and allows *some* operations to be performed. However, the information and operations that are available in the Message Properties dialog box differ according to which browser (active, pending, history) was used to open it.

For example, the Unbuffer Time field displays only if the Message Properties dialog box is opened from the filtered pending messages browser.

About the Filtered Active Message Browser

You can use the filtered active message browser to work with your selected messages in the same way you would in the active message browser. The filtered active message browser is your personally customized presentation of the messages displayed in the active browser. While the active message browser displays every message belonging to your managed nodes and message groups, the filtered active message browser displays only the messages you have configured it to display.

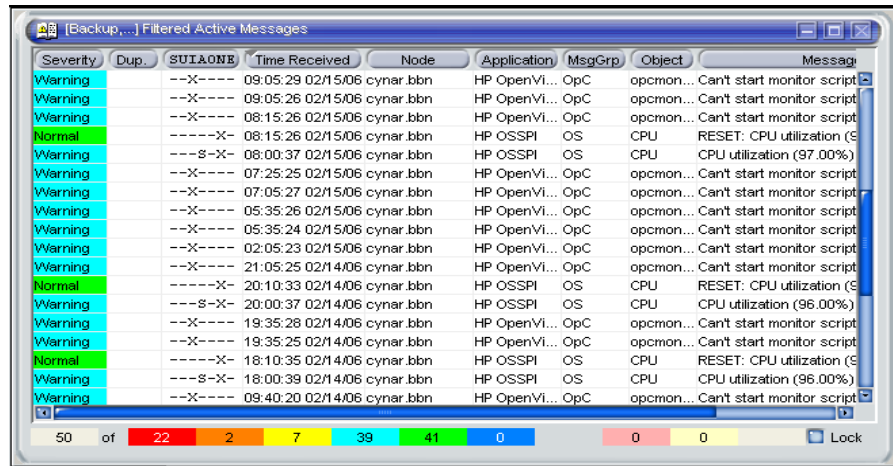
NOTE

You can limit the maximum number of messages loaded into active message browsers. This can be set in the Preferences dialog box in the General tab. See the “About the Preferences Dialog Box” on page 450 for more information.

Figure 1-23 shows active messages in a sample filtered active message browser.

Figure 1-23

Active Messages in a Filtered Active Message Browser



In the filtered active message browser, you can tailor the view so only the most important messages are displayed, and concentrate on messages that need immediate attention:

❑ **Select Specific Messages**

You can select specific messages in the message browser to be displayed in the filtered message browser.

❑ **Define Message Filters**

You can define a filter to display only a subset of the incoming messages.

You can perform the same functions in the filtered active message browser as you can in the active message browser (for example, starting operator-initiated actions or applications on the node that generated the message).

NOTE

To find out how to customize the message browser, see “Customizing the Message Browser Columns” on page 188.

About the Filtered History Message Browser

When a message has been acknowledged, it is removed from the active message browser and put in the history database. The filtered history message browser displays all acknowledged messages in the message groups for which you are currently responsible.

You can use the filtered history message browser to view these messages and unacknowledge them. Examining acknowledged messages can be very helpful when you want to find out more about techniques you used previously to solve problems.

Opening a filtered history message browser may take a long time to complete because history messages are retrieved from the database and not from cache. During the download, the Java GUI cannot be used for other tasks. If you need to access the Java GUI while history messages are being downloaded, cancel the download, and consider changing the filter criteria to better match the history messages you are interested in.

You can also limit the maximum number of messages displayed in a history message browser.

Figure 1-24 shows acknowledged messages in the filtered history message browser.

Figure 1-24

Acknowledged Messages in the Filtered History Message Browser

Severity	Dup.	SUIAONE	Time...	Node	Application	MsgGrp	Object	Message Text
Normal	--X----		15:01:43 1...	beckett.bb...	SNMPTraps	SNMP	<\$2>	Data Collection data event for pingRes
Normal	--X----		14:59:44 1...	beckett.bb...	SNMPTraps	SNMP	<\$2>	Data Collection data event for pingRes
Normal	--X----		14:53:40 1...	beckett.bb...	SNMPTraps	SNMP	<\$2>	Data Collection data event for pingRes
Normal	--X----		14:51:36 1...	beckett.bb...	SNMPTraps	SNMP	<\$2>	Data Collection data event for pingRes
Normal	--X----		14:45:36 1...	beckett.bb...	SNMPTraps	SNMP	<\$2>	Data Collection data event for pingRes
Normal	--X----		14:40:12 1...	beckett.bb...	SNMPTraps	SNMP	/opt/OVbin...	Data Collection statistics file changed
Normal	--X----		14:40:09 1...	beckett.bb...	SNMPTraps	SNMP	<\$2>	ovent disconnected from pmd
Normal	--X----		14:40:09 1...	beckett.bb...	SNMPTraps	SNMP	<\$2>	ovent connected to pmd
Normal	--X----		14:39:34 1...	beckett.bb...	SNMPTraps	SNMP	<\$2>	Data Collection data event for pingRes
Normal	--X----		14:37:34 1...	beckett.bb...	SNMPTraps	SNMP	<\$2>	Data Collection data event for pingRes
Normal	--X----		14:31:34 1...	beckett.bb...	SNMPTraps	SNMP	<\$2>	Data Collection data event for pingRes
Normal	--X----		14:29:34 1...	beckett.bb...	SNMPTraps	SNMP	<\$2>	Data Collection data event for pingRes
Normal	--X----		14:23:33 1...	beckett.bb...	SNMPTraps	SNMP	<\$2>	Data Collection data event for pingRes
Normal	--X----		14:21:30 1...	beckett.bb...	SNMPTraps	SNMP	<\$2>	Data Collection data event for pingRes
Normal	--X----		14:15:25 1...	beckett.bb...	SNMPTraps	SNMP	<\$2>	Data Collection data event for pingRes
Normal	--X----		14:09:12 1...	beckett.bb...	SNMPTraps	SNMP	<\$2>	Data Collection data event for pingRes
Normal	--X----		14:07:11 1...	beckett.bb...	SNMPTraps	SNMP	<\$2>	Data Collection data event for pingRes
Normal	--X----		14:00:43 1...	beckett.bb...	SNMPTraps	SNMP	<\$2>	Data Collection data event for pingRes
Normal	--X----		13:58:43 1...	beckett.bb...	SNMPTraps	SNMP	<\$2>	Data Collection data event for pingRes
Normal	--X----		13:54:43 1...	beckett.bb...	SNMPTraps	SNMP	<\$2>	Data Collection data event for pingRes
Normal	--X----		13:52:43 1...	beckett.bb...	SNMPTraps	SNMP	<\$2>	Data Collection data event for pingRes

50 of 0 0 0 6 308 0

Message Dashboard Services Diagnostic Dashboard Corrective Actions Online Help

NOTE

You can create a new history filter on a selected message. The menu item for creating the new history filter can be accessed in one of the following ways:

- By performing a right-click on the selected message (popup menu).
 - By selecting **Actions: Messages** from the menu bar.
-

About the Filtered Pending Messages Browser

You can start the filtered pending messages browser like any other filtered browser. The filtered pending messages browser shows those messages that have been buffered because they arrived outside a defined period of **service hours**.

If you want to work on a pending message, you must first **unbuffer** it. Unbuffering a message moves the message from the filtered pending messages browser to the active message browser, where operations may be performed in the usual way. You can perform a limited set of actions on messages in the filtered pending messages browser. For example, you can save and print messages, or unbuffer and acknowledge messages.

CAUTION

Although you can acknowledge pending messages, and add or modify their annotations, it is better to perform operations on messages only when they are in the active message browser.

Sometimes, the filtered pending messages browser may not contain any messages, for one of two reasons:

❑ **Within Service Hours**

You are currently operating within service hours, and all messages arrive in the active message browser.

❑ **Outside Service Hours**

Your OVO administrator may not have configured OVO to buffer messages outside service hours.

NOTE

The severity level of messages in the filtered pending messages browser does not affect status propagation in the Nodes and Message Groups folders, and so on.

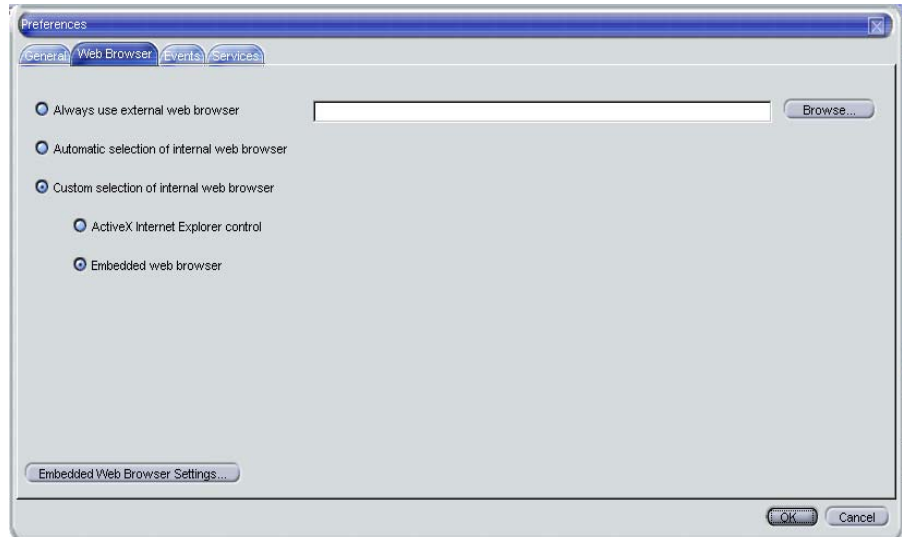
About Integrated Web Browsers

Instead of running an external web browser in the background, you can run your favorite web browser from within the OVO Java GUI itself. As a result, you can access intranet sites, search the Internet for business-related information, and view your OVO message browsers from within a single, integrated interface. Integrated web browsers display in the workspace pane of the OVO Java GUI.

You set your web browser preferences in the **Web Browser** tab of the Preferences dialog box, as shown in Figure 1-25.

Figure 1-25

Web Browser Tab in Preferences Dialog Box



You can choose any one of the following types of browsers:

External Web Browser

You can access an external web browser, such as Microsoft Internet Explorer or Netscape Communicator.

ActiveX Control

You can access Microsoft Internet Explorer ActiveX controls by creating special ActiveX tabs in the Workspace Properties dialog box, as shown in Figure 1-26. Make sure the Is ActiveX Container checkbox is selected.

Embedded Web Browser

You can access an embedded web browser, as shown in Figure 1-27 on page 76. You can also set proxy servers for the embedded web browser, as shown in Figure 1-28 on page 76. When you restart the Java GUI, your new web browser and proxy settings are read from the itooprc file in your home directory. For an overview of the itooprc file, see “About the itooprc Resource File” on page 507.

Figure 1-26 Defining ActiveX Workspace in Workspace Properties Dialog Box

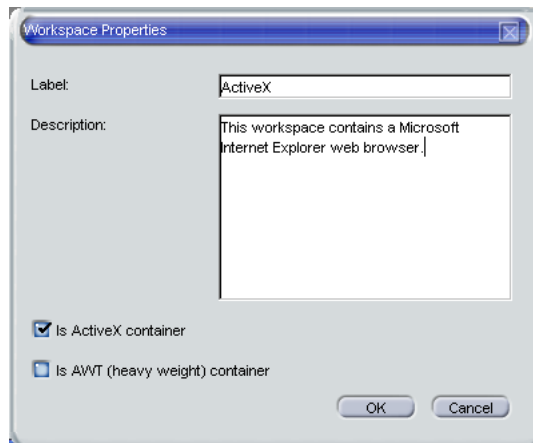


Figure 1-27 Embedded Web Browser

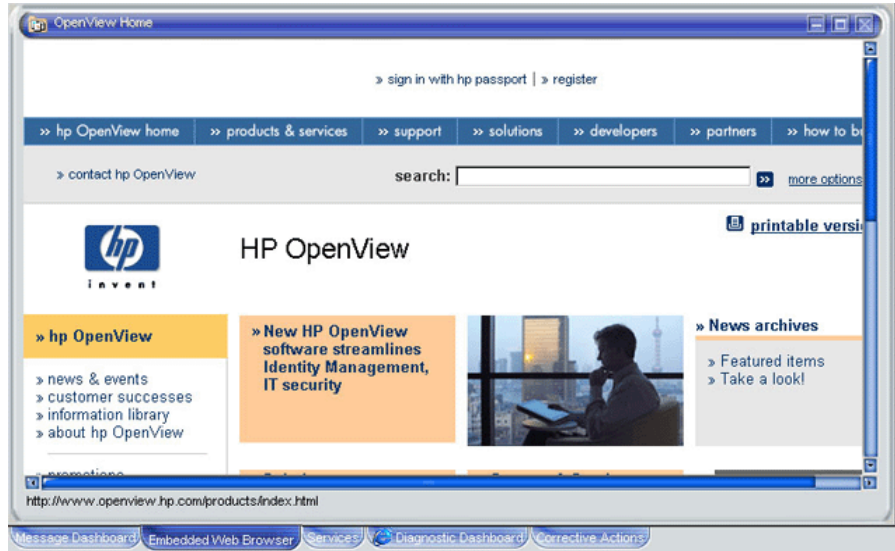


Figure 1-28 Proxy Authentication



About the Status Bar

The Java GUI status bar, at the bottom of the message browser, displays the information on the current status of the Java GUI. The following information is available from the status bar:

- ❑ The status of the secure link (SSL) between the management server and the Java GUI client; enabled or disabled. The default is disabled SSL, signified by an open lock in the far left corner of the status bar.
- ❑ All actions currently performed in the Java GUI. When no actions are being performed, the Java GUI is in the idle state and Ready is displayed in the left corner of the status bar.
- ❑ The maximum number of messages that the message browser is configured to display, displayed in the right corner of the status bar.
- ❑ The status of the communication between the Java GUI and the management server, and the status of loading services from the management server.

The gray indication light changes to yellow when services are retrieved from the management server. No service related actions can be performed during this time.

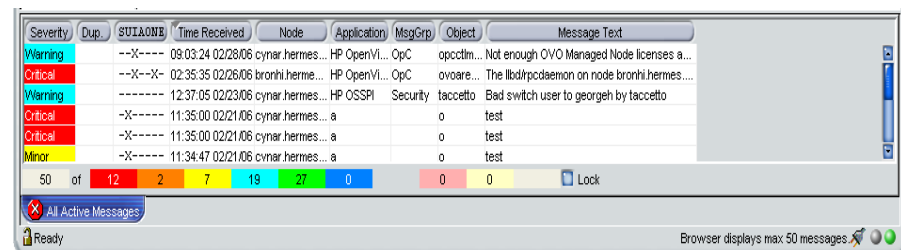
The green indication light changes to red to indicate that the communication between the Java GUI and the management server is in progress.

The indication lights are placed in the far right corner of the status bar.

Figure 1-29 shows the Java GUI status bar with indicators.

Figure 1-29

Status Bar



About the Menu Bar

The menu bar is the strip of pulldown menus at the very top of the Java GUI, as shown in Figure 1-30. You can use these menus to perform operations throughout the Java GUI.

Figure 1-30

Menu Bar



About the Toolbar

The toolbar is the row of icons just below the menu bar, as shown in Figure 1-31. The toolbar provides menu choices that apply to the objects in the object pane, workspace pane, and browser pane.

Figure 1-31

Toolbar



NOTE

For a description of the workspace pane, see “About the Workspace Pane” on page 53.

The toolbar is divided into the following components:

- Message Browser Toolbar
- Message Toolbar
- Service Toolbar

You can reposition these components in a particular order, or you can hide any of them. For more details, see “To Customize the Toolbar” on page 273.

About Go to Service

The `Go to Service` drop-down list is a part of the `Service Toolbar`. It contains a list of all services currently present in the `Java GUI cache`, which can be displayed within the selected service graph. You can use the `Go to Service` drop-down list for navigating only within service graphs.

When you select a service in the list, and then click the `[Go to Service]` toolbar button, the service is displayed in the center of a service graph surrounded by its neighboring services.

NOTE

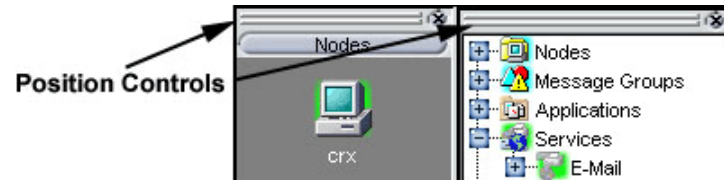
The `Go to Service` drop-down list is available only from the toolbar.

About the Position Controls

The position controls are the narrow band of horizontal bars just below the toolbar, as shown in Figure 1-32. These bars enable you to move the shortcut bar and object pane horizontally.

Figure 1-32

Position Controls



By default, the position controls are hidden. You can make them visible by selecting **View: Position Controls** in the menu bar. Likewise, when the position controls are visible, you can hide them again by deselecting **View: Position Controls** in the menu bar.

Types of Popup Menus

OVO provides popup menus for each major area of the Java GUI:

❑ **Shortcut Bar**

For an overview of popup menus in the shortcut bar, see “About the Shortcut Bar Popup Menu” on page 83.

For an overview of the shortcut bar itself, see “About the Shortcut Bar” on page 41.

❑ **Object Pane**

For an overview of popup menus in the object pane, see “About the Object Pane Popup Menu” on page 84.

For an overview of the object pane itself, see “About the Object Pane” on page 43.

❑ **Workspace Pane**

For an overview of popup menus in the workspace pane, see “About the Workspace Pane Popup Menu” on page 85.

For an overview of the workspace pane itself, see “About the Workspace Pane” on page 53.

❑ **Browser Pane**

For an overview of popup menus in the browser pane, see “About the Browser Pane Popup Menu” on page 87.

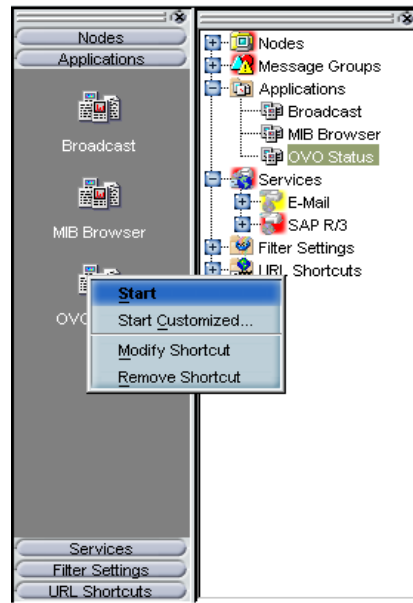
For an overview of the browser pane itself, see “About the Browser Pane” on page 63.

About the Shortcut Bar Popup Menu

Figure 1-33 shows a popup menu for a selected application in the shortcut bar. To access this menu, right-click any shortcut bar item.

Figure 1-33

Popup Menu for a Selected Application in the Shortcut Bar



NOTE

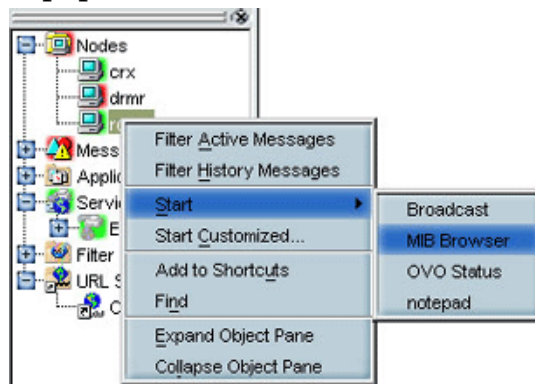
For a description of the shortcut bar, see “About the Shortcut Bar” on page 41.

About the Object Pane Popup Menu

The object pane popup menu differs, depending on which object is selected. For example, the popup menu for services is different from the popup menu for a node.

Figure 1-34 shows how to generate a predefined report from the popup menu in the object pane. To access this menu, right-click any object pane item.

Figure 1-34 **Popup Menu for a Particular Node in the Object Pane**



NOTE

For a description of the object pane, see “About the Object Pane” on page 43.

About the Workspace Pane Popup Menu

The workspace pane contains two kinds of popup menus:

- ❑ **Tab Menu**

To access this menu, right-click a tab at the bottom of the workspace pane, as shown in Figure 1-35.

- ❑ **Workspace Menu**

To access this menu, right-click a workspace in the workspace pane, as shown in Figure 1-36 on page 86.

Figure 1-35

Popup Menu on a Tab in the Workspace Pane

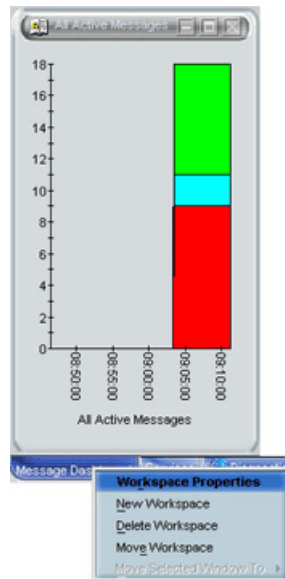
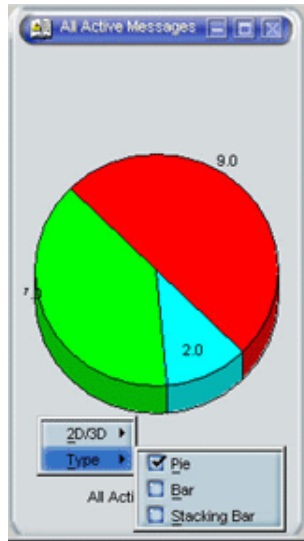


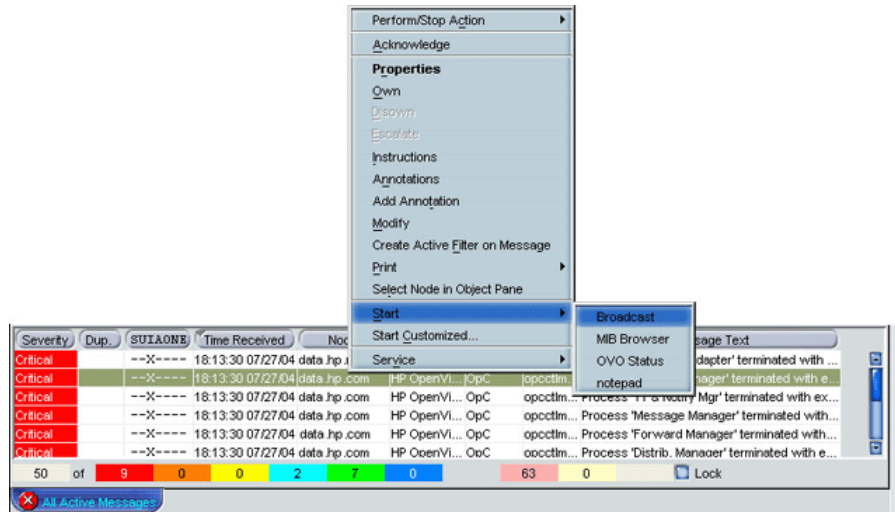
Figure 1-36 **Popup Menu on a Workspace Pane**



About the Browser Pane Popup Menu

Figure 1-37 shows the context sensitive popup menu for application launch in the browser pane. To access this menu, right-click a message in the browser pane.

Figure 1-37 Starting an Application from a Message Browser Popup Menu



NOTE

For a description of the browser pane, see “About the Browser Pane” on page 63.

Creating the OVO GUI Startup Message

According to the NIST 800-37 standard, usage and criticality of any application should be acknowledged before its startup. This is achieved with warning message displayed before the application is started.

You can create the OVO GUI startup message that contains your own text, as well as to enable and disable this message.

IMPORTANT

It is possible to customize, edit or change the status of OVO GUI startup message only as the user `root`.

The OVO GUI startup message displays, if it is enabled, after the login window. If the agreement defined in this message is accepted, OVO starts. Otherwise, the login sequence is stopped immediately.

If the OVO GUI startup message is disabled, OVO starts right after the login window.

For more information on OVO GUI startup message creation, and the prerequisites that have to be taken into account, refer to *OVO Administrator's Reference*.

Performing Drag and Drop Operations

Drag and drop operations simplify work with the Java GUI. Java GUI supports the following drag-and-drop operations:

- ❑ Drag and Drop Operations Inside the Java GUI
- ❑ Drag and Drop Operations Between Java GUI and Other Applications

NOTE

Drag operations in Java GUI are performed in two different modes, depending on the object that is being dragged. For mode details on drag modes, see “Drag Modes” on page 97.

Drag and Drop Operations Inside the Java GUI

You can perform these operations through the concept of the following categories:

- ❑ **Sources**

Java GUI areas from which you can drag the objects.

- ❑ **Targets**

Java GUI areas where you can drop the dragged objects.

Table 1-1 on page 90 shows sources and targets where the drag-and-drop operations are supported. For every source-target pair where drag-and-drop is supported, there are underlying actions associated with these operations. See “Sources and Standard Drag Operation” on page 90 and “Targets and Drop Associated Actions” on page 91 for the description of these actions.

Table 1-1 Supported Drag and Drop Operations

Targets Sources	Shortcut bar	Workspace pane	Workspace tab	Object pane	Filter dialog box
Object pane	✓	✓	✓	N/A	✓
Shortcut bar	✓	✓	✓	N/A	✓
Workspace tab	N/A	N/A	✓	N/A	N/A
Client window	N/A	N/A	✓	✓	N/A
Service graph	✓	✓	✓	N/A	✓

Sources and Standard Drag Operation

All Java GUI areas from which you can drag the objects are marked as sources.

NOTE

Objects dragged from the sources are not necessarily displayed in the same way for every target. The way they are displayed depends on the action associated with the particular source-target pair. See “Targets and Drop Associated Actions” on page 91 for more information about the actions performed as a result of drag and drop operations.

When you start dragging an object, the mouse cursor changes to reflect the current status of the operation and shows whether it is possible to drop the object on a target.

However, there are special cases when you *cannot* use a standard drag operation. For more information, see “Special Mode Cases” on page 98.

NOTE

It is possible to drag more than one object from source to target simultaneously.

Targets and Drop Associated Actions

All Java GUI areas where you can drop the dragged objects are marked as targets. Dropping objects is associated with actions that are described in the following tables. These show possible sources and actions for every target.

NOTE

Most actions associated with dropping objects are also available from the popup and other menus of particular target areas.

❑ Shortcut bar

Table 1-2 **Shortcut Bar Drop Actions**

Source	Dropped Object	Associated Action
Object pane	All	Adds an object as a shortcut into the shortcut bar.
Shortcut bar	All	Repositions shortcuts inside the shortcut bar.
Service graph	Service	Creates a new shortcut for service and adds it to the shortcut bar.

There are a number of areas where objects can be dropped within a shortcut bar. These are the following:

- **Shortcut pane**

Object dropped anywhere inside the shortcut pane, except between two shortcuts, displays as a shortcut appended to the end of the shortcut pane.

- **Shortcut pane, between two shortcuts**

Object dropped between two shortcuts displays as a shortcut inserted at the position indicated by a visible 'insert line'.

- **Shortcut group button**

When you drop an object on a shortcut group button, a shortcut group opens. The dropped object displays as a shortcut appended at the end of the shortcut group.

Hovering with the mouse for a short while over a shortcut group button opens the shortcut group. This helps you to choose a suitable shortcut group to drop the object on.

- **Scroll buttons**

Hovering with the mouse over a scroll button results in scrolling up or down, depending on the scroll button that you are hovering over. This helps you to choose a position for the object to be dropped where there are many shortcuts present in a shortcut bar.

NOTE

Using drag and drop operations, you can reposition shortcuts in a shortcut bar.

❑ **Workspace pane**

Table 1-3 Workspace Drop Actions

Source	Dropped Object	Associated Action
Object pane and shortcut bar	Nodes	Opens an Active Filtered Browser in a workspace.
	Node groups	
	Message groups	
	Filters	
	Root service	Opens a service graph.
	Services	
	Applications	Starts an application and opens it in a workspace.
	URL shortcuts	Starts a web browser in a workspace.
Browser pane tab		Repositions message browser from browser pane to the workspace.
Service graph		Opens a service graph in a workspace.

❑ **Workspace tab**

Table 1-4 Workspace Tab Drop Actions

Source	Dropped Object	Associated Action
Workspace tab		Switches source and target tabs.
Client window	All	Moves a client window from current to the target workspace.

Hovering with the mouse for a short while over a workspace tab opens the corresponding workspace. This help you to choose a suitable workspace to drop the object on.

When you drop an object on a non-selected workspace tab, the tab is selected and the workspace containing a client window created by dropping the object opens.

NOTE

You can reposition workspaces from a workspace tab popup menu using the Move Workspace option.

❑ **Browser pane**

Table 1-5 Browser Pane Drop Actions

Source	Dropped Object	Associated Action
Object pane and shortcut bar	Nodes	Opens an Active Filtered Browser in a browser pane.
	Node groups	
	Message groups	
	Filters	
Client window	Message browser	Repositions message browser from workspace to the browser pane.

NOTE

You can open a message browser directly in the browser pane when you drop an object on it.

❑ **Object pane**

Table 1-6 Object Pane Drop Actions

Source	Dropped Object	Associated Action
Client window	Embedded web browser	Creates a new URL shortcut and adds it to the object pane.
	Message browser	Creates a new personal filter from message browser and adds it to the object pane.

❑ **Filter dialog box**

Table 1-7 Filter dialog box Drop Actions

Source	Dropped Object	Associated Action
Object pane and shortcut bar	Nodes	Adds node names into the list in the Symbols and Objects tab.
	Node groups	
	Message groups	Adds a message group name into the list in the Symbols and Objects tab.
	Root service	Adds a service name into the list in the Symbols and Objects tab.
	Services	
	Filters	Copies all filter setting properties from object pane item to a dialog box.
Service graph		Adds a service name into the list in the Symbols and Objects tab.

Drag and Drop Operations Between Java GUI and Other Applications

You can drag and drop a Java GUI message browser to other applications running on the system.

NOTE It is *not* possible to transfer data from other applications to the Java GUI message browser.

Figure 1-38 presents a message browser text in Microsoft Excel.

Figure 1-38 Message Browser Text in Microsoft Excel

	A	B	C	D	E	F	G	H	I	J	K
1	Severity	Dup.	SUIAONE	Time Received	Node	Application	MsgGrp	Object	Message Text		
2	Normal	--X---		20.8.2003 15:03	integra	SNMPTraps	SNMP	integra	Map Synchronization Completed on m		
3	Warning	--X---		20.8.2003 17:05	integra	OpC	OS	swap_dis	SWAP Utilization (100.00%) is greater		
4	Warning	--X---		21.8.2003 17:11	integra	HP OpenView	OpC	opcctlm	The 'HP OpenView Operations Emerge		
5	Warning	--X---		22.8.2003 17:11	integra	HP OpenView	OpC	opcctlm	The 'HP OpenView Operations Emerge		
6	Minor	--X---		23.8.2003 13:13	integra	SNMPTraps	SNMP	<\$2>	Your Name Services is performing poo		
7	Minor	--X---		24.8.2003 13:13	integra	SNMPTraps	SNMP	<\$2>	Your Name Services is performing poo		
8	Warning	--X---		25.8.2003 22:22	integra	SNMPTraps	SNMP	integra	Error receiving SNMPv1 event from ovtr		
9	Normal	--X---		26.8.2003 15:32	integra	SNMPTraps	SNMP	192.168.2	Net added		
10	Normal	--X---		26.8.2003 15:32	integra	SNMPTraps	SNMP	192.168.1	Seg flags INVISIBLE		
11	Normal	--X---		26.8.2003 15:32	integra	SNMPTraps	SNMP	192.168.2	Seg added		
12	Warning	--X---		27.8.2003 11:42	integra	SNMPTraps	SNMP	integra	Error receiving SNMPv1 event from ovtr		
13	Minor	-X----		29.8.2003 16:00	integra	app		obj	minor_message		
14	Major	-X----		29.8.2003 16:13	integra	app		obj	major_message		
15	Major	-X----		29.8.2003 16:13	integra	app		obj	major_message		
16	Major	-X----		29.8.2003 16:13	integra	app		obj	major_message		
17	Major	-X----		29.8.2003 16:13	integra	app		obj	major_message		
18	Normal	-X----		29.8.2003 16:26	integra	app		obj	normal_message		
19	Normal	-X----		29.8.2003 16:26	integra	app		obj	normal_message		
20	Normal	-X----		29.8.2003 16:26	integra	app		obj	normal_message		
21	Normal	-X----		29.8.2003 16:26	integra	app		obj	normal_message		
22	Warning	---R---		29.8.2003 17:00	integra	app		obj	warning_message		
23	Warning	---R---		29.8.2003 17:00	integra	app		obj	warning_message		

To save data to files that can be attached to emails and other documents, choose **Export** from the Java GUI **File** menu.

Drag Modes

The following drag modes exist for drag and drop operations:

❑ **Normal mode**

A standard drag operation. See “Sources and Standard Drag Operation” on page 90 for more information.

❑ **Special drag mode**

This mode is used for the special cases when it is not possible to use a standard drag operation. For information about these cases, see “Special Mode Cases” on page 98.

To invoke the special drag mode, perform the following:

1. Select the client window where the dragging will be performed.
2. Place the mouse cursor inside the client window and press [CTRL]+[D].

When this mode is on, a mouse cursor changes from an ‘arrow’ to a ‘hand’, and behaves as in a standard drag operation.

The special drag mode automatically changes to a normal drag mode after performing the drop operation, or by moving the mouse outside the client window where dragging in special mode was performed. You can also turn to normal mode by pressing [CTRL]+[D] again.

Special Mode Cases

A special drag mode must be used when dragging the following:

❑ Client windows

A client window can be any kind of window that can be opened in the workspace (except ActiveX web browser). The following types of client windows exist:

- ❑ Application Output Panel
- ❑ Message Browser Charts
- ❑ Embedded Web Browser
- ❑ Message Browser
- ❑ Service Graph (including Service Impact Graph and Service Root Cause Graph)
- ❑ Service Submap and Custom Map

Client windows can be moved only within the workspace using a standard drag operation. To drag them outside the workspace, you must invoke a special drag mode. To learn how to invoke the special drag mode, see “Drag Modes” on page 97.

A mouse drag inside the window starts a drag and drop operation.

❑ Services in service graphs and maps

Services can be moved only within the service graph or map using a standard drag operation. To enable services to be dropped outside service graph or map, you must invoke a special drag mode. To learn how to invoke the special drag mode, see “Drag Modes” on page 97.

These are possible ways how you can perform the drag operation:

NOTE

You can perform the drop operation depending on the target location that you choose. For more information on supported source-target pairs, see “Drag and Drop Operations Inside the Java GUI” on page 89.

- **Dragging selected services**

If you have one or more services selected, dragging one of them will move all selected services to a target location.

- **Dragging non-selected services**

If you drag a non-selected service, even though there might be some services selected, only the non-selected service will be moved to a target location.

NOTE

If you drag an area surrounding the services, an entire service graph or map, similarly as any other client window, will be moved to a target location.

About the Problem Solving Process

The OVO problem solving process includes the following steps:

1. Detecting Problems

OVO enables you to automatically detect problems in the message browsers and the object pane, review messages and node status, and direct problem management activities. OVO notifies you when problems occur, and indicates exactly where the problems are located.

For details, see “Detecting Problems in Your Environment” on page 102.

2. Investigating Problems

The most common indication of a problem in your managed environment is a message in your message browser. The message indicates where and why a problem occurred, and suggests what you should do to resolve the problem.

For details, see “Investigating Problems in Your Environment” on page 116.

3. Solving Problems

After you have been notified of a problem and have investigated its cause, the following tools are available to help you solve it, if they have been configured and assigned to you by the OVO administrator:

- Applications
- Automatic actions
- Broadcast commands
- Operator-initiated actions
- Operator instructions
- Message escalations
- Terminal access

For details, see “Solving Problems in Your Environment” on page 133.

4. Documenting Solutions

After you have completed work on a message, you should document your efforts and remove the message from the active message browser, the filtered active message browser, or the filtered pending messages browser. To do this, you use message annotations to record how a problem was resolved, and then acknowledge the message to remove it from the current work area, storing it in the history database.

For details, see “Documenting Solutions in Your Environment” on page 152.

Detecting Problems in Your Environment

OVO enables you to automatically detect problems in the message browsers and in the `Nodes` and `Message Groups` folders in the object pane, review messages and node status, and direct problem management activities. OVO notifies you when problems occur, and indicates exactly where the problems are located.

This section includes the following information to help you understand how OVO notifies you of a problem:

- ❑ **Monitoring Your Environment**
Explains how OVO highlights the node that generated a message.
- ❑ **Searching the Object Pane**
Explains how you can use the search function to identify the node you are looking for.
- ❑ **About Message Event Notification**
Explains how you handle message event notification.
- ❑ **Viewing Messages in the Message Browser**
Explains how you view messages in the message browser.
- ❑ **Browsing Messages Effectively**
Explains how you use message browsers to identify messages that indicate a problem.
- ❑ **About Message Severity Coloring**
Explains how OVO uses colors to indicate severity levels.

Monitoring Your Environment

To monitor your OVO managed environment, you can view message nodes, search the object pane, and respond to message event notifications:

- ❑ **View a Message Node Manually**

You can manually access and view a message node in the shortcut bar and object pane. For details, see “To View a Message Node Manually” on page 201.

- ❑ **View a Message Node Automatically**

You can automatically access and view a message node associated with a problem you have already detected. For details, see “To View a Message Node Automatically” on page 202.

- ❑ **Search the Object Pane**

You can search for a specific item in the object tree using the basic search function or the advanced search function. For details, see “Searching the Object Pane” on page 104.

- ❑ **View Message Event Notifications**

You can automatically access and view a message associated with a problem you have already detected. For details, see “About Message Event Notification” on page 106.

Searching the Object Pane

You can search for a specific item in the object tree using the basic search function or the advanced search function in the `Find` dialog box.

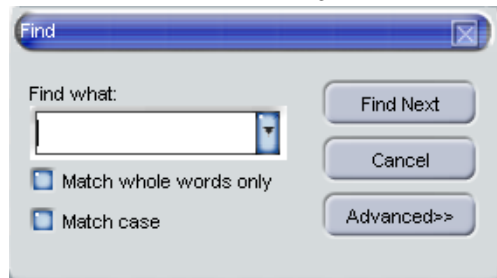
NOTE

To find out how to use the search function, see “To Search the Object Pane” on page 202.

The basic search enables you to search the entire object tree, as shown in Figure 1-39.

Figure 1-39

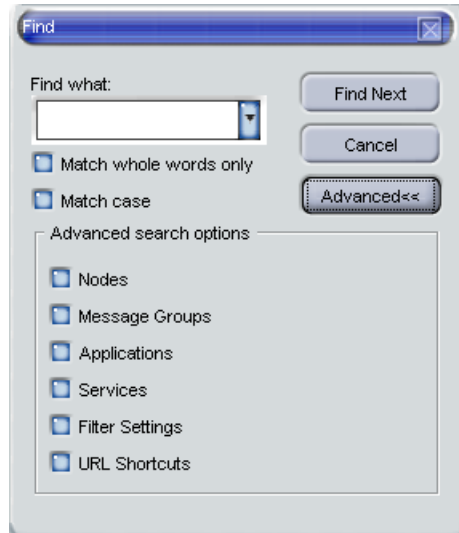
Basic Search of the Object Tree



The advanced search enables you to search selected sections of the object tree, as shown in Figure 1-40.

Figure 1-40

Advanced Search of the Object Tree



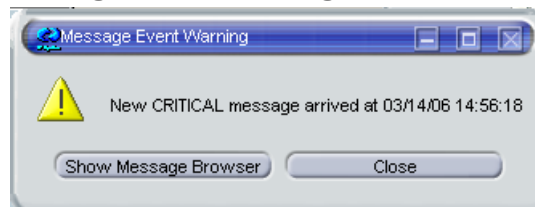
In both cases, the search begins at the top of the object tree, rather than from the selected item.

About Message Event Notification

Message event notification keeps you informed about new messages with high severity. This notification is especially helpful if you have many windows opened simultaneously, or if there are a lot of new messages with low severity coming in. Figure 1-41 shows a message event warning.

Figure 1-41

Message Event Warning



To find out what to do when a message event notification dialog box opens, see “To View Message Event Notifications” on page 203. To find out how to customize message event notification, see “Customizing Message Event Notification” on page 180.

Viewing Messages in the Message Browser

When you start the OVO GUI, a message browser opens in the browser pane, and automatically displays all active messages from the nodes assigned to you. You can change the number of messages displayed so that only the latest messages are shown. To further narrow your view of the messages in the message browser, you can open filtered message browsers that display only messages matching your selected view filters.

By disabling an autoscroll feature, you can make sure that old messages you currently work on remain visible in the message browser while new messages are arriving.

To find out how to view all, selected, filtered or old messages in the message browser, see “Viewing Messages” on page 204.

Browsing Messages Effectively

The message browsers provide you with the following information:

- ❑ What the problem is
- ❑ How serious the problem is
- ❑ Which preconfigured actions you can use to correct the problem

When you browse messages, you scan the message browsers for incoming messages, looking for important information requiring your attention. A good scanning policy makes your message-management tasks easier, and it makes you a more effective operator. To develop a scanning policy, you determine which messages are most important to your environment.

This section explains how to do the following:

- ❑ **Scanning Messages in the Message Browsers**

Using priorities and policies to scan messages in the message browsers or reading each message as it is displayed in the message browsers.

- ❑ **Customizing Browser Columns to be Displayed**

Selecting message attributes (set by the OVO administrator) to reflect your personal scanning policy.

Scanning Messages in the Message Browsers

As an example of message scanning, you might scan messages in the message browsers using the following priorities and policies:

Severity

Use the severity flags to search for messages indicating problems. Color-coded severity levels help you do this quickly.

Actions

Search for messages indicating started operator-initiated actions.

Failures

Search for messages indicating that automatic or operator-initiated actions have failed. Restart the actions to try again.

Procedures

Search for messages that have no configured action, but require a response from you to correct a problem.

Ownership

Search for messages owned by you.

Custom Message Attributes

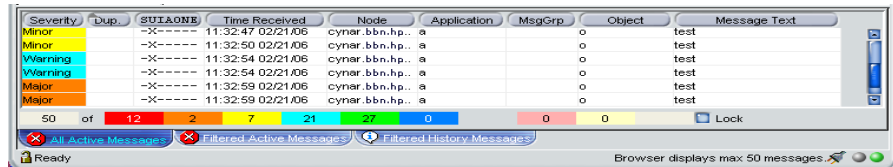
Search for messages that have a specific attribute chosen by the administrator (for example, a customer name, the type of Service Level Agreement, and so on).

Another approach is to read each message as it is displayed in the message browsers. If you decide to follow this approach, you should be aware that your environment could require you to apply different policies to your message scanning.

The total number of messages relating to each severity level or ownership state displays in the corresponding segment of each color bar.

The severity and the ownership color bars, and the view identifier that specifies which filters you have chosen to display messages, are shown in Figure 1-42.

Figure 1-42 Reviewing Message Number and Ownership



NOTE

The ownership display mode determines whether colors are used to indicate message ownership. This mode also determines whether the ownership-state color bar displays in the message browsers. For more information about the ownership display mode, see “About Message Ownership” on page 135.

By checking the color bars beneath the message buffer, you can use the message browsers to see how many messages relate to a given severity level, or are owned or marked by you or another user.

NOTE

For a description of message severity colors, see “About Message Colors” on page 67.

If you want node status to be the first priority of your scanning policy, you can use the Nodes folder in the object tree together with the message browsers. If OVO is configured to do so, the icon of each node in the object tree changes color, reflecting the highest severity level of a message issued by that node. These colors also correspond with the colors used in the severity column of the message browsers. For example, if you notice that a node’s icon has changed to red (Critical), scan the message browsers for messages with the status color red.

Customizing Browser Columns to be Displayed

You can use the Customize Message Browser Columns dialog box to select message attributes (set by the OVO administrator) that reflect your personal scanning policy. You *cannot* use the Customize Message Browser Columns dialog box to remove either the severity or the ownership columns from the message browsers.

The Customize Message Browser Columns dialog box has two tabs:

General

Enables you to select from default message attributes, as shown in Figure 1-43 on page 111.

Custom

Enables you to select custom message attributes previously set by the OVO administrator, as shown in Figure 1-44 on page 112. For an overview of custom message attributes, see “About Custom Message Attributes” on page 121.

Figure 1-43 shows the General tab of the Customize Message Browser Columns dialog box.

Figure 1-43 General Tab in the Customize Message Browser Columns Dialog Box

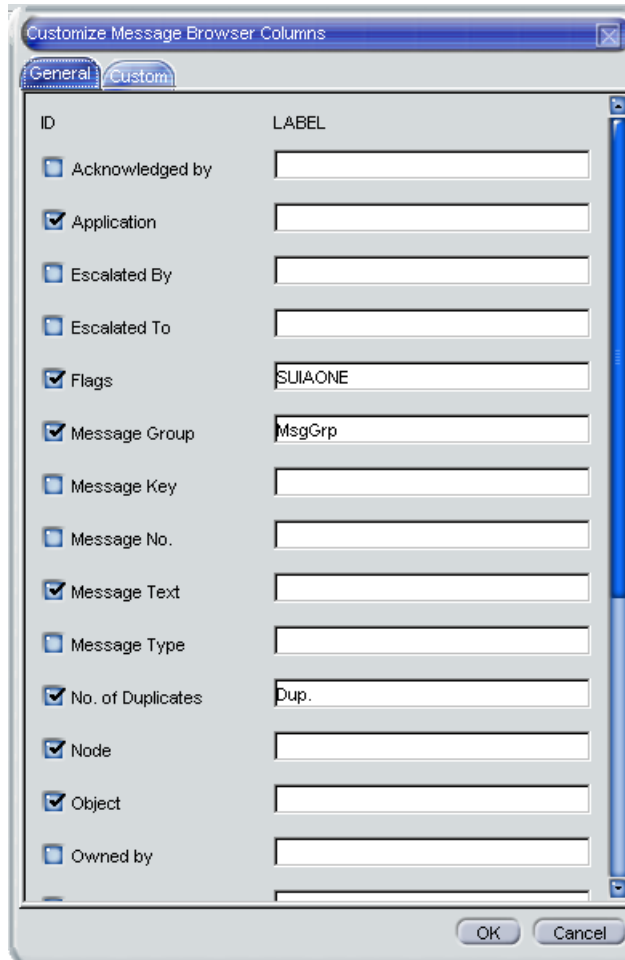
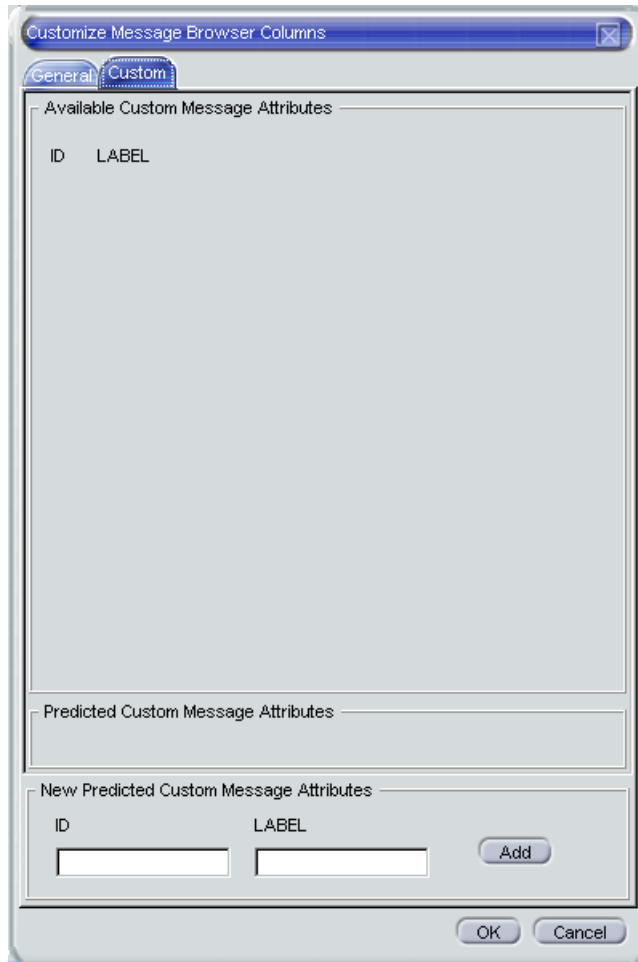


Figure 1-44 shows the Custom tab of the Customize Message Browser Columns dialog box.

Figure 1-44 Custom Tab in the Customize Message Browser Columns Dialog Box



About Message Severity Coloring

The severity of the most critical message determines the color of the following Java GUI containers:

❑ **Shortcut Bar**

For details about coloring in the shortcut bar, see “Coloring in the Shortcut Bar and Object Pane” on page 113.

For an overview of the shortcut bar itself, see “About the Shortcut Bar” on page 41.

❑ **Object Pane**

For details about coloring in the object pane, see “Coloring in the Shortcut Bar and Object Pane” on page 113.

For an overview of the object pane itself, see “About the Object Pane” on page 43.

❑ **Browser Pane**

For details about coloring in the browser pane, see “Coloring in the Browser Pane” on page 115.

For an overview of the browser pane itself, see “About the Browser Pane” on page 63.

Coloring in the Shortcut Bar and Object Pane

In the shortcut bar (see Figure 1-45 on page 114) and object pane (see Figure 1-46 on page 114), the following elements are colored with the severity color of the most critical message:

- ❑ Nodes
- ❑ Message groups
- ❑ Services (if Service Navigator is installed)

If the most critical message has a severity of `Normal`, the element that contains it is not colored. For example, if a node in the shortcut bar and object pane contains nothing but messages with a severity of `Normal`, the node is not colored. Then, if a `Critical` message arrives, the color of the node changes to red, indicating that you need to solve a `Critical` problem on this node.

Figure 1-45 **Coloring of Nodes in the Shortcut Bar**

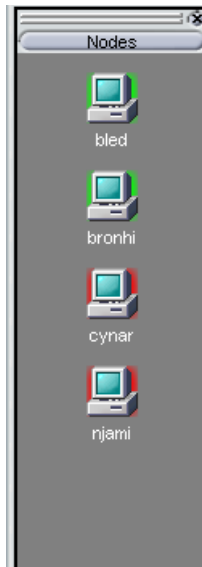
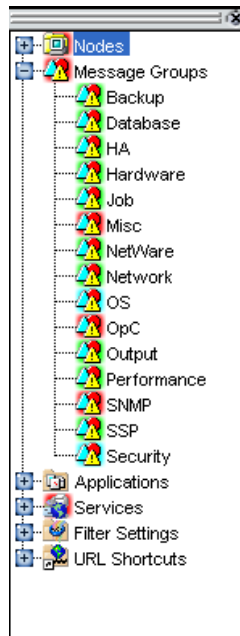


Figure 1-46 **Coloring in the Object Pane**



Coloring in the Browser Pane

In the browser pane, the tabs contain an icon that shows the severity of the most critical message in the corresponding message browser. If a message with a higher severity arrives in the message browser, the icon on the tab changes to reflect the new severity. For example, if a tab in the browser pane contains nothing but messages with severity of `Normal`, the tab shows the icon representing the severity `Normal`. Then, if a `Critical` message arrives, you see the icon of the tab change to reflect the new severity, indicating that you need to solve a `Critical` problem on this node.

NOTE

For more information about coloring in the browser pane, see “About Message Colors” on page 67.

Investigating Problems in Your Environment

The most common indication of a problem in your managed environment is a message in your message browser. The message indicates where and why a problem occurred, and suggests what you should do to resolve the problem. Not all messages represent problems. For example, a message about a user login merely notifies you of the fact that a user has logged into a system.

This section includes the following information to help you understand how OVO notifies you of a problem:

- ❑ **Investigating Problems with the Message Browser**
Explains how you can get basic information about a message by reviewing the message in the workspace pane or the browser pane. Also explains how you can view detailed information about a message by reviewing the Message Properties dialog box.
- ❑ **Examining Message Attributes**
Explains how you can access details about a message, and what the message attributes tell you about a message.
- ❑ **Modifying Message Attributes**
Explains when and how you would modify message attributes to make the message more meaningful.
- ❑ **Reviewing the Original Message Text**
Explains how to display the original, unfiltered text of a message.
- ❑ **Adding OVO Variables**
Explains message attributes, including custom message attributes, that can be used in applications.
- ❑ **About Custom Message Attributes**
Explains what custom message attributes are, and how you can review them.
- ❑ **Viewing Message Severity in the Message Dashboard**
Explains how to view message severity in one of two formats.

❑ **Finding Impacted Service Navigator Services with the Services Workspace**

Explains how Service Navigator helps you identify impacted services.

❑ **Using OpenView Products in the Diagnostic Dashboard**

Explains how you can use integrated products to identify a problem.

❑ **Investigating Message Histories**

Explains how message histories help you find the solution to a problem.

❑ **Investigating Pending Messages**

Explains when you should work on pending messages.

Investigating Problems with the Message Browser

You can investigate problems with the message browser as follows:

❑ **Basic Information**

You get basic information about a message by reviewing the message in the workspace pane or the browser pane. Only the most important information is shown. For details, see “Viewing Messages in the Message Browser” on page 212.

You can modify and even forward the message to another operator or to the OVO administrator. For details, see “To Send a Message to Another Operator” on page 212.

❑ **Detailed Information**

You view detailed information about a message by reviewing the Message Properties dialog box. There you can view all information associated with a message, including instructions, annotations, and any configured actions. For details, see “To View Detailed Message Information” on page 213.

Examining Message Attributes

The key information in the message browsers is the incoming messages. Each line of the message buffer displays a single message and its attributes. Reading and understanding the attributes is as important as reading the message text.

Double-clicking a message opens the `Message Properties` dialog box. The `Message Properties` dialog box contains the full details of a message, including all message attributes, as shown in see Figure 1-22 on page 68.

From this dialog box, you can implement the problem-solving actions indicated in the message browsers. For example, you can perform operator-initiated actions, view available instructions or annotations, or acknowledge the message. As an added convenience, you can print messages from the dialog box.

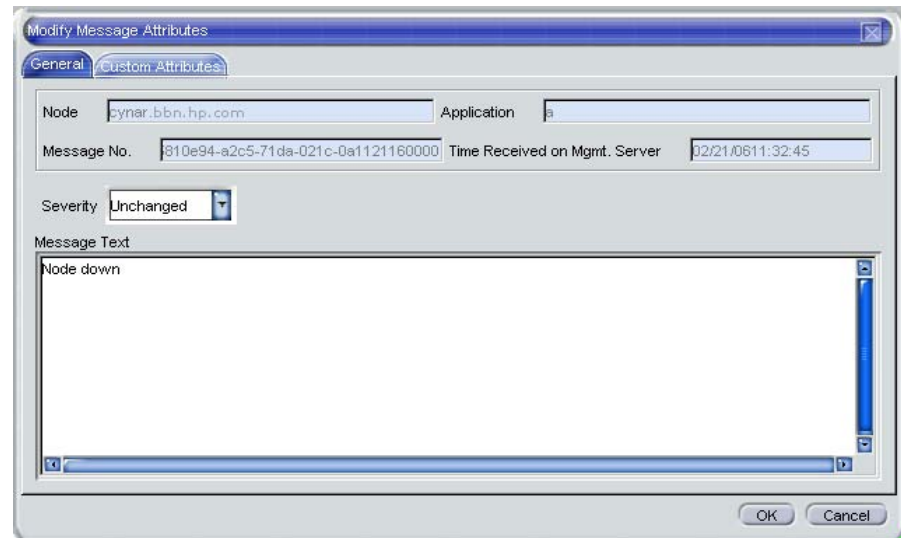
The `[Modify...]` button is displayed only if you have been granted the right to modify the attributes of a message.

Modifying Message Attributes

The `Modify Message Attributes` dialog box enables you to modify the severity and the text of a message, as shown in Figure 1-47.

Figure 1-47

Modify Message Attributes Dialog Box



Use this dialog box if you want to increase or decrease the severity of a message, or add more detailed text before you escalate a message.

In the `Modify Message Attributes` dialog box, the original message text is not changed, only the message text as it is presented by OVO. All modifications are tracked through automatic annotations.

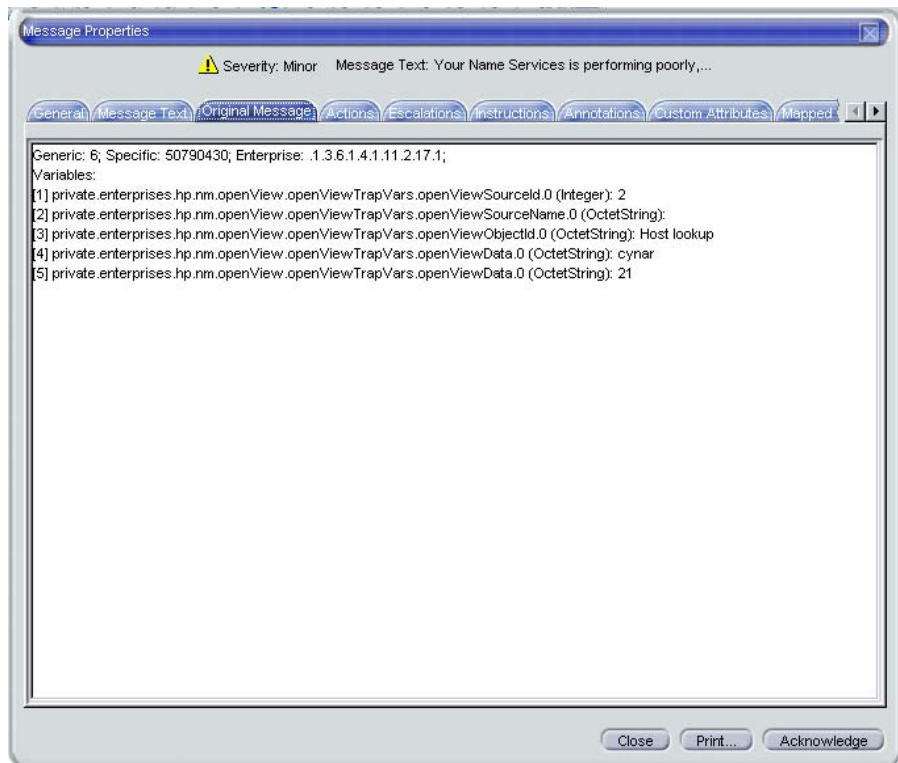
Reviewing the Original Message Text

Displaying the original, unfiltered message text may be useful when the message text in the Message Properties dialog box proves to be unhelpful.

Figure 1-48 shows an example of the Original Message tab in the Message Properties dialog box.

Figure 1-48

Original Message Tab in the Message Properties Dialog Box



NOTE

If the message does not have any original message text, the Original Message tab is empty.

About Custom Message Attributes

Custom message attributes are message attributes that the OVO administrator defines for a message. These attributes can convey any kind of information, whatever the administrator thinks useful. Typical custom message attributes are, for example, `Customer` for a customer name or `SLA` for service level agreements.

OVO enables you to review these custom message attributes in the following windows:

❑ **Message Browser** (optional)

Custom message attributes are displayed as additional columns in the message browser windows. For details, see “Viewing Custom Message Attributes” on page 122.

❑ **Message Properties** (default)

You can view currently available custom message attributes in the `Custom Attributes` tab.

You can sort messages in the browser according to custom message attributes. You can open a filtered browser based on the custom message attributes.

NOTE

You can also use custom message attributes as message-related variables, which are used for application launch, operator-initiated actions, and message event notification actions. The custom message attributes are used as input launch parameters. For more information about message related variables, see “Adding OVO Variables” on page 148.

Viewing Custom Message Attributes

If you have enabled the display of custom message attributes in your message browser, they display as additional columns in your browser windows, as shown in Figure 1-49.

Figure 1-49 Custom Message Attribute as a Column in the Message Browser

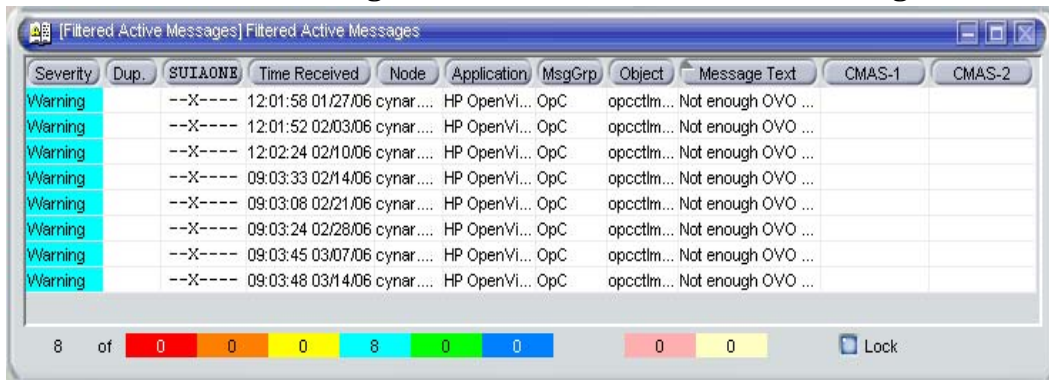
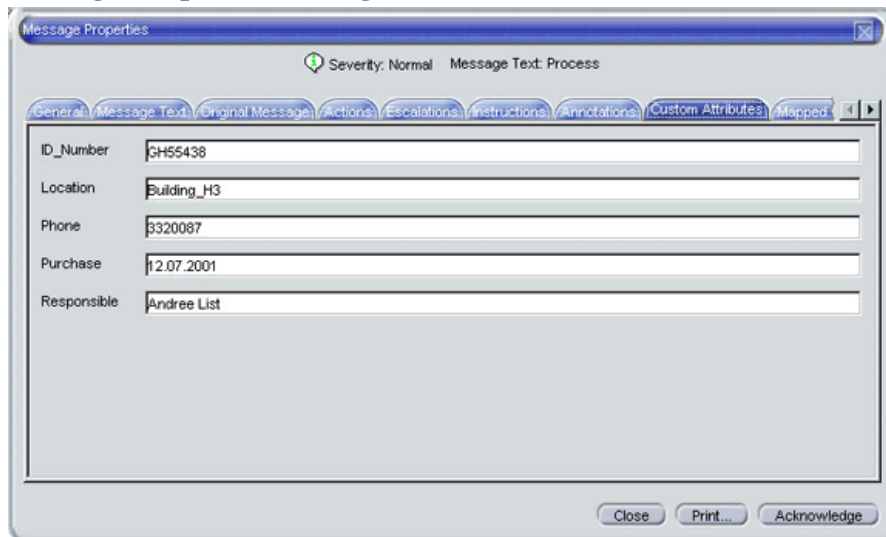


Figure 1-50 shows the Message Properties dialog box with a Custom Attributes tab for available custom message attributes.

Figure 1-50 Message Properties Dialog Box with Custom Attributes Tab



Investigating Problems with the Workspace Pane

You can use the workspace pane to investigate problems as follows:

❑ **Message Dashboard**

You can view message severity in the `Message Dashboard` workspace. For details, see “Viewing Message Severity in the Message Dashboard” on page 124.

❑ **Services**

If `Service Navigator` is installed and configured on your system, a `Services` tab displays in the workspace pane. You can use the `Services` tab to get impacted service analysis.

❑ **Diagnostic Dashboard**

You can use the `Diagnostic Dashboard` to access other OpenView applications integrated with OVO. These applications help you to further diagnose the problem. For details, see “Using OpenView Products in the Diagnostic Dashboard” on page 129.

Viewing Message Severity in the Message Dashboard

In the `Message Dashboard` tab of the workspace pane, you can view message severity in one of two formats:

❑ **Current State Chart**

Displays the severity of all messages in the currently selected message browser.

For details, see “About the Current State Chart” on page 125.

❑ **History Chart**

Displays the severity changes over time of all messages in the currently selected message browser.

For details, see “About the History Chart” on page 127.

You can switch between these two charts by using `Switch to Current State Chart` and `Switch to History Chart` icons in the toolbar. You can also open a new message browser with the same filter as the original browser from the message browser, current state chart, or history chart.

For example, you could switch an active message browser to a current state chart to get a quick overview of the severities of the current messages. Then you could open a new message browser to compare the pie chart with messages. You could also analyze messages in the history message browser. Finally, you could switch to the history chart, where you would see that many critical messages arrived at a specific day or hour, and see that no more critical messages arrived after the problem was resolved.

About the Current State Chart

The current state chart displays the severity of all messages in the currently selected message browser. The messages are grouped by severity, which is color-coded. The chart can be displayed as a pie chart or a bar chart in two- or three-dimensional formats.

Figure 1-51 shows a current state chart, formatted as two-dimensional (2D) bar chart, displaying a number of messages with a specific severity.

Figure 1-51

Current State Chart as a Bar Chart

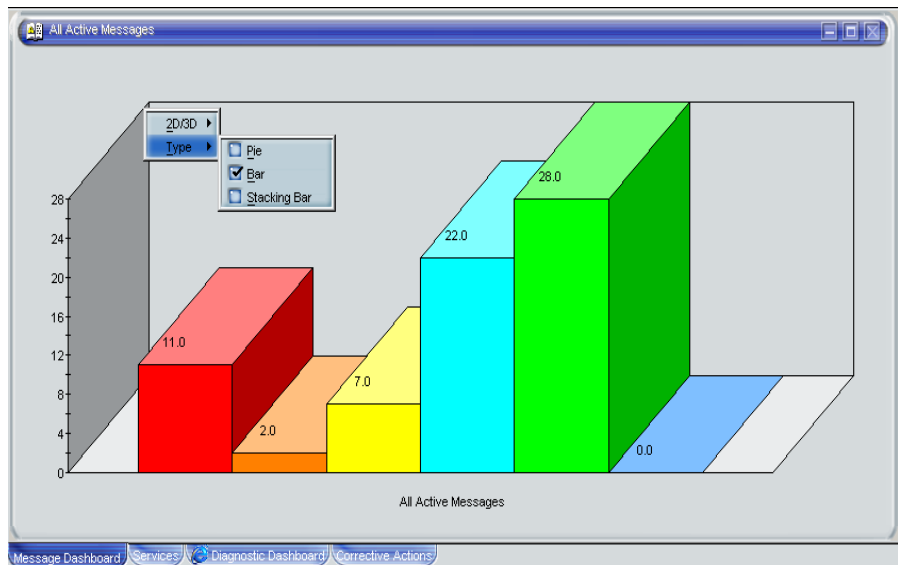
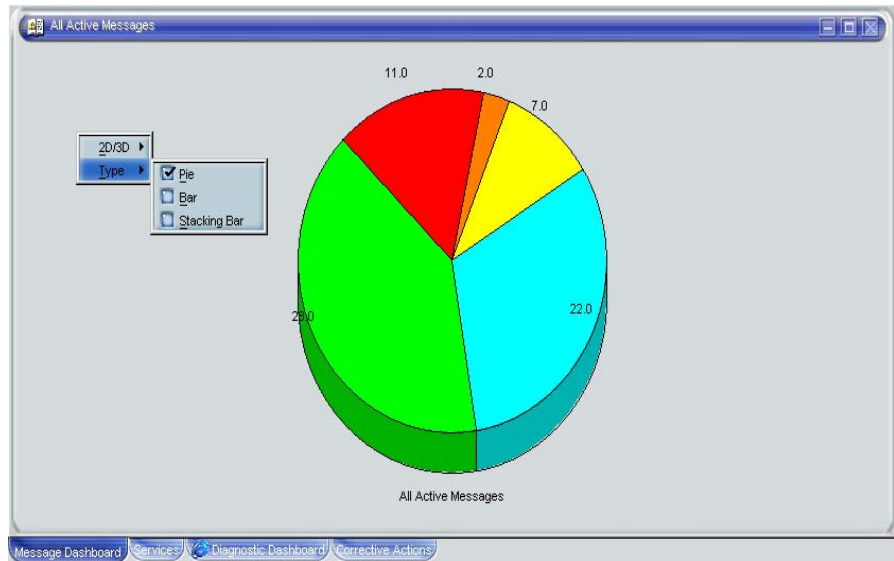


Figure 1-52 shows a current state chart of all active messages, formatted as a two-dimensional (2D) pie chart with a popup menu.

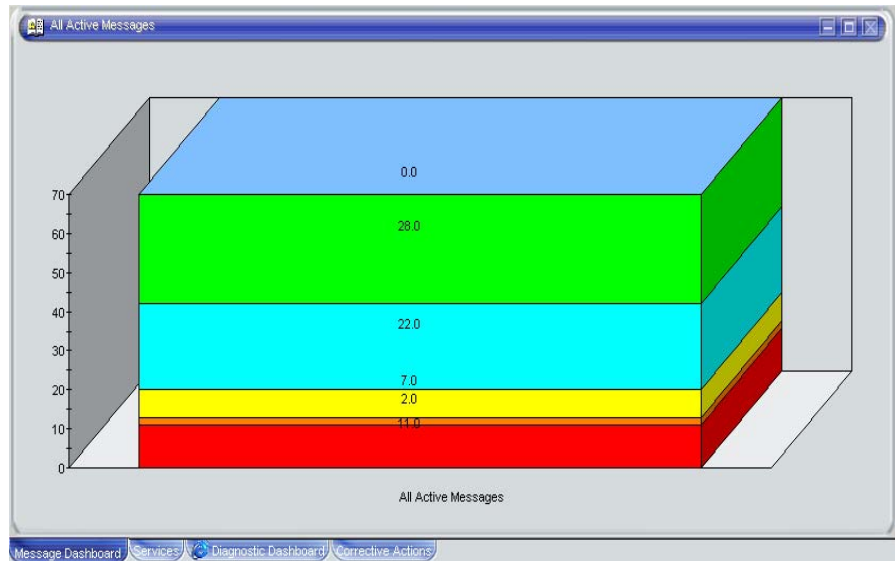
Figure 1-52 Current State Chart as a Pie Chart



About the History Chart

The history chart displays the severity changes over time of all messages in the currently selected message browser, as shown in Figure 1-53.

Figure 1-53 History Graph Shows Severity Changes over Time



The messages are grouped by severity and time interval, from the earliest to latest message. These groups are connected with lines and displayed in the color of the corresponding severity.

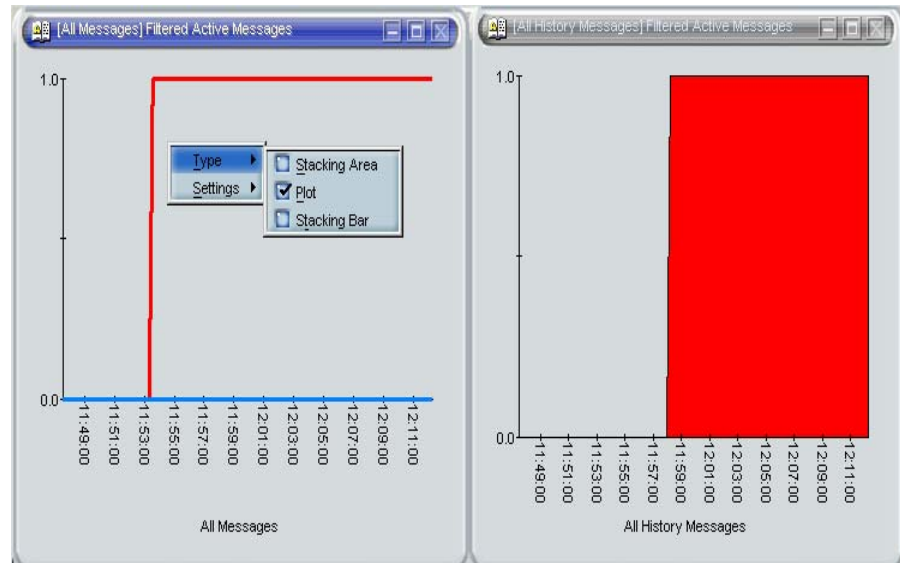
From the popup menu in the history chart, you can choose any one of three formats for the history chart:

- Stacking Area
- Plot
- Stacking Bar

All three types are displayed in two-dimensional (2D) format only.

Figure 1-54 shows two history graphs with an associated popup menu.

Figure 1-54 Two History Graphs and an Associated Popup Menu



Finding Impacted Service Navigator Services with the Services Workspace

If Service Navigator is installed and configured on your system, a `Services` tab displays in the workspace pane. You can use the `Services` tab to get impacted service analysis.

Using OpenView Products in the Diagnostic Dashboard

Additional OpenView applications may be installed on top of OVO. If these additional OpenView applications are installed and configured, you can access them in the `Diagnostic Dashboard` tab of the workspace pane. For details, see “About the Diagnostic Dashboard Workspace” on page 57. To find out how you can use these applications to investigate a problem further, see the documentation of the respective application.

Investigating Message Histories

As shown in Figure 1-24 on page 71, the filtered history message browser displays all **acknowledged** messages. Acknowledged messages are all messages for which you have completed work, or that have been sent to the history database by OVO.

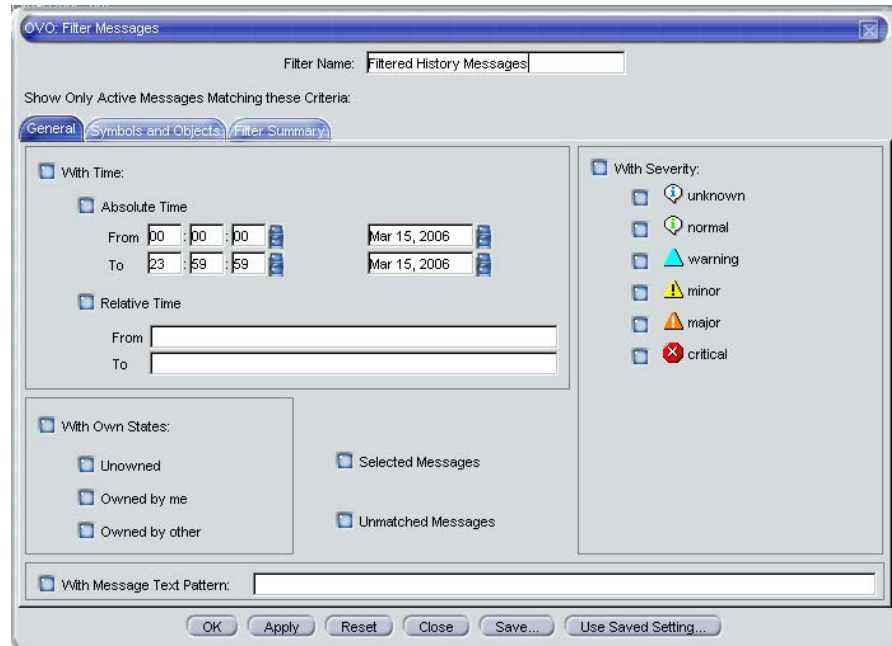
NOTE

For details about the filtered history message browser, see “About the Filtered History Message Browser” on page 71. For more information on message acknowledgment and automatic acknowledgments, see “Documenting Solutions in Your Environment” on page 152.

Use the filtered history message browser as a resource for solving problems. For example, if you are not sure how to perform an action for a message, you can review the history data for occurrences of the same or similar messages. By reviewing techniques used to solve previous problems (often stored as annotations to a message), you can devise a plan to solve your current problem. The OVO administrator can run reports to determine which messages occur more frequently, so automatic and operator-initiated actions or instructional text are available to help solve the problems that are generating the messages.

You use the `Filter Messages` dialog box to define a set of filters, and to open the filtered history message browser, as shown in Figure 1-55.

Figure 1-55 **Filter Messages Dialog Box**



NOTE

The `With Time` checkbox is in the selected state by default to avoid accidentally opening a history browser with an excessive number of messages.

After you have configured the filtered history message browser to display the desired information in the desired way, you can use the `Save Browser Filter Settings` dialog box to save the settings for reuse. In this way, you can see the same or similar information at a later date without having to repeat the configuration process.

For more information on the `Save Browser Filter Settings` and the `Browser Settings` dialog boxes, see “Customizing the Message Browser Columns” on page 188.

Investigating Pending Messages

The filtered pending messages browser displays all messages that arrive on the OVO management server outside of defined **service hours**. They remain on the management server until a defined unbuffer time has been reached.

You can do the following with **pending messages**:

❑ **Acknowledge**

Messages are moved to the filtered history message browser.

❑ **Unbuffer** (manually or automatically)

Messages are moved to the active message browser.

NOTE

For details about the filtered pending messages browser, see “About the Filtered Pending Messages Browser” on page 73.

Solving Problems in Your Environment

After you have been notified of a problem and have investigated its cause, the following tools are available to help you solve it, if they have been configured and assigned to you by the OVO administrator:

- ❑ Applications
- ❑ Automatic actions
- ❑ Broadcast command
- ❑ Operator-initiated actions
- ❑ Operator instructions
- ❑ Message escalation
- ❑ Terminal access

This section includes the following information to help you understand how OVO helps you solve a problem:

- ❑ **About Message Ownership**
Explains the effect message ownership has on your capabilities to work on a message.
- ❑ **Evaluating Action Results in the Corrective Actions Workspace**
Explains where and how you would evaluate results of automatic actions.
- ❑ **Reviewing and Rerunning Automatic Actions**
Explains the nature of automatic actions, and when you would rerun them.
- ❑ **Starting and Reviewing Operator-initiated Actions**
Explains how to work with operator-initiated actions.
- ❑ **Reading Operator Instructions**
Explains how to read and follow operator instructions.
- ❑ **Starting and Customizing Applications**
Explains how to start and customize applications.

- ❑ **Operating with the Java GUI From Other Java Applications**
Explains how to use certain Java GUI features remotely from other Java applications.
- ❑ **Adding OVO Variables**
Explains how to use OVO variables in application calls.
- ❑ **Broadcasting Commands**
Explains how to broadcast commands to multiple nodes.
- ❑ **Accessing a Terminal**
Explains how to work with virtual terminals.
- ❑ **Escalating Messages**
Explains when and how to escalate a message.

NOTE

Some of the operations described in this section are available only to the owner of the related message. For more information about message ownership, see “About Message Ownership” on page 135.

About Message Ownership

It is important to understand the effect ownership has on operations performed to solve problems. The OVO administrator determines ownership policy by selecting one of the ownership modes allowed in OVO.

Types of Ownership Modes

OVO provides the following default message **ownership modes**:

❑ **Optional**

As an operator, you have explicit permission to take ownership of a message. The owner of a message has exclusive read-write access to the message. With the exception of the OVO administrator, all users who find this message in their message browsers have only limited access to it.

In this mode, only the owner of a message may do the following:

- Start or stop operator-initiated actions related to the message.
- Stop or restart automatic or operator-initiated actions related to the message.
- Escalate the message.
- Acknowledge the message.
- Unacknowledge the message.

❑ **Enforced** (default mode)

As an operator, you can either choose explicitly to take ownership of an unowned message or automatically own the message when performing operations on the message.

In this mode, an operator automatically owns a message when attempting to do the following:

- Start or stop operator-initiated actions relating to the message.
- Stop or restart automatic or operator-initiated actions related to the message.
- Escalate the message.
- Unacknowledge the message.

❑ **Informational**

The concept of ownership is replaced with that of marking and unmarking. A marked message indicates that you have taken note of the message. Marking a message is purely for informational purposes. It does not restrict or alter operations on the message in the way optional or enforced mode do. As an operator, you may unmark only those messages you yourself have marked. The OVO administrator can unmark any marked message.

Types of Ownership Display Modes

The ownership display mode determines whether or not owning or marking a message influences status propagation.

OVO provides the following **ownership display modes**:

❑ **No Status Propagation** (default display mode)

The moment a message is owned or marked, the color indicating the severity of the message changes, a flag displays in the own-state column (S) in the message browsers, and the own-state color bar in the message browsers reflects the new number of messages owned. The status of a message that is owned or marked is ignored for the purposes of status propagation in the Nodes and Message Group folders in the object pane.

For example, if you take ownership of the one and only message with Critical severity level relating to a given managed node, the managed node to which that Critical message relates no longer displays the Critical severity-level color (by default, red). Instead, it displays the status of the next unowned message with the highest severity level in the message browser relating to the same managed node.

❑ **Status Propagation**

The status of all messages whether owned or not is used to determine the status of the related symbols of other submap windows. Consequently, in the example above, the managed node to which the single critical message relates will continue to assume the Critical severity-level color (by default, red) even after the message has been owned. In this display mode, the only indication that the message is owned is a flag in the own-state column in the message browsers.

Evaluating Action Results in the Corrective Actions Workspace

To maintain a current and accurate overview of the computing environment, you need to know the status and results of actions. The **status** of an action is defined as the availability and current state of the action.

The status indicates whether an action:

- Has been configured for the message
- Is still running
- Has been successfully completed
- Has failed

Reviewing action availability is part of your initial investigation of problems. You review the message browsers and the `Message Properties` dialog box to determine the availability of automatic or operator-initiated actions. The value beneath the `Flags` field in the message browser displays the availability and state of the action.

Evaluating the results of actions is essential to problem-solving because corrective actions are not always successful. They do not always solve the problem.

Use the following guidelines to check the result of an action:

Review Annotations

Review the annotations of the message. If configured to do so, OVO automatically writes the actions `stdout` and `stderr` as annotations for automatic and operator-initiated actions.

Review Object Status

Broadcast a script or command using the `Broadcast` application, to review the status of the object. In the `Broadcast Output` window, you can review the results.

Reviewing and Rerunning Automatic Actions

The OVO administrator can configure automatic actions for a message. These actions are started automatically as soon as the event is detected.

Reviewing Automatic Actions

You can review the automatic action of a message either by checking the status column in a message browser or by opening the `Message Properties` dialog box. For details, see “About the Message Browser” on page 65 and “Examining Message Attributes” on page 118.

After an automatic action has completed, you can review the results to ensure that the problem has been corrected. If the OVO administrator has configured annotations for the message, you can review the results of an automatic action by reading these annotations. The actions `stdout` and `stderr` are logged as annotations with the message. If the problem still exists, or if the automatic action was not successful, you can rerun the action.

Rerunning Automatic Actions

You rerun an automatic action by doing one of the following:

❑ Menu Bar

Select the message in the message browser, then select `Actions: Messages -> Perform/Stop Action -> Perform Automatic Action` from the menu bar.

❑ Popup Menu

Right-click the message in the message browser, then choose `Perform/Stop Action -> Perform Automatic Action` from the popup menu.

Reviewing Annotations to Automatic Actions

The OVO administrator evaluates the effectiveness of actions by reviewing annotations, then decides whether additional or different automatic actions should be configured. For more information about creating message annotations, see “Annotating Messages” on page 153.

Configuring Automatic Acknowledgements

Your OVO administrator can configure an automatic acknowledgment of automatic actions that execute successfully. If OVO is so configured, the message associated with the action is automatically moved to the history database after the action completes.

Starting and Reviewing Operator-initiated Actions

The OVO administrator configures operator-initiated actions for messages where automatic actions are not suitable. For example, actions or programs requiring too much CPU should not be started without first evaluating system load factors and requirements. For these types of actions, your intervention and control are necessary.

Starting Operator-initiated Actions

You start an operator-initiated action by doing one of the following:

❑ Menu Bar

Select the message in the message browser, then select Actions: Messages -> Perform/Stop Action -> Perform Operator-initiated Action from the menu bar.

❑ Popup Menu

Right-click the message in the message browser, then choose Perform/Stop Action -> Perform Operator-initiated Action from the popup menu.

Reviewing Operator-initiated Actions

You can review the operator-initiated action of a message either by checking the status column in a message browser or by opening the Message Properties dialog box. For details, see “Examining Message Attributes” on page 118.

After an operator-initiated action has completed, you can review the results to ensure that the problem has been corrected. If the OVO administrator has configured annotations for the message, you can review the results of an operator-initiated action by reading these annotations. The action stdout and stderr are logged as annotations with the message. If the problem still exists, or if the operator-initiated action was not successful, you can rerun the action.

Reviewing Annotations to Operator-initiated Actions

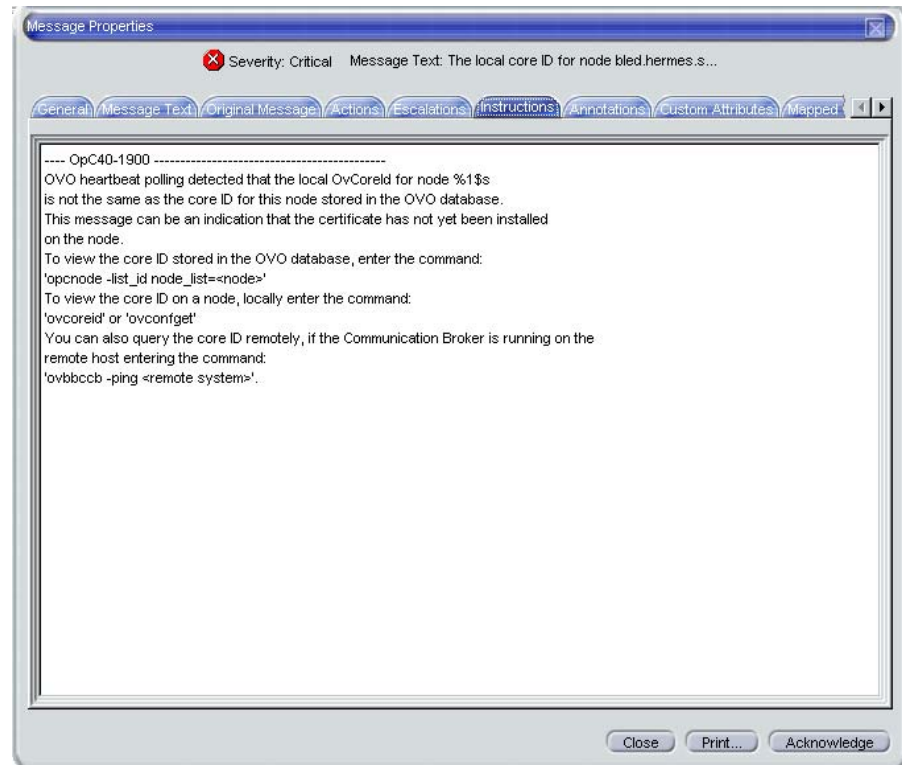
The OVO administrator evaluates the effectiveness of operator-initiated actions by reviewing annotations and determines whether additional or different operator-initiated actions should be configured.

Reading Operator Instructions

To help you solve a problem, the OVO administrator can provide you with instructions for a message, as shown in Figure 1-56.

Figure 1-56

Instructions for Solving Problems



Typically, operator instructions do the following:

- ❑ **Describe Automatic Action**

Describe an automatic action. For details, see “Reviewing and Rerunning Automatic Actions” on page 138.

- ❑ **Describe Operator-initiated Action**

Give details of how you should perform an operator-initiated action. For details, see “Starting and Reviewing Operator-initiated Actions” on page 140.

❑ **Describe Steps**

Describe any manual steps required for solving a problem (for example, “Start Application X in the Application Desktop”).

In the attribute column 1 of the message browser, you see an X for each message with written instructions.

The OVO administrator can also use the instructions interface to call an external application to present you with a message. The way you view these messages varies, depending on the external application used by the OVO administrator. The application may use either one of its own windows or a window in the Java GUI.

Starting and Customizing Applications

Applications are scripts or programs that have been integrated into OVO. The OVO administrator first examines your environment, then determines which applications you need to maintain it. Each application has predefined startup attributes, including a list of the managed nodes for individual operators.

Applications can also be programs or services running in the environment (for example, the UNIX `lp` print spooler program). You could be responsible for controlling the status of the `lp` spooler and its peripherals. To maintain the print services, you respond to messages issued by the `lp` spooler, and send controlling commands, such as `enable`. Controlling programs within your environment means that you can access the correct commands and the user login capabilities.

Starting Applications

As an operator, you can start applications to resolve unsuccessful automatic or operator-initiated actions, or messages for which an action has not been configured.

You should have a thorough understanding of the event and message before starting an application to resolve a problem.

NOTE

To start applications with no graphical interface, such as `cmd.exe` or `telnet`, as local applications in Java GUI, the startup parameters must be properly configured by OVO administrator when assigning Java GUI operator defaults. Refer to *OVO Administrator's Reference* for more information.

You can start applications from one of three locations:

❑ **Shortcut Bar**

You can start applications from nodes, applications, and services in the shortcut bar.

❑ **Object Pane**

You can start applications from nodes, applications, and services in the object pane.

❑ **Message Browser**

You can start applications from popup menus on messages in the message browser.

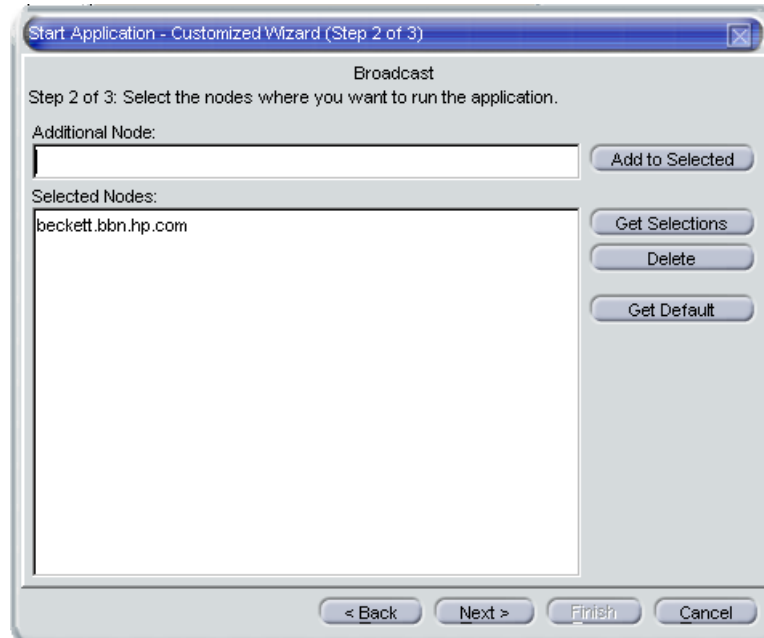
NOTE

If Service Navigator is installed, applications can also be started on services. This includes general applications that are available in OVO as well as service-specific applications that have been set up especially for services.

Customizing Applications

If the OVO administrator has set up the correct permissions, you can change many of the startup attributes of an application using the Start Customized Application wizard, as shown in Figure 1-57.

Figure 1-57 Start Customized Application Wizard (Step 2 of 3)



For example, you can change the nodes on which an application is started, the user name, or additional call parameters. The only item that cannot be changed is the application call itself. To find out how you can use message variables to pass parts of the message as parameters to the application call, see “Adding OVO Variables” on page 148.

Operating with the Java GUI From Other Java Applications

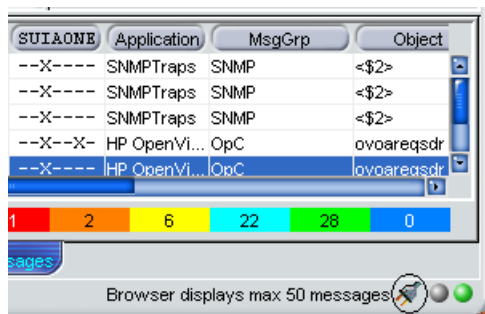
You can control certain features in the Java GUI remotely from other Java applications using the Java GUI Remote APIs. The features can be controlled from the following:

- ❑ An independent application that runs separately from the Java GUI on a localhost.
- ❑ A Java applet that runs as an integrated add-on component in the workspace of the Java GUI.

Using Java GUI Remote APIs is useful in cases when you have OVO services or nodes mapped in other Java applets or applications. The possibility to operate with specific configurations remotely from other Java applications enables you to identify and resolve problems without searching for problem causing elements directly in the Java GUI.

When the Java GUI Remote APIs are enabled, an additional icon is displayed in the Java GUI, as presented in the Figure 1-58:

Figure 1-58 Icon Indicating Enabled Java GUI Remote APIs Feature in the Java GUI



For more information on the concept, integration details and usage of the Java GUI Remote APIs, refer to the *OVO Application Integration Guide*.

For details about the available Remote APIs, refer to the Java GUI Remote APIs Specification, which you can access by opening the following URL in a web browser:

`http://<management_server>:3443/ITO_DOC/C/manuals/APIdoc`

In this instance, `<management_server>` is the fully qualified hostname of your management server.

Note that the Java GUI Remote APIs and the corresponding documentation are part of the HP OpenView Operations Developer's Toolkit.

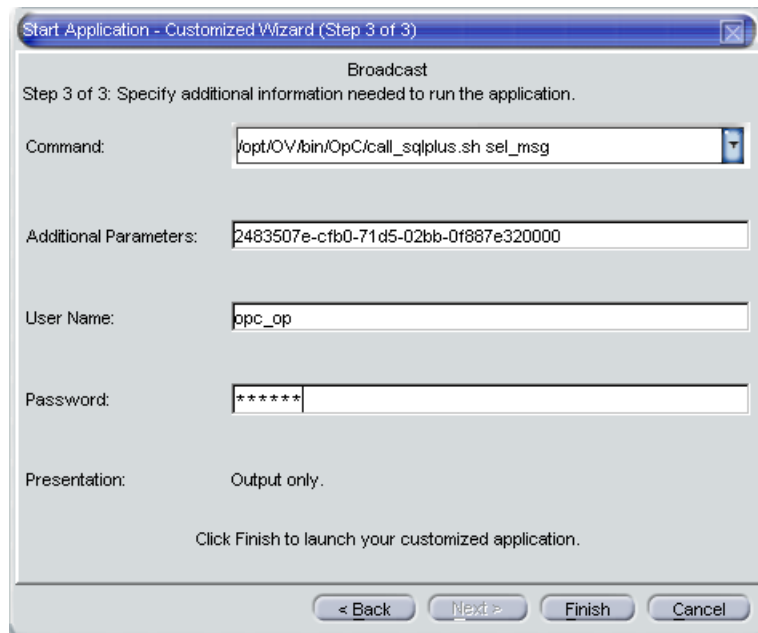
Adding OVO Variables

All message attributes, including custom message attributes, are variables that can be used in applications and are exchanged for their values at application launch time. For example, you can write applications that depend on specific attributes. Then the attributes are given as parameters to the application.

Figure 1-59 shows how to add OVO variables as parameters in the Start Customized Application wizard.

Figure 1-59

Start Customized Application Wizard (Step 3 of 3)



Broadcasting Commands

You can start corrective actions simultaneously on multiple nodes by broadcasting a command. You specify the command you want to broadcast, and select the nodes within your environment on which you want to start the command. You can also use this capability to investigate problems (for example, by issuing the `ps -ef` command to all specified nodes to check the number of currently running processes).

Starting the `Broadcast` application always starts the wizard.

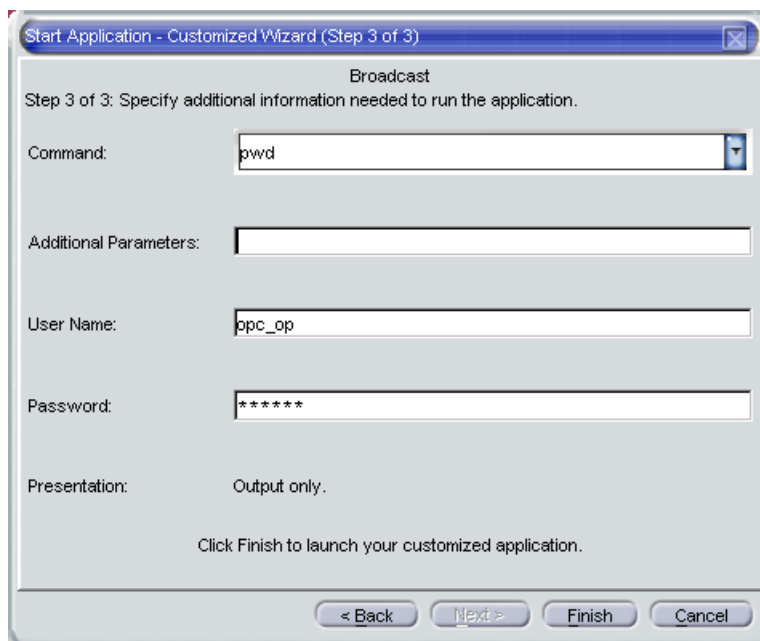
NOTE

The `Broadcast` application may not be available to you by default. The OVO administrator may have to assign it to you specifically.

When you broadcast a command, you specify the command once. The command is then sent to multiple nodes to help you to perform global tasks quickly and easily. Although OVO does not limit the length of the command to be broadcast, if the command is longer than the maximum length supported on the target system, the target system will truncate it.

Figure 1-60 shows the last step in completing the broadcast command wizard.

Figure 1-60 **Completing the Broadcast Command Wizard**



To retrieve the commands from the current session, click the arrow in the Command call, as shown in Figure 1-60.

The output of a broadcast command is displayed in the Corrective Actions workspace as application output.

Accessing a Terminal

You can work directly on nodes reporting problems by opening a virtual terminal (window) on the node. Using this window, you can investigate problems, issue commands or scripts, or start applications.

NOTE

A virtual terminal application may not be available by default. The OVO administrator has to configure one manually.

You can use a virtual terminal to access many of the managed nodes within your environment. The OVO administrator can configure a default user name and password, so you don't have to enter the information. Start the virtual terminal application on the nodes where you want to issue command or review status. A terminal window opens in the *Corrective Actions* workspace. Use this window to issue commands or review status. Without leaving your Java GUI, you can access any node within your environment, perform tasks and controls, and start corrective actions.

Escalating Messages

Message escalation is not part of the default OVO configuration. If your OVO administrator has configured message escalation, you can escalate messages you yourself cannot solve. That is, you can send a message to another management server more capable of handling the problem.

Documenting Solutions in Your Environment

After you have completed work on a message, you document your efforts and remove the message from the active message browser, filtered active message browser, or filtered pending messages browser. To do this, you use message annotations to record how a problem was resolved, and then acknowledge the message to remove it from the current work area, storing it in the history database.

This section includes the following information to help you understand how to document solutions:

- ❑ **Annotating Messages**

Explains how to add quick summaries to a message.

- ❑ **Printing Messages**

Explains how to print message, message details, and application output.

- ❑ **Acknowledging Messages**

Explains how to move messages from the active message browser, filtered active message browser, or filtered pending messages browser to the history database.

Annotating Messages

Annotating a message is similar to adding a short note of explanation to a business contract. Message annotation quickly summarizes the important points of the message. It can serve as a reference the next time you receive the same message.

About Annotations

Message annotations generally contain the following information:

- Action performed to resolve the problem
- Name of the user who started the action
- Status information of the action performed (stdout, stderr)
- Start and finish times for the action
- Any pre- and post-action information
- Any message attributes changed
- Any duplicates of the message found

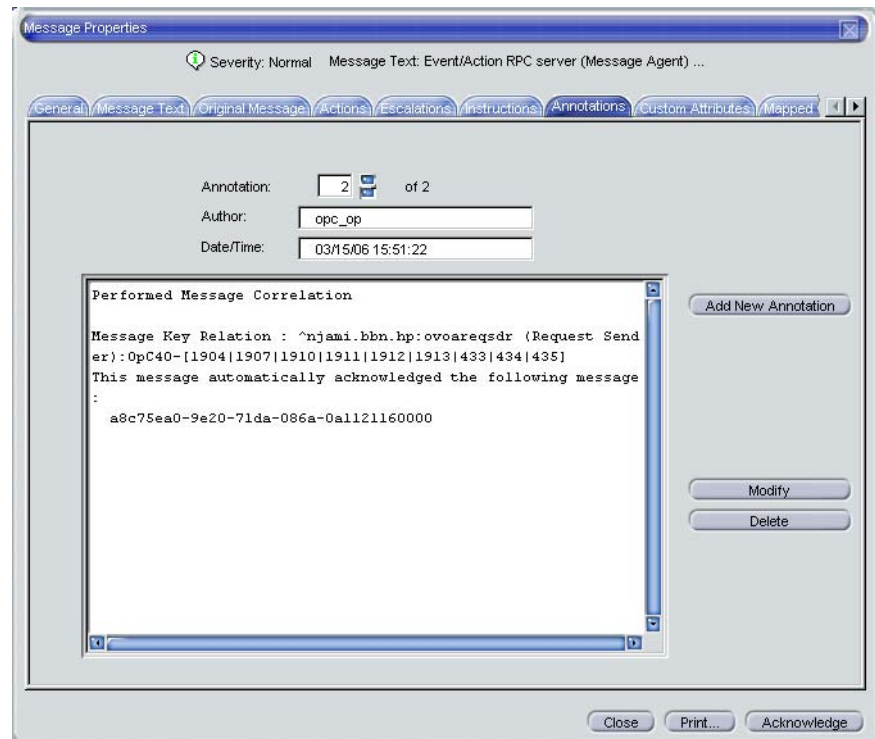
Adding Annotations

You can also use annotations to record difficulties you encountered solving the problem, verbal or written instructions you received about the problem, communications sent to users or groups affected by the problem, and so on. For example, if you are at the end of your shift, but a particular problem is not yet resolved, you can leave an annotated message for your colleagues.

The Annotations tab in the Message Properties dialog box contains all annotations related to a single message, as shown in Figure 1-61.

Figure 1-61

Adding a New Annotation



Reviewing Annotations

Like a note of explanation, a message annotation serves as a resource for solving problems. You can review the message annotations for a record of previous actions used to solve the problem. This includes, for example, comparing previous action exit values with current ones, or reviewing cautions or warnings related to the proposed action. You can add your own annotations, or even delete them if they are no longer needed or correct.

The OVO administrator can use message annotations as a record of events that describe resolution techniques, times, and resources. In addition, the OVO administrator can use message annotations as a basis for developing instructional text and preconfigured actions for messages.

Printing Messages

OVO enables you to print the following:

- Messages
- Message Details
- Application Output

Acknowledging Messages

Acknowledging a message is similar to filing (or storing) a bill after you have paid it. You want to retain a copy of the transaction to verify you have paid the bill, and as a reference to compare with future bills. After you have finished working with a message you “remove” it from your desktop and “file” it away for future reference.

About Acknowledgements

Typically, you acknowledge a message for one of the following reasons:

Resolved Problems

You have finished work on the message and resolved all related problems.

Duplicate Messages

You have another message in your message browsers describing the same event.

Irrelevant Messages

You no longer need the message (for example, if the message has low severity and requires no action).

Acknowledging a message moves it from the active message browser, filtered active message browser, or filtered pending messages browser to the history database. Also, the status of the corresponding message group and node may change depending on the highest priority of the remaining messages.

NOTE

A problem is not resolved by acknowledging the message. You should review the results of your corrective actions to ensure that the problem has been resolved before acknowledging the message. For details, see “Solving Problems in Your Environment” on page 133.

Automatic Acknowledgments from the Administrator

The OVO administrator can configure an automatic acknowledgment for messages with either automatic or operator-initiated actions. When the action for a message with an automatic action and an automatic acknowledgment is successfully completed, the message is sent directly to the history database. The message is removed from the message browsers, without your intervention. You can review automatically acknowledged messages using the filtered history message browser.

Automatic Acknowledgments from OVO

Messages can be acknowledged automatically by succeeding messages if OVO establishes a relationship between them:

❑ **Problem Deteriorating**

Succeeding messages report a deterioration of the original problem (for example, the amount of free disk space has reduced even more).

❑ **Problem Solved**

Original problem has been solved (for example, the application is running again).

Reviewing Acknowledgments

Messages that have been acknowledged are stored in the history database. You can review these messages using the filtered history message browser. For details, see “Investigating Message Histories” on page 130.

You can also move acknowledged messages back to the active message browser by unacknowledging them. After unacknowledging a message, you can continue working with it.

Customizing Your Environment

You can customize your OVO environment as follows:

- ❑ **Customizing the Java GUI**
 - Changing Operator Passwords
 - Loading the Default Configuration
 - Changing the Refresh Interval
 - Saving Console Settings
 - Changing the Look and Feel of the Java GUI
 - Showing and Hiding the Position Controls
 - Moving Panes and Areas
 - Showing and Hiding Panes and Areas
 - Customizing the Shortcut Bar
 - Choosing a Web Browser
 - Customizing Popup Menus
 - Customizing the Toolbar
 - Customizing Message Event Notification
 - Customizing the General Font Size
- ❑ **Customizing Message Browsers**
 - Setting Up Filtered Message Browsers
 - Saving and Reusing Filter Settings
 - Saving Filters to the Object Pane
 - Accessing Quick Filters
 - Adding Message Browser Tabs in the Browser Pane
 - Switching Message Colors to an Entire Line
 - Customizing the Message Browser Columns

- Showing and Hiding Message Browser Columns
- Saving the Customized Message Browser Layout

Changing Operator Passwords

OVO enables you to change your login password from the Change Operator Password dialog box, as shown in Figure 1-62.

Figure 1-62

Change Operator Password Dialog Box



You can access this dialog box from the **File: Change Password** in the menu bar. After the information is sent to the management server and updated in the database, you receive a system message confirming the password change.

NOTE

Only the password for the currently logged-in operator can be changed.

IMPORTANT

On first login as any of the default users, you must change your default password for security reasons. You can change your password again at a later time, but you will not be allowed to set the password back to default.

Loading the Default Configuration

The Java GUI comes with a standard set of defaults. These defaults are normally changed by your OVO administrator. As a result, the first time you login to the OVO Java GUI, you receive a set of default components, provided by your OVO administrator.

As an operator, you can one or both of the following:

❑ Save Console Session Settings

If you customize the Java GUI (for example, adding URL shortcuts to the shortcut bar, moving panes or areas, adding filtered message browsers, and so on), you can save these changes by selecting `File: Save Console Session Settings` from the menu bar. The next time you log on to the Java GUI, you will see these changes, which override the default configuration originally provided by your OVO administrator. You can customize the Java GUI and save your changes as often as you like.

❑ Reload Assigned Defaults

If you make a major mistake when customizing the Java GUI (for example, unintentionally deleting the browser pane), you can restore the defaults originally provided by your OVO administrators by selecting `File: Reload Assigned Defaults` from the menu bar.

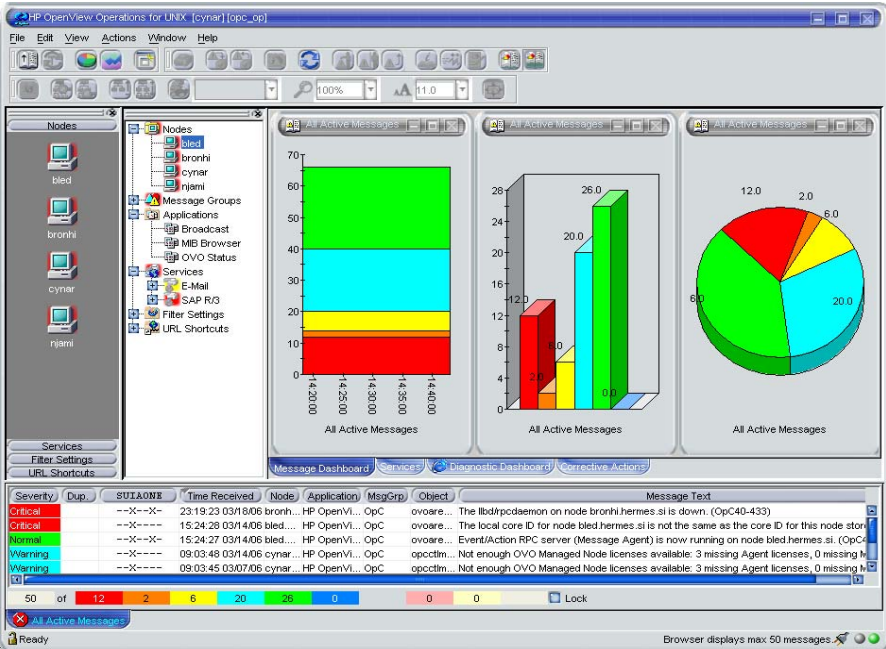
CAUTION

If you reload assigned defaults, you lose all changes you made to the Java GUI and saved with the `File: Save Console Session Settings` option. That is, your changes are overwritten by the defaults originally assigned to you by your OVO administrator.

Operator Defaults Assigned by the System

Figure 1-63 shows the operator defaults assigned by the system.

Figure 1-63 System-defined Defaults for Operators



The Java GUI provides operators with the following system defaults:

❑ **Movable Panes**

Main window contains four visible movable panes:

- Shortcut bar (top left)
- Object pane (top center)
- Workspace pane (top right)
- Browser pane (bottom)

By default, the movable pane is disabled.

❑ **Shortcut Bar**

In the shortcut bar, the following shortcut groups display as menu items:

- *Nodes*
Shortcuts for every first-level node element
- *Services* (if there are any services available)
Shortcuts for every first-level service
- *Filter Settings* (empty by default)
Shortcuts for global (administrator) and personal (operator) filter settings.
- *URL Shortcuts*
Includes the OpenView Home URL shortcut:
`http://www.openview.com`

❑ **Workspace Pane**

In the workspace pane, the following non-ActiveX workspaces are created, in the following order:

1. Message Dashboard (default workspace)

In the Message Dashboard workspace, three message browser for all active messages are opened with the vertically tiled positions and the following content types:

- History chart (stacking area)
- Bar chart (3D)
- Pie chart (3D)

For details, see “About the Message Dashboard Workspace” on page 56.

2. Services (if any services are available)

In the Services workspace, a service graph for all first-level services is opened. For details, see “About the Services Workspace” on page 56.

3. Diagnostic Dashboard

In the Diagnostic Dashboard workspace, other OpenView applications that integrate with OVO are displayed. For details, see “About the Diagnostic Dashboard Workspace” on page 57.

4. Corrective Actions

In the Corrective Actions workspace, you can maintain a current and accurate overview of the computing environment by reviewing the status and results of actions. For details, see “About the Corrective Actions Workspace” on page 58.

❑ **Browser Pane**

In the browser pane, a message browser for all active messages opened with the content type of Message Table is opened. For details, see “About the Browser Pane” on page 63.

Operator Defaults Assigned by the OVO Administrator

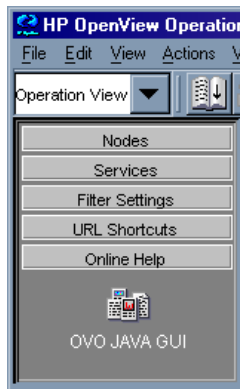
The OVO administrator can define default startup behaviors for operator areas of the Java GUI with two application groups:

❑ **Shortcuts**

The OVO administrator can create new application groups that are added individually at the end of the shortcut bar. These application groups can contain any kind of application. The same tree level found under the shortcuts application group is added to the shortcut bar, as shown in Table 1-8.

Figure 1-64 shows an example of the Online Help shortcut group and the OVO Java GUI shortcut, which were added to the shortcut bar as defaults by the OVO administrator on the management server. The Figure 1-12 on page 59 shows this example displayed within the OVO Java GUI window.

Figure 1-64 Online Help Shortcut Assigned by the OVO Administrator



❑ **Workspaces**

The OVO administrator can create new application groups that are added individually after existing default workspaces in the workspace pane. These application groups can contain any kind of application. All applications found in the second level of the Workspaces application group are then started accordingly to the previously created workspace pane workspaces. All opened applications in the workspaces are tiled vertically.

Because the default container type for workspaces is *not* ActiveX, you *cannot* use a Microsoft Internet Explorer web browser in default workspaces. If you want to use Internet Explorer, you must create a new workspace with the ActiveX container type.

Table 1-8

Object Tree Items as Shortcuts

Object Pane	Shortcut Bar
Application Group	Shortcut Group
Application	Shortcut

To avoid duplication, OVO does *not* add items that already exist on the level to which you try to add them. After the OVO administrator adds new shortcuts and workspaces for applications, the applications under Shortcuts and Workspaces behave like any other application in the object pane. The applications are always opened in the currently selected workspace.

Figure 1-65 shows an example of the Online Help workspace that presents the Java GUI online help introduction page. The Figure 1-12 on page 59 shows this example displayed within the OVO Java GUI window.

Figure 1-65 Online Help Workspace Assigned by the OVO Administrator



For information on how to create application groups and applications on the management server to set the operator defaults, refer to the *OVO Administrator's Reference*.

NOTE

OVO administrators can assign a set of shortcuts or workspaces to an individual operator, a group of operators, or all operators.

Changing the Refresh Interval

Choosing **View: Refresh** in the menu bar updates the node status, message group status, browser status summary line, all messages in the message browser, and the service status. By default, the Java GUI automatically refreshes at the preset interval of 30 seconds. If you want, you can choose **Edit: Preferences** in the menu bar, then modify this interval in the **Preference** dialog box. However, if you make the refresh interval too a large, you may not be immediately informed of any status changes.

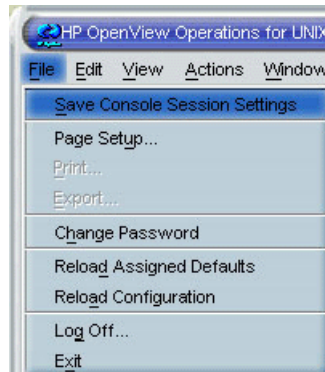
NOTE

You can also reload your configuration if your OVO administrator has changed your responsibilities, managed nodes, or applications. Reloading is done manually. The refresh interval is only used for retrieving the latest messages or service status.

Saving Console Settings

You can store any customizations you made in a Java GUI session by choosing **File: Save Console Session Settings** in the menu bar, as shown in Figure 1-66.

Figure 1-66 Save Console Session Settings Menu Item



The next time you start the Java GUI, the stored settings are read and restored in the Java GUI. For example, you could add a few URL shortcuts to the shortcut bar, reverse the positions of the shortcut bar and workspace pane, and add a few filtered message browsers to the browser pane. If you save these changes, they display the next time you login to the Java GUI.

You can save the following console session settings:

❑ **Position Controls**

Position and visibility of moveable areas

❑ **Shortcut Bar**

- Position and visibility of buttons and shortcuts
- Names and locations of URL shortcuts

❑ **Workspace Pane**

- Workspace names, descriptions, positions, and so on
- Filters, styles, and positions of open message browsers
- Positions of open URL applications
- Positions of open service graphs
- Web browser and proxy settings

❑ **Browser Pane**

Tab names, descriptions, positions, and so on

❑ **Message Browser Toolbar**

Visibility in toolbar, workspaces, and browser pane

OVO console session settings are stored in a binary file called `HP_OV_consoleSettings_mgmtServerName_operator`, which is stored locally on your system:

Windows 2000, 2003, and XP

`C:\Documents and Settings\<user>`

Solaris

`/export/home/<user>`

UNIX

`/home/<user>`

NOTE

`HP_OV_consoleSettings_mgmtServerName_operator` binary file is stored in user's home directory on UNIX-based systems.

Changing the Look and Feel of the Java GUI

You can change the look and feel of the Java GUI by choosing `Edit: Preferences` in the menu bar.

From the Preferences dialog box, you can select one of the following look-and-feel options:

- Metal
- Motif
- Hewlett-Packard (default look)
- Windows (available *only* on Windows systems)
- Aqua (available *only* on Mac OS systems)

For a description of each option on the Preferences dialog box, see “About the Preferences Dialog Box” on page 450.

Customizing the Progress Dialog Box

You can change the image that appears inside of the Progress dialog box by placing an image named `customImg.gif` into your home directory.

Figure 1-67 shows the Progress dialog box which opens when OVO performs tasks that take a long time to complete.

Figure 1-67 Progress Dialog Box



Note that OVO resizes the image to fit into the Progress dialog box.

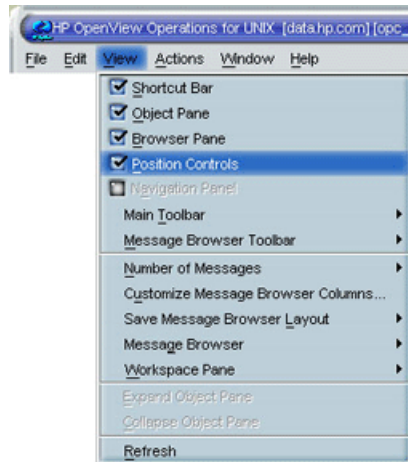
Showing and Hiding the Position Controls

The position controls are the narrow band of horizontal bars near the top of the Java GUI that enable you to move the shortcut bar and the object pane horizontally. If you do not want to use the position controls, you can hide them by deselecting `View: Position Controls` from the menu bar. Likewise, if the position controls are already hidden, you can make them visible again by selecting `View: Position Controls` from the menu bar.

Figure 1-68 shows how to enable the position controls from the menu bar.

Figure 1-68

Enabling the Position Controls



Moving Panes and Areas

You can use the position controls to move the shortcut bar and the object pane horizontally, as shown in Figure 1-69.

Figure 1-69 Moving the Object Pane: Before

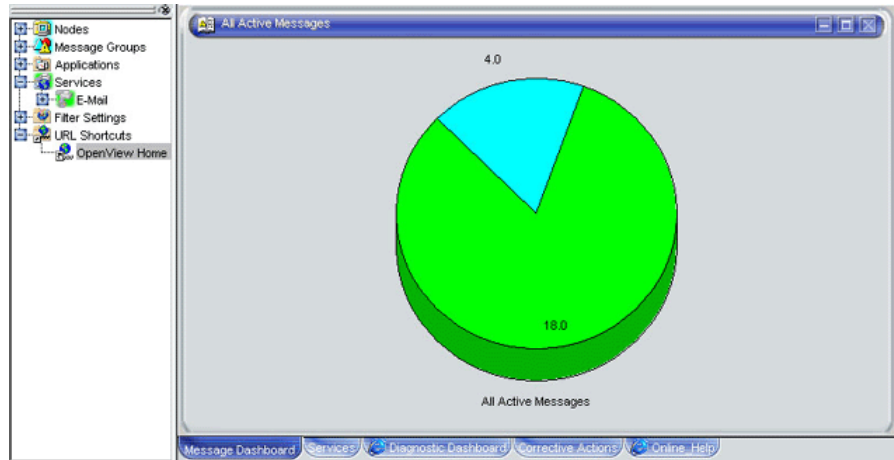
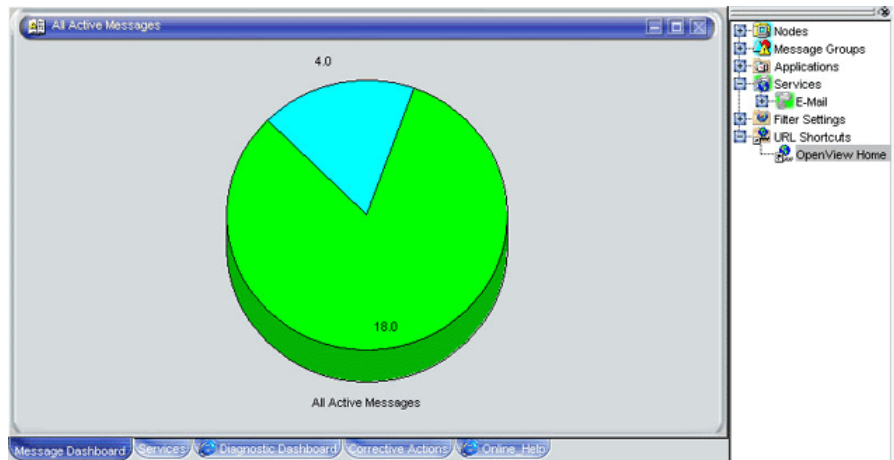


Figure 1-70 shows object pane moved to the right of the workspace pane.

Figure 1-70 Moving the Object Pane: After



Showing and Hiding Panes and Areas

OVO enables you to show or hide the following parts of the Java GUI:

- Shortcut bar
- Object pane
- Browser pane

If you want to hide the browser pane, simply remove all message browsers from the browser pane. You cannot hide the workspace pane.

Figure 1-71 shows how to enable the shortcut bar by selecting **View: Shortcut Bar** in the menu bar.

Figure 1-71

Enabling the Shortcut Bar and Object Pane

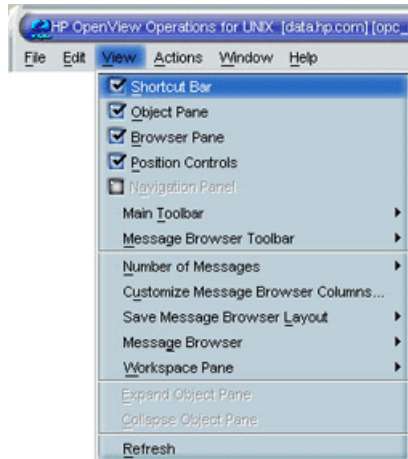


Figure 1-72 shows how to disable the shortcut bar by deselecting View: Shortcut Bar in the menu bar.

Figure 1-72 **Disabling the Shortcut Bar**

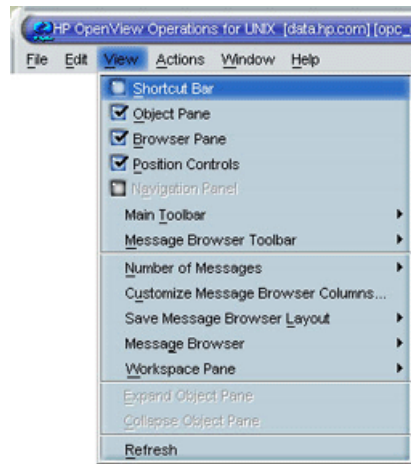
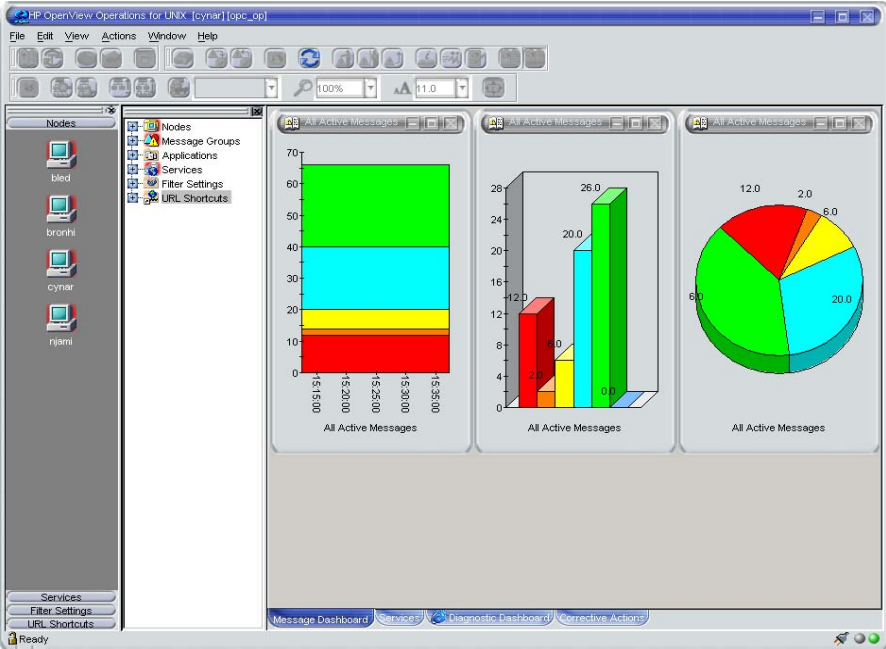


Figure 1-73 shows how the OVO GUI looks like after you have selected Close from the popup menu on all browser tabs in the browser pane.

Figure 1-73 Disabled Browser Pane



Customizing the Shortcut Bar

You can customize the shortcut bar as follows:

- ❑ **Switch the Shortcut Bar On and Off**

Switch the shortcut bar on or off from the `View` menu in the menu bar.

- ❑ **Add Object Pane Items**

Add selected object pane items to the shortcut bar by selecting `Add to Shortcut Bar` from the popup menu in the object pane.

- ❑ **Customize Shortcut Groups**

Add, rename or delete shortcut groups from the popup menu in the shortcut bar.

- ❑ **Customize Shortcuts**

Rename or delete shortcuts from the popup menu in the shortcut bar.

- ❑ **Customize Icon Size**

Customize the size of the icons in the shortcut bar from the `General` tab of the `Preferences` dialog box.

To start or customize a shortcut, you right-click the shortcut icon, then select an item from the popup menu.

Choosing a Web Browser

Instead running an external web browser in the background, you can run your favorite web browser from within the OVO Java GUI itself. As a result, you can access intranet sites, search the Internet for business-related information, and view your message browsers from within a single, integrated interface. Integrated web browsers display in the workspace pane of the OVO Java GUI.

For details about choosing a web browser, see “About Integrated Web Browsers” on page 74.

Customizing the Toolbar

All toolbar components are visible, by default. You can hide or make visible any of them. See “About the Toolbar” on page 79 for more information about the toolbar components.

You can also reposition any of these components by creating the floating toolbar and placing the component back to the taskbar or by moving the component within the docked toolbar.

See “To Customize the Toolbar” on page 273 for more information on how to perform these actions.

Customizing Popup Menus

If you have selected messages in the message browser, you may want to focus exclusively on the applications that are related to those messages. A large number of unrelated applications can, at times, make the popup menu unwieldy.

OVO enables you to limit the number of applications that display in popup menus. The Tailored Set of Applications limits popup menu items to application that are related to currently selected messages. Related applications are defined with the \$OPC_MSG string in the application call. If there are no applications with currently selected \$OPC_MSG string, the popup menu does not contain any applications.

To enable tailored popup menus, you select Tailored Set of Applications from the General tab in the Preferences dialog box, as shown in Figure 1-74. Likewise, to switch the feature off, you deselect the checkbox.

Figure 1-74

Preferences Checkbox for a Tailored Set of Applications

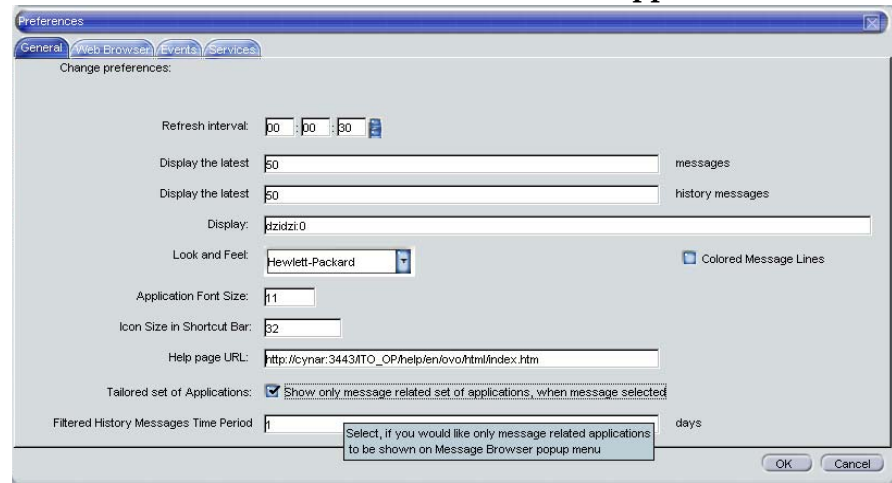
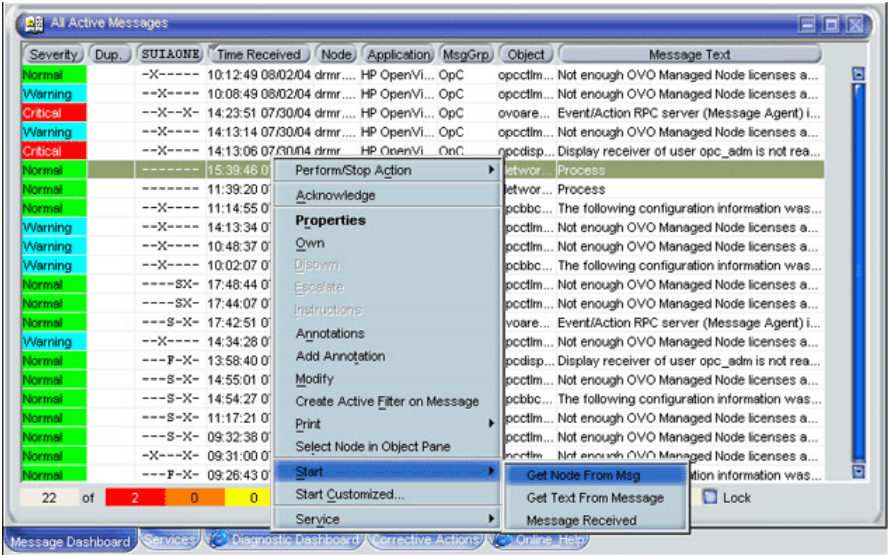


Figure 1-75 shows a popup menu for a tailored set of applications. The marked applications use message-related variables and are therefore shown in the popup menu on the selected message.

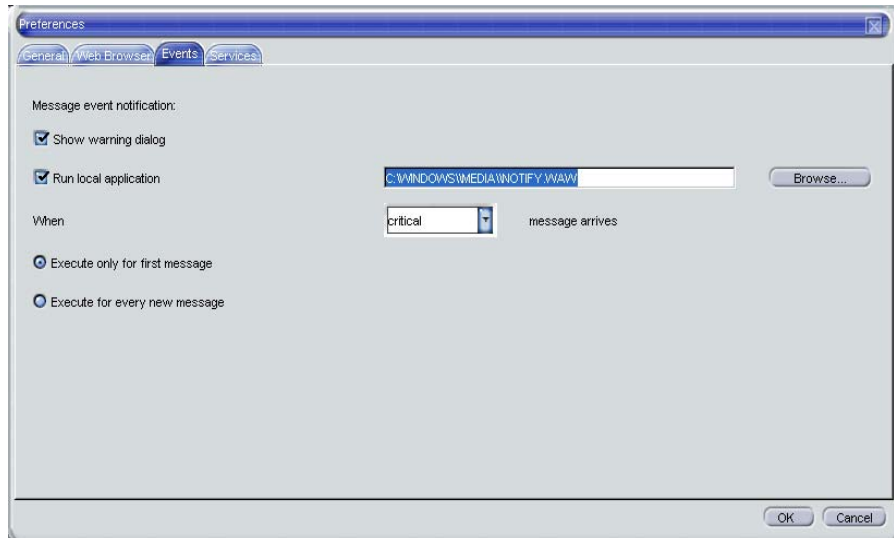
Figure 1-75 Popup Menu for a Tailored Set of Applications



Customizing Message Event Notification

You can enable or disable message event notification, run local applications (for example, to produce acoustic warnings), or reset the severity threshold for notification, from the **Events** tab of the Preferences dialog box, as shown in Figure 1-76.

Figure 1-76 Message Event Notification Settings in the Preferences Dialog Box



For an overview of message event notification, see “About Message Event Notification” on page 106.

Customizing the General Font Size

You can set the general font size in the General tab of the Java GUI Edit: Preferences dialog box.

For a description of each option on the General tab of the Preferences dialog box, see “About the Preferences: General Tab” on page 451.

IMPORTANT

You *cannot* set the font size in service graphs and maps this way. To customize the font size in service graphs and maps, refer to the *HP OpenView Service Navigator Concepts and Configuration Guide* for more information.

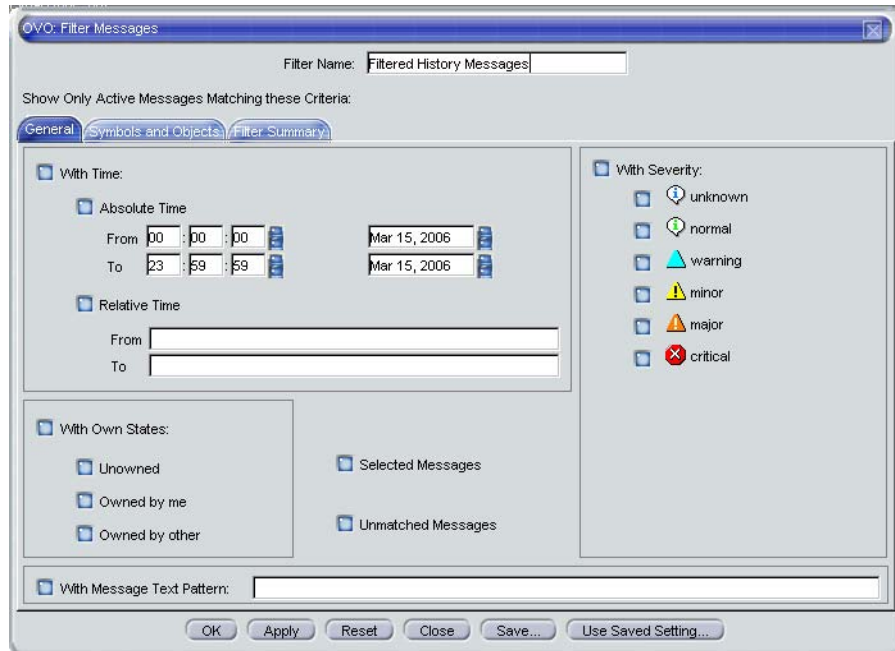
Setting Up Filtered Message Browsers

Filtered message browsers show only a subset of all available messages, filtered according to criteria you select yourself. For example, if you want to display messages with severity levels of Warning or Critical, you can specify that messages of all other severity levels are not displayed.

You can add new filters and modify existing filters through the Filter Messages dialog box, as shown in Figure 1-77.

To access the Filter Messages dialog box, select Actions: Filtering -> <Filter Type> from the menu bar.

Figure 1-77 Filter Messages Dialog Box



You can add filtered message browsers to the browser pane from the Actions: Filtering menu in the menu bar.

With Time filter

The With Time filter is very useful for reviewing only those messages that arrive during a specific day or period of time. Time may be defined as absolute or relative to the time the browser settings are saved.

NOTE

If OVO Java GUI is running on a system with timezone setting different from the setting on the OVO management server, the timestamps in the messages displayed in the Java GUI are taken from the local system (the system where Java GUI is running on) and not from the OVO management server.

❑ **With Own States Filter**

The `With Own States` filter may be used to see messages you own. It is not possible for the administrator to determine from the `With Own States` filter the identity of the owner of a given message.

❑ **With Message Text Pattern Filter**

The `With Message Text Pattern` filter is used to see only messages that match a specified text pattern. You can specify a filter pattern in the `With Message Text Pattern` field.

If you use control characters such as angle brackets (< and >) or brackets ([and]) when specifying a filter pattern in the `With Message Text Pattern` field, make sure to precede these characters with a backslash (\). Otherwise the following error message appears:

```
"Syntax error in pattern definition "[message".  
(OpC20-235) "
```

Saving and Reusing Filter Settings

After you have configured a filter, you can do one of the following:

❑ Apply the Filter

You can apply the filter (after having provided a name). A filtered message browser opens, displaying only the messages that you want to see. The `Filter Messages` dialog box remains open. If you are satisfied with your filter, you can save it for later reuse.

❑ Save Filter Settings

Use the `Filter Messages` dialog box to save the settings for reuse, as shown in Figure 1-78 on page 185. In this way, you can see the same or similar information at a later date without having to repeat the configuration process.

❑ Reuse Filter Settings

Use the `Browser Settings` dialog box to choose from a list of existing settings that may be modified and renamed to suit individual needs, as shown in Figure 1-79 on page 185. These settings are independent of your home session and browser layout. To access the `Browser Settings` window, select `Actions: Filtering -> Use Saved Settings` from the menu bar, or open a saved filter of desired type from the object pane.

NOTE

You can use the `Save Setting` and `Browser Settings` dialog boxes only to save or alter the settings of the window from which you opened them. In addition, if the respective “parent” browser window is closed, both dialog boxes are closed automatically.

The `Browser Settings` dialog box allows you to select a saved filter. To use a setting for a new filtered active message browser, filtered history message browser, or filtered pending messages browser, select the desired setting in the list box first.

Figure 1-78 shows the Save Browser Filter Settings dialog box.

Figure 1-78 Save Browser Filter Settings Dialog Box

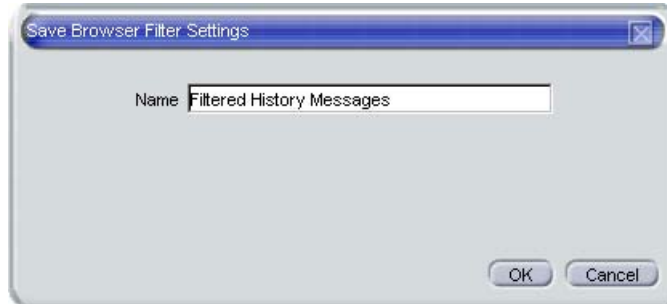


Figure 1-79 shows the Browser Settings dialog box.

Figure 1-79 Browser Settings Dialog Box



Saving Filters to the Object Pane

OVO enables you to access saved filters in the object pane. For example, if you want to see all messages that could show a possible problem in the Performance area, you would create a filter that shows all warnings, all minor, major, and critical messages, and all unknown messages with message group Performance. You would then save the new filter. Later, to see the messages in your new filter, you could select the filter from the object pane, and open a filtered message browser.

To find out how to save filters to the object pane, see “To Save the Browser Filter Settings” on page 276.

Accessing Quick Filters

OVO enables you to access message filters quickly and easily.

To access filtered message browsers, you select the Filter Settings group of a popup menu in one of two locations:

- ❑ **Shortcut Bar**

For details, see “About the Shortcut Bar Popup Menu” on page 83.

- ❑ **Object Pane**

For details, see “About the Object Pane Popup Menu” on page 84.

Adding Message Browser Tabs in the Browser Pane

When you open a filtered message browser, it is automatically displayed in the workspace pane. To move the filtered message browser from the workspace pane to the browser pane, you need to click the toolbar button `Put Message Browser to Browser Pane` (“About Toolbar Icons and Drop-down Lists” on page 376). After it is in the browser pane, the browser can be moved back to the workspace pane using the same toolbar button.

Figure 1-17 on page 64 shows how to move a browser from the workspace pane to the browser pane.

Switching Message Colors to an Entire Line

To toggle between the default and colorized modes, choose `Edit: Preferences . . .` from the menu bar. Then, in the `General` tab of the `Preferences` dialog box, select or deselect the checkbox `Colored Lines`, then click `[OK]`.

The preferences are saved on the computer where the Java GUI is running. The preferences are also saved to all Java GUIs running on that client. If you start another Java GUI on another client, the settings previously saved on that other client are used. If you want, you can change the settings on that other client as well.

Customizing the Message Browser Columns

OVO enables you to change the physical layout of browser columns:

❑ **Resize Columns**

Resize them by dragging the column borders to the left or right.

❑ **Reorder Columns**

Reorder the columns by dragging the column labels.

❑ **Show or Hide Columns**

Show or hide columns by choosing in the `Customize Browser Columns` dialog box which message attributes to show or hide. For details, see “Showing and Hiding Message Browser Columns” on page 190.

❑ **Customize Column Labels**

Specify new labels for message browser columns in the `Customize Browser Columns` dialog box. For details, see “About the Customize Message Browser Columns Dialog Box” on page 422.

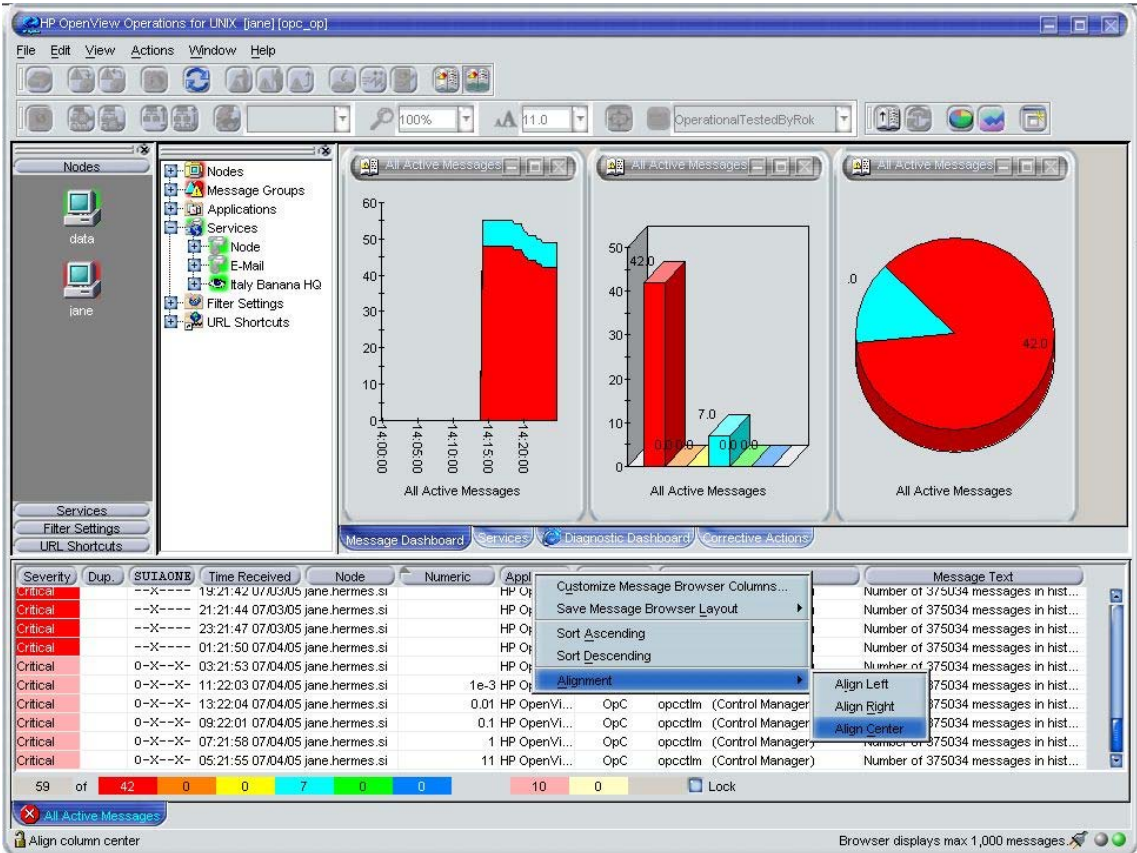
❑ **Align the Column Content**

Align the column content using a popup menu in the message browser opened on the message browser headline. Alignment can be set to left, right or center. See Figure 1-80 on page 189.

These settings can be saved for future sessions using the `Save Message Browser Layout` item of the `View` or popup menus.

To find out how to save the message browser layout, see “Saving the Customized Message Browser Layout” on page 191.

Figure 1-80 Customizing Browser Layout from the Message Browser



Showing and Hiding Message Browser Columns

You can configure OVO to display only a subset of all available message attributes in the message browsers. This also applies to custom message attributes. This is done in the `Customize Browser Columns` dialog box.

To access this dialog box, choose `Customize Message Browser Columns` from the `View` menu in the Java GUI or right-click the message browser headline and select `Customize Message Browser Columns...` from the popup menu.

The `Customize Browser Columns` dialog box contains two tabs:

❑ **General tab**

List of general message attributes. Figure 1-43 on page 111 shows the `General` tab for displaying default columns in the `Customize Browser Columns` dialog box. The selected items are displayed in the current message browser with the specified label or ID (if there is no label).

❑ **Custom tab**

Customized message attributes. Figure 1-44 on page 112 shows the `Custom` tab for displaying custom message attributes as columns in the `Customize Browser Columns` dialog box.

The `Custom` tab has three sections:

- *Available Custom Message Attributes*
Attributes already defined in the database.
- *Predicted Custom Message Attributes*
Attributes you expect to be present in the future.
- *New Predicted Custom Message Attribute*
New operator-defined attributes.

From either of these tabs, you can configure to display the message attributes for the current message browser. After pressing `[OK]`, this configuration applies only to the current (active) message browser.

Saving the Customized Message Browser Layout

To save the browser layout for opened message browsers, use the `Save Browser Layout` option for every particular type of the browser:

❑ **Filtered Browsers**

Matches the filter name for filtered message browsers. The saved layout applies only to the named message browser. You cannot globalize to other named message browsers.

❑ **Default Browsers**

Matches the type for default message browsers:

- Filtered active messages browser
- Filtered history message browser
- Filtered pending messages browser

Using Global Java GUI Property Files

The property files used by the Java GUI can be enabled and configured using the `ovconfchg` configuration tool on the OVO management server.

These global settings are stored at the shared folder location, which can be a local path, remote path or URL with HTTP protocol (must start with 'http:' string), and then applied to all Java GUI clients connecting to that management server.

Global settings normally override the settings set locally on the Java GUI client systems, with exception of startup parameters, which are not taken into consideration upon Java GUI startup, since Java GUI is started before global settings are applied.

NOTE

The allowed users can save the settings files in their home directories without affecting the global settings files. They can copy these Java GUI settings files to the sharepoint for global use. Refer to the *OVO Administrator's Reference* for more information.

For information about enabling and configuring the Java GUI global settings, and the global configuration change polling, refer to the *OVO Administrator's Reference* guide.

Using Secure HTTPS-based Java GUI Communication

This section describes the HTTPS-based Java GUI as a solution for providing a secure communication between the Java GUI and the OVO management server. The following topics are discussed:

- ❑ The HTTPS-based Java GUI Architecture
Outlines the HTTPS-based Java GUI underlying concepts and architecture.
- ❑ Establishing a Secure Communication
Describes the process for establishing a secure communication.
- ❑ About Certificates
Provides basic information about the certificates and the authentication modes.

For more information about configuring secure communication between HTTPS-based Java GUI and the OVO management server, see “Configuring Secure HTTPS-based Java GUI Communication” on page 288.

Instructions on how to install and enable the HTTPS-based Java GUI, as well as to disable the non-secure communication between the Java GUI client and the OVO management server are detailed in the *OVO Installation Guide for the Management Server*.

The HTTPS-based Java GUI Architecture

The standard Java GUI supplied with OVO 8 has no secured link to the management server. This functionality is provided with the HTTPS-based Java GUI, that is the Java GUI which uses a HTTPS protocol with Secure Socket Layer (SSL) encryption for communication with OVO management server. The SSL encryption is based on the Core functionality components.

The HTTPS protocol acts as a guardian for applications, gauging which incoming communication requests are trustworthy for secure exchange of data. For details on how the secure communication is established, see “Establishing a Secure Communication” on page 195.

The HTTPS functionality provides three prerequisites for network security:

- ❑ Secrecy
- ❑ Data integrity
- ❑ Authentication

Once a user logs in to the HTTPS-based Java GUI, the communication using the HTTPS protocol is initiated between the client and the management server, based on the authentication of certificates. For more information about the certificates, see “About Certificates” on page 198.

Implementation of HTTPS-based communication also secures Service Navigator requests. The HTTPS protocol establishes a secure link between the OVO Java-based operator client and the OVO management server.

Establishing a Secure Communication

The process of establishing a secure communication is as follows:

Java GUI client connects to the `opcuihttps` process, which acts as a proxy between the Java GUI client and the OVO management server using the HTTPS protocol. For information about how to configure `opcuihttps` settings and the HTTPS-based Java GUI connection through firewalls, as well as for a list of parameters related to the HTTPS-based Java GUI, refer to the *OVO Administrator's Reference*.

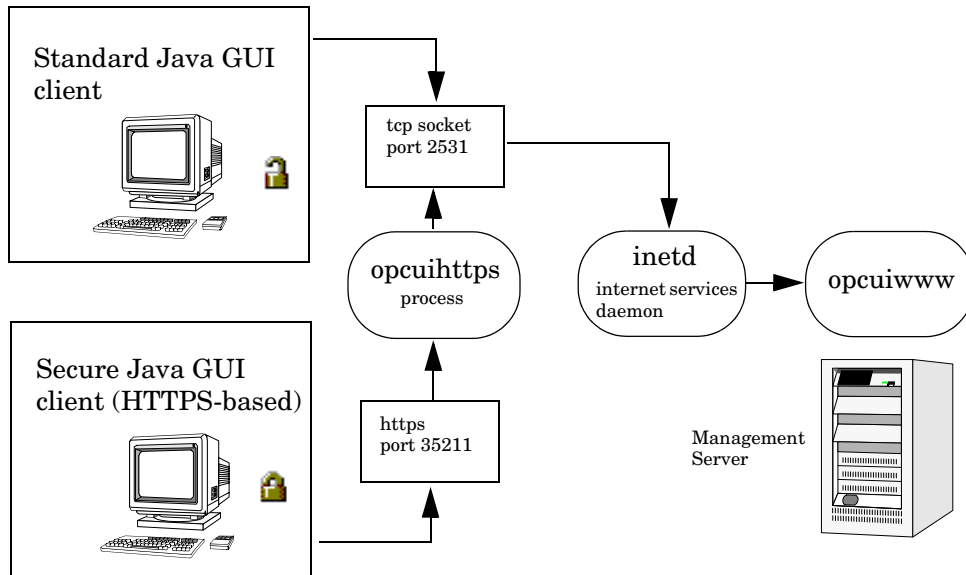
The Java GUI communicates with the `opcuihttps` process using a secure HTTPS protocol on the port 35211. The `opcuihttps` process then redirects the https requests to the standard Java GUI port (2531) using socket communication. All forwarded HTTPS requests are then handled by the `inetd` process, as well as the requests from non-secure Java GUI clients.

The `opcuihttps` process also processes replies from the OVO management server and mediates them to the Java GUI using the HTTPS protocol.

This way all communication requests, from the Java GUI to the OVO management server and the other way round, become trustworthy for secure exchange of data.

Figure 1-81 on page 196 shows the client-server communication.

Figure 1-81 Client-server Communication



About the Authentication Process

The authentication process which ensure establishing a secure communication has four steps:

1. Operator logs in.

The operator enters a username and a password at login.

For the login to work, a certificate does not need be installed on the HTTPS-based Java GUI client. For details, see “About Certificates” on page 198.

2. A certificate is generated.

If the Java GUI contacts the management server for the first time, a server certificate is generated.

The management server then sends the certificate to authenticate itself to the Java GUI client.

NOTE

If you choose to use the server certificate for more than a current session, it gets stored in the local Certificate Store. This certificate will then be used for each subsequent connection between Java GUI and the management server.

3. Client identifies the server.

Based on the certificate it has received from the management server, the client identifies the management server.

If you are using a full authentication mode, the client also authenticates itself with the client certificate. This way the higher level of security is achieved. See “About Certificates” on page 198 for more information about the authentication modes.

4. Communication channel is opened.

If the authentication is successful, a communication channel is opened.

NOTE

In case that HTTPS-based communication between Java GUI and the OVO management server fails to establish, you are prompted to use a non-secure communication type. If you press Cancel, the login window is displayed.

If you set the `https_only` parameter in the `ito_op` startup script to **yes**, you are not prompted to use a non-secure communication. See “Configuring the HTTPS-based Communication on the Java GUI Client” on page 289 for more information about the startup parameters for the HTTPS-based communication.

Figure 1-81 on page 196 shows what you see depending on the chosen communication type:

❑ **HTTPS-based communication**

If you are using the HTTPS-based Java GUI communication, a *closed* padlock icon appears on the login window and on the status bar.

❑ **Standard communication**

If you are using the standard HTTPS Java GUI communication, an *open* padlock icon appears in the GUI.

About Certificates

The HTTPS-based Java GUI provides network security through the exchange and authentication of electronic **certificates** between client and server. A certificate is a way of endorsing a public key, and includes, in an encrypted format, the username and public key of the sender.

Certificates are signed with the private key of the trusted **Certification Authority** (CA) who issued it. The CA then appends its public key to the certificate, which means that it can be verified by the person receiving it.

About Authentication Modes

The SSL encryption is provided for the following authentication modes:

❑ **Server authentication**

This is a default authentication mode, where only server certificates are required. It is possible to connect to an OVO management server from an anonymous Java GUI client.

❑ **Full authentication**

The full authentication mode requires that client certificates are installed on the client systems.

For details about providing certificates for both authentication modes, see “Providing Certificates” on page 293.

2 Performing Daily Tasks

Detecting Problems with OVO

OVO detects problems and potential problems in the managed environment.

This section describes the following:

- ❑ **Monitoring OVO**

To monitor your OVO managed environment, you can view message nodes, search the object tree, and respond to message event notifications.

- ❑ **Viewing Messages**

When you start the OVO GUI, a message browser opens in the browser pane, and automatically displays all active messages from the nodes assigned to you.

NOTE

For an overview of the OVO problems solving process, see “About the Problem Solving Process” on page 100.

Monitoring OVO

To monitor your OVO managed environment, you can view message nodes, search the object tree, and respond to message event notifications:

❑ View a Message Node Manually

You can manually access and view a message node in the shortcut bar and object pane. For details, see “To View a Message Node Manually” on page 201.

❑ View a Message Node Automatically

You can automatically access and view a message node associated with a problem you have already detected. For details, see “To View a Message Node Automatically” on page 202.

❑ Search the Object Pane

You can search for a specific item in the object tree using the basic search function or the advanced search function. For details, see “To Search the Object Pane” on page 202.

❑ View Message Event Notifications

You can automatically access and view a message associated with a problem you have already detected. For details, see “To View Message Event Notifications” on page 203.

To View a Message Node Manually

In the managed environment, nodes are displayed hierarchically in two locations:

❑ Shortcut Bar

To view nodes in the shortcut bar, click the `Nodes` bar. For an overview of the shortcut bar, see “About the Shortcut Bar” on page 41. For an image of nodes in the shortcut bar, see Figure 1-45 on page 114.

❑ Object Pane

To view nodes in the object pane, click the plus sign (+) next to the `Nodes` or `Node Layout Group` icon. For an overview of the object pane, see “About the Object Pane” on page 43. For an image of nodes in the object tree, see Figure 1-4 on page 45.

To View a Message Node Automatically

After you have detected a problem, you can automatically highlight the affected node in the object pane.

To access a message node automatically, follow these steps:

1. In the message browser, select the message you have investigated (see “About the Message Browser” on page 65).
2. Right-click the message, then select `Select Node in Object Pane` from the popup menu (see “right-click” on page 526).

This highlights the node or nodes in the object pane. You can now start applications on that node.

To Search the Object Pane

You can search for a specific item in the object pane using the basic search function or the advanced search function. For an overview of the search function, see “Searching the Object Pane” on page 104.

To search for a specific item in the object pane, follow these steps:

1. Select `Edit: Find...` from the menu bar.
2. In the `Find` dialog box, enter your search criteria.

For descriptions of options in the `Find` dialog box, see “About the Find Dialog Box” on page 434.

NOTE

If you want, you can choose to search for whole words only, matching case, or both. When the search function finds a specific item, the item is highlighted in the object pane. If the item is not visible because the object tree is collapsed, the tree is expanded, and the item is scrolled into the visible area of object pane. Normally, the search starts from the top of the object tree. However, if you start a search while an item is already highlighted, the search starts from the selected item.

3. Click `[Find Next]`.

The basic search enables you to search the entire object pane.

To View Message Event Notifications

Message event notification keeps you informed about new messages with high severity. This notification is especially helpful if you have many windows opened simultaneously, or if there are a lot of new messages with low severity coming in. For an overview of message event notification, see “About Message Event Notification” on page 106.

When a message event notification dialog box opens, you can choose one of two options:

Show Message Browser

Opens the associated message browser to show the message with high severity. If the message is associated with more than one message browser (for example because they are using the same filter), only one message browser is displayed).

Close

Closes the message event notification dialog box.

NOTE

You can enable or disable message event notification, or reset the severity threshold for notification, from the *Preferences* dialog box. To find out how to configure message event notification, see “To Configure Message Event Notification” on page 274. For descriptions of options in the *Preferences* dialog box, see “About the Preferences Dialog Box” on page 450.

Viewing Messages

When you start the OVO GUI, a message browser opens in the browser pane, and automatically displays all active messages from the nodes assigned to you.

NOTE

For an overview of the message browser, see “About the Message Browser” on page 65. For an overview of the browser pane, see “About the Browser Pane” on page 63. For an image of messages in the message browser, see Figure 1-15 on page 63.

You can change the maximum number of messages displayed so that only the latest messages are shown (see “Changing the Number of Messages Displayed” on page 285). The default number of messages displayed is 50, but you can change it as needed.

To further narrow your view of the messages in the message browser, you can open filtered message browsers that display only messages matching your selected view filters. For details, see “To View Active Messages” on page 206.

This section describes how to do the following:

- To View All Active Messages
- To View Selected Messages
- To View Active Messages
- To View History Messages
- To View Pending Messages
- To View Old Messages

To View All Active Messages

To view all active messages, do this:

- ❑ In the menu bar, select `Actions: Filtering -> All Active Messages`.

A message browser opens in the workspace pane, displaying all active messages.

NOTE

To move the message browser from the workspace pane to the browser pane, click the `Move to Browser Pane` button in the toolbar (see “About Toolbar Icons and Drop-down Lists” on page 376).

To View Selected Messages

It may be useful to open a message browser displaying only a selection of messages (for example, if you want to focus on messages from a particular node or message group).

NOTE

Viewing selected messages enables you to open a filtered message browser quickly. To open a filtered message browser with a different filter criteria, see “To View Active Messages” on page 206.

To view selected messages, follow these steps:

1. In the object pane, right-click a node, message group, or service.
For an overview of the object pane, see “About the Object Pane” on page 43.
A popup menu opens.
2. In the popup menu, select one of the following:
 - `Filter Active Messages`
 - `Filter History Messages`

In the workspace pane, a message browser opens displaying only messages generated from the selected node, message group, or service. Depending on which option you selected in the popup menu, the message browser shows either active or history messages.

For an overview of the workspace pane, see “About the Workspace Pane” on page 53.

To View Active Messages

You can save message browser settings so that you can apply the same filter when required.

NOTE

Viewing active messages enables you to open a filtered message browser with a different filter criteria. To open a filtered message browser quickly, see “To View Selected Messages” on page 205.

To view filtered active messages, follow these steps:

1. From the menu bar, select **Actions: Filtering -> New Active Filtered Browser**.
2. In the **Filter Messages** dialog box, enter a name for the filter.

For a description of each option in the **Filter Messages** dialog box, see “About the Filter Messages Dialog Box” on page 427.

3. Select the filtering criteria you want to apply.
4. Click **[OK]**.

A new filtered active message browser opens, displaying only the messages matching your selected criteria.

To View History Messages

To view filtered history messages, follow these steps:

1. From the menu bar, select **Actions: Filtering** -> **New History Filtered Browser**
2. In the **Filter Messages** dialog box, enter a name for the filter.
For a description of each option in the **Filter Messages** dialog box, see “About the Filter Messages Dialog Box” on page 427.
3. Select the filtering criteria you want to apply.
4. Click **[OK]**.

A new filtered history message browser opens displaying only the messages matching your selected criteria.

NOTE

You can create a new history filter on a selected message. The menu item for creating a new history filter can be accessed in one of the following ways:

- By performing a right-click on the selected message (popup menu)
 - By selecting **Actions: Messages from the menu bar**.
-

To View Pending Messages

Use the filtered pending messages browser to review and manage messages that arrive on the OVO management server outside of defined service hours. For an overview of the filtered pending messages browser, see “About the Filtered Pending Messages Browser” on page 73.

To view filtered or unfiltered pending messages, follow these steps:

1. From the menu bar, select **Actions: Filtering -> New Pending Filtered Browser**.
2. In the **Filter Messages** dialog box, select all or specified pending messages:

- *All Pending Messages*

Click [OK] to see all pending messages.

- *Specified Pending Messages*

To see only some pending messages, use the following tabs:

— *General*

In the **General** tab, you can select messages received within a certain time frame, messages owned by selected parties, messages selected in the message browser, messages that do *not* match the selected criteria, messages with a selected severity level, and messages that match a specified text pattern.

— *Symbols and Objects*

In the **Symbols and Objects** tab, you can select symbols and objects chosen from the message browser or the object pane.

— *Pending Details*

In the **Pending Details** tab, you can select buffered messages with an expired buffer time frame and messages received within a certain time frame.

For descriptions of options in the **Filter Messages** dialog box, see “About the Filter Messages Dialog Box” on page 427.

3. Click [OK].

A new filtered pending messages browser opens displaying only the messages matching your selected criteria.

NOTE

Messages in the pending messages browser are read-only. If you want to move a pending message directly to the history database, simply acknowledge it (see “message acknowledgment” on page 520). If you want to work a pending message, you must first unbuffer it to move it into the message browser (see “unbuffering message” on page 528).

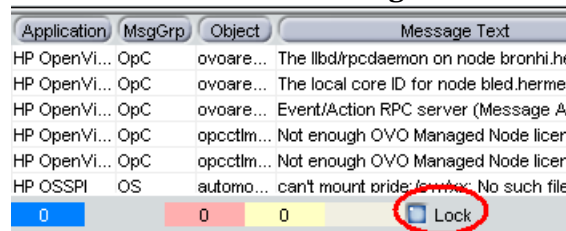
To View Old Messages

When viewing old messages, the arrival of new messages may cause that the messages you are currently viewing become invisible in the message browser.

To make sure that the messages you currently work on remain visible in the message browser while new messages are arriving, disable an autoscroll feature. You can do that by clicking the `Lock` checkbox placed at the bottom of message browser, as shown in the Figure 2-1.

Figure 2-1

Autoscroll Feature in Message Browser



Investigating Problems with OVO

If OVO detects a problem in your managed environment, you need to investigate the problem. This section explain how to use the message browser or the `Message Properties` dialog box to find out more about the problem, including when the problem occurred, on which node the problem occurred, how severe the problem is, and if any actions are preconfigured to solve the problem. The history database is also a good resource for investigating how similar problems have been solved previously.

This section describes the following:

- ❑ Investigating Problems with the Message Browser
- ❑ To Modify the Attributes of a Message
- ❑ Investigating Problems with the Workspace Pane
- ❑ Investigating Message Histories
- ❑ Investigating Pending Messages

Investigating Problems with the Message Browser

You can investigate problems with the message browser as follows:

❑ **Basic Information**

You get basic information about a message by reviewing the message in the workspace pane or the browser pane. Only the most important information is shown. For details, see “Viewing Messages in the Message Browser” on page 212.

You can modify and even forward the message to another operator or to the OVO administrator. For details, see “To Send a Message to Another Operator” on page 212.

❑ **Detailed Information**

You view detailed information about a message by reviewing the Message Properties dialog box. There you can view all information associated with a message, including instructions, annotations, and any configured actions. For details, see “To View Detailed Message Information” on page 213.

Viewing Messages in the Message Browser

By default, the message browser headline displays the most important attributes of a message. For an overview of the message browser and its headline, see “About the Message Browser” on page 65. For a description of default elements in the message headline, see “About the Message Browser Headline” on page 471.

If you want, you can modify the message browser as follows:

❑ **Sort Messages**

You can sort message by date and time, or by attribute (including custom message attribute). For details, see “Changing the Layout of Browser Windows” on page 283.

❑ **Resize Columns**

You can resize the columns of the message browser. For details, see “Changing the Layout of Browser Windows” on page 283.

❑ **Change Attributes**

You can change the attributes of a message. For details, see “To Modify the Attributes of a Message” on page 214. For descriptions of message attributes, see “About Message Fields” on page 475.

❑ **Lock the Message Browser**

You can lock the message browser to make sure that the old messages you are currently viewing remain visible during the arrival of new messages. For details, see “To View Old Messages” on page 209.

To Send a Message to Another Operator

You can copy the message in the message browser to the clipboard and paste it into a text file. This may be useful when you want to send the message to another operator or to the OVO administrator.

To send a message, follow these steps:

1. In the message browser, select the message.
2. In the menu bar, select `Edit: Copy to Clipboard`.
3. In your email program, paste the text into the body of a message, then send the message to another operator or to the OVO administrator.

To View Detailed Message Information

To view detailed message information, follow these steps:

1. Access the `Message Properties` dialog box.

In the browser pane, do one the following:

- *Double-click*
Double-click the message.
- *Menu Bar*
Select the message. Then, from the menu bar, select `Actions : Messages -> Properties`.
- *Popup Menu*
Right-click the message and use the popup menu (see “right-click” on page 526).
- *Toolbar*
Select the message. Then, from the toolbar, click the `Show Properties` button (see “About Toolbar Icons and Drop-down Lists” on page 376).

The `Message Properties` dialog box opens.

2. In the `Message Properties` dialog box, access options by clicking tabs, such as the following:

- *Original Message*
May contain more information about the message itself.
- *Instructions*
May contain information about how to solve the problem.

For descriptions of options in the `Message Properties` dialog box, see “About the Message Properties Dialog Box” on page 438.

3. *Optional*: Print the contents of the `Message Properties` window by clicking `[Print...]`.

A print dialog opens. There you can specify further options.

For more information about printing the contents of the `Message Properties` dialog box, see “Printing OVO Messages and Application Output” on page 243.

To Modify the Attributes of a Message

In some situations it may be useful to modify the attributes of a message (for example, if you want to give a message a higher severity or a more meaningful message text).

NOTE

You can modify message attributes only if your OVO administrator has provided you with sufficient operator privileges.

To modify the attributes of a message, follow these steps:

1. In the message browser, select the message you want to modify.
2. Right-click the message, then select `Modify` from the popup menu.
The `Modify Message Attributes` dialog box opens.
3. Modify the message severity or text.
4. Click `[OK]`.

Your changes are applied immediately to the message you selected. You now own the message.

Investigating Problems with the Workspace Pane

You can use the workspace pane to investigate problems as follows:

❑ Message Dashboard

You can view message severity in the Message Dashboard workspace. For details, see “Viewing Message Severity in the Message Dashboard Workspace” on page 215.

❑ Diagnostic Dashboard

You can monitor other OpenView applications that integrate with OVO in the Message Dashboard workspace. For details, see “Monitoring Applications in the Diagnostic Dashboard Workspace” on page 216.

Viewing Message Severity in the Message Dashboard Workspace

You can view message severity in the Message Dashboard workspace of the workspace pane.

You can view message severity in one of two formats:

❑ Current State Chart

Displays the severity of all messages in the currently selected message browser. For details, see “About the Current State Chart” on page 125.

❑ History Chart

Displays the severity changes over time of all messages in the currently selected message browser. For details, see “About the History Chart” on page 127.

You can switch between these two charts by using `Switch to Pie Chart` (current state chart) and `Switch to History Chart` icons in the toolbar (see “About Toolbar Icons and Drop-down Lists” on page 376). You can also open a new message browser with the same filter as the original browser from the message browser, current state chart, or history chart.

For an overview of the Message Dashboard workspace, see “About the Message Dashboard Workspace” on page 56.

Monitoring Applications in the Diagnostic Dashboard Workspace

The Diagnostic Dashboard workspace enables you to monitor other OpenView applications that integrate with OVO.

For example, the following applications provide integration points for OVO:

- Performance (HP OpenView Performance for Windows)
- Network Neighbor View
- Network Path
- Internet Services

For more information about how applications can help you investigate problems, see the documentation supplied with the applications.

For an overview of the Diagnostic Dashboard workspace, see “About the Diagnostic Dashboard Workspace” on page 57.

Investigating Message Histories

The history database contains all of your acknowledged messages (that is, all messages for which you have completed work). It can serve as a knowledge database in which you can search for previous solutions to problems. You access the history database by opening a filtered history message browser and reviewing the displayed messages.

NOTE

For an overview of the filtered history message browser, see “About the Filtered History Message Browser” on page 71.

This section describes how to do the following:

- ❑ To Access the History Database Quickly
- ❑ To Specify a Detailed Filter
- ❑ To Change Your Current View

Opening a filtered history message browser may take a long time to complete because history messages are retrieved from the database and not from cache. During the download, the Java GUI cannot be used for other tasks. If you need to access the Java GUI while history messages are being downloaded, cancel the download and consider changing the filter criteria to better match the history messages you are interested in.

You can also limit the maximum number of messages displayed in a history message browser.

To Access the History Database Quickly

To access the history database quickly, follow these steps:

1. In the object pane, select the node, message group, or service in which you are interested.

For an overview of the object pane, see “About the Object Pane” on page 43.

2. Open a filtered history message browser.

Right-click the message (see “right-click” on page 526), then select `Filter History Messages` from the popup menu.

A filtered history message browser opens, displaying only acknowledged messages from the selected node, message group, or service. By default, only messages generated the same day are displayed. If you want to see message generated on other days, you must specify a detailed filter.

To Specify a Detailed Filter

To specify a detailed filter, follow these steps:

1. From the menu bar, select `Actions: Filtering -> New History Filtered Browser`.
2. In the `Filter Messages` dialog box, select the filtering criteria you want to apply.

For descriptions of options in the `Filter Messages` dialog box, see “About the Filter Messages Dialog Box” on page 427.

3. Click `[OK]`.

A filtered history message browser opens displaying only the messages matching your selected criteria (see “About the Filtered History Message Browser” on page 71).

To Change Your Current View

To change your current view, follow these steps:

1. From the menu bar, select `Actions: Filtering -> Modify Filter`.
2. In the `Filter Messages` dialog box, specify further criteria.

You can open as many different filtered message browsers as needed.

Investigating Pending Messages

The filtered pending messages browser displays all messages that arrive on the OVO management server outside of defined service hours. They remain on the management server until a defined unbuffer time has been reached.

You can do the following with pending messages:

❑ **Acknowledge**

Messages are moved to the filtered history message browser. To find out how to acknowledge messages, see “Acknowledging Messages” on page 248.

❑ **Unbuffer** (manually or automatically)

Messages are moved to the active message browser. To find out how to unbuffer messages, see “To Unbuffer a Pending Message” on page 223.

NOTE

For details about the filtered pending messages browser, see “About the Filtered Pending Messages Browser” on page 73.

Solving Problems with OVO

After you have investigated a problem, you need to direct problem solving activities to remedy the problem in the managed environment.

This section describes the following:

- ❑ Owning Messages
- ❑ To Unbuffer a Pending Message
- ❑ Verifying Automatic Actions
- ❑ Verifying Operator-initiated Actions
- ❑ To Access Operator Instructions
- ❑ To View Operator-assigned Applications
- ❑ Starting Applications
- ❑ Starting X-OVw Applications
- ❑ To Customize the Startup Attributes of an Application
- ❑ To Broadcast a Command
- ❑ To Escalate a Message

Owning Messages

Owning a message indicates to other operators that you have read a message and want to perform the actions associated with that message. When you assume ownership of a message, actions associated with the message are restricted to you. However, other users are still allowed to view the message.

The number of messages owned by you and owned by others is displayed in the color bar of the message browser.

This section describes how to do the following:

- To Own a Message
- To Disown a Message

To Own a Message

To own a message, follow these steps:

1. In the workspace pane, select the message you want to work on (see “About the Workspace Pane” on page 53).
2. Do one of the following:
 - *Toolbar*
In the toolbar, click the `Own` button (see “About Toolbar Icons and Drop-down Lists” on page 376).
 - *Popup Menu*
Right-click the message, then select `Own` from the popup menu (see “right-click” on page 526).
 - *Menu Bar*
From the menu bar, select `Actions: Messages -> Own`.

To Disown a Message

Disowning a message indicates that you no longer want to work with that message. Only the owner or the OVO administrator may disown a message.

To disown a message, do one of the following:

1. In the workspace pane, select the message you no longer want to work with (see “About the Workspace Pane” on page 53).

2. Do one of the following:

- *Toolbar*

In the toolbar, click the `Disown` button (see “About Toolbar Icons and Drop-down Lists” on page 376).

- *Popup Menu*

Right-click the message, then select `Disown` from the popup menu (see “right-click” on page 526).

- *Menu Bar*

From the menu bar, select `Actions: Messages -> Disown`.

To Unbuffer a Pending Message

Before you can start working on a pending message, you must first unbuffer it (see “unbuffering message” on page 528).

To unbuffer a pending message, follow these steps:

1. Open a filtered pending messages browser and select the message you want to unbuffer.

For details, see “To View Pending Messages” on page 208.

2. Do one of the following:

- *Popup Menu*

Right-click the message and select Unbuffer from the popup menu (see right-click).

- *Menu Bar*

From the menu bar, select `Actions: Messages -> Unbuffer`.

3. The pending message is moved to the message browser.

You can now work with the message as you would with any other active message.

Verifying Automatic Actions

Some problems are solved by OVO automatically through preconfigured actions. If a message has an associated automatic action, you will find a value in the **A** column of the **Flags** field in the message browser.

You can verify whether an automatic action is configured for a message, and, if so, whether the action was completed successfully, by using either the message browser or the **Message Properties** dialog box.

This section describes how to do the following:

- ❑ To Verify an Automatic Action in the Message Browser
- ❑ To Verify an Automatic Action in the Message Properties Dialog Box

To Verify an Automatic Action in the Message Browser

To verify an action for a message, follow these steps:

1. Check the **Flags (SUIAONE)** field of the message browser.
2. In the **A** column, look for the following values:
 - No automatic action is configured for the message.
 - S Automatic action was successful.
 - F Automatic action failed.
 - R Automatic action is running.

To Verify an Automatic Action in the Message Properties Dialog Box

To verify an action in the Message Properties dialog box, follow these steps:

1. Access the Message Properties dialog box.

In the browser pane, do one of the following:

- *Double-click*

Double-click the message.

- *Menu Bar*

Select the message. Then, from the menu bar, select Actions: Messages -> Properties.

- *Popup Menu*

Right-click the message and use the popup menu (see “right-click” on page 526).

- *Toolbar*

Select the message. Then, from the toolbar, click the Show Properties button (see “About Toolbar Icons and Drop-down Lists” on page 376).

2. Click the Actions tab of the Message Properties dialog box.
3. Check for any actions of type Automatic.
4. Check the Status field.

If the Status field indicates Successful, the automatic action has been completed successfully. The status field may also indicate that the automatic action is currently running. If necessary, you can stop running actions.

5. Click the Annotations tab of the Message Properties dialog box.

You can also the Annotations tab by doing one of the following:

- *Toolbar*

Select the message, then click the Annotation button in the toolbar (see “About Toolbar Icons and Drop-down Lists” on page 376).

- *Popup Menu*

Right-click the message and use the popup menu (see “right-click” on page 526).

- *Menu Bar*

Select the message, then select `Actions: Messages -> Annotations` from the menu bar.

If the action has an associated annotation, the annotation is shown.

6. Check the annotations for more information about the results of the action.

Verifying Operator-initiated Actions

Use operator-initiated actions when you want to evaluate a problem before activating the solution. If a message has an associated operator-initiated action, you will see a value in the `O` column of the `Flags` field in the message browser.

You can verify whether an operator-initiated action is configured for a message, and, if so, whether the action was completed successfully, by using either the message browser or the `Message Properties` dialog box.

This section describes how to do the following:

- ❑ To Verify an Operator-initiated Action in the Message Browser
- ❑ To Verify an Operator-initiated Action in the Message Properties Dialog Box

To Verify an Operator-initiated Action in the Message Browser

To verify an operator-initiated action for a message, follow these steps:

1. Check the `Flags (UIAONE)` field of the message browser.
2. In the `O` column, look for the following values:

-	No operator-initiated action is configured for the message.
X	Operator-initiated action is configured for the message.
S	Operator-initiated action was successful.
F	Operator-initiated action failed.
R	Operator-initiated action is running.

To Verify an Operator-initiated Action in the Message Properties Dialog Box

To verify an operator-initiated action in the Message Properties dialog box, follow these steps:

1. Access the Message Properties dialog box.

In the browser pane, do one of the following:

- *Double-click*

Double-click the message.

- *Menu Bar*

Select the message. Then, from the menu bar, select Actions: Messages -> Properties.

- *Popup Menu*

Right-click the message and use the popup menu (see “right-click” on page 526).

- *Toolbar*

Select the message. Then, from the toolbar, click the Properties button (see “About the Toolbar” on page 79).

2. Click the Actions tab of the Message Properties dialog box.
3. Check for any actions of type Operator Initiated.
4. Review the command and determine if it is appropriate to proceed with the action.
5. If you decide that the configured action is appropriate, click [Perform] to initiate the action.

You can also initiate the action by doing one of the following:

- *Toolbar*

Select the message, then click the Perform Action button in the toolbar (see “About Toolbar Icons and Drop-down Lists” on page 376).

- *Popup Menu*

Right-click the message, then select Perform/Stop Action -> Perform Operator-Initiated Action from the popup menu.

- *Menu Bar*

Select the message, then select Actions: Messages -> Perform/Stop Action from the menu bar.

NOTE

If you started the action by mistake, or if the action seems to be pending, you can also stop it.

6. Check the annotation (if configured) for the output of the action.
You can perform operator-initiated actions as often as needed.

To Access Operator Instructions

In the attribute column **I** of the message browser, you see an **X** for each message with written instructions.

To read these instructions, follow these steps:

1. In the message browser, right-click the message.
2. In the popup menu, click **Properties**.
3. Click the **Instructions** tab to review the instructions written for you.

To View Operator-assigned Applications

To view all applications assigned to you, do one of the following:

❑ **Menu Bar**

In the menu bar, select one of the following:

- **Actions: Start**
- **Actions: Start Customized...**

Figure 2-2 on page 231 shows all operator-assigned actions as viewed from the **Actions** menu.

❑ **Object Pane**

In the object pane, do one of the following:

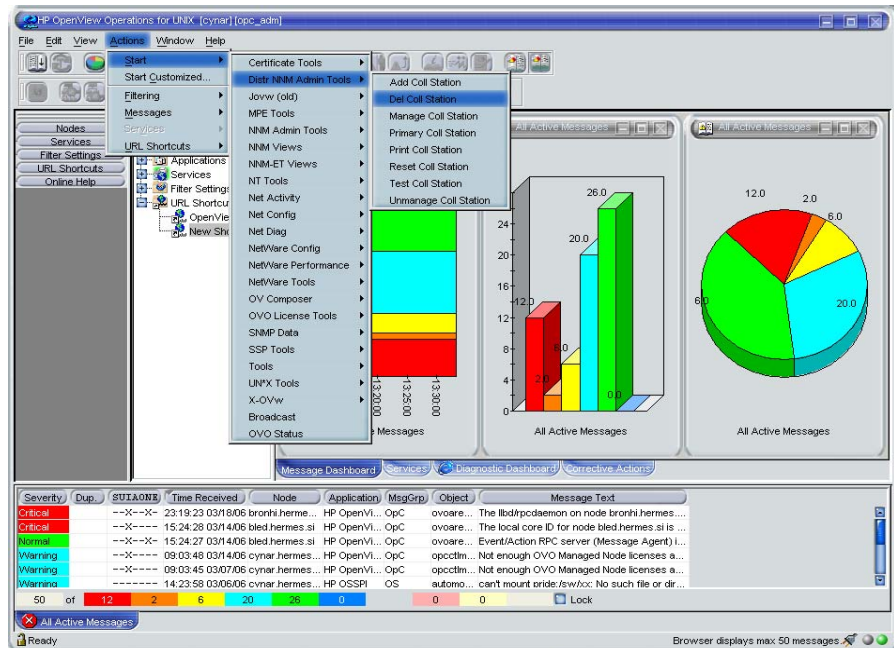
- Double-click an application in the **Applications** folder.
- Right-click an application in the **Applications** folder, then select one of the following from the popup menu:
 - **Start**
 - **Start Customized...**

For descriptions of popup menu options in the object pane, see “About Object Pane Popup Menu Items” on page 388.

NOTE

When Use Tailored Set of Applications is checked in the Preferences dialog box, the set of available applications in the popup menu is smaller than the set of available application in the Actions menu. For descriptions of options in the Preferences dialog box, see “About the Preferences Dialog Box” on page 450.

Figure 2-2 Viewing All Operator-assigned Actions from the Actions Menu



Starting Applications

You can start an application from OVO to remedy an unsuccessful automatic action or operator-initiated action, or to handle a message for which no action has been configured. Applications are executed on the management server, configured nodes, or nodes you have selected.

NOTE

All applications assigned to an operator are displayed in the **Actions: Start** and the **Actions: Start Customized...** wizard in the menu bar.

From the menu bar and popup menus, there are two ways to start an application:

Start

Start the application directly through the **Start** menu without further customizing the application. Figure 2-2 on page 231 shows all operator-assigned actions as viewed from the **Actions** menu.

Start Customized

Start through the **Start Customized Application** wizard, which enables you to customize the application (for example, add parameters to the application call. For details, see “To Customize the Startup Attributes of an Application” on page 237. For descriptions of options in the **Start Customized Application** wizard, see “About the Start Customized Application Wizard” on page 468.

This section describes how to do the following:

- To Start an Application from the Menu Bar
- To Start an Application from the Object Pane
- To Start an Application from the Message Browser

To Start an Application from the Menu Bar

To start an application from the menu bar, follow these steps:

1. In the shortcut bar or object pane, select the managed node or nodes on which you want to start the application.

NOTE

You can use the search function to find the node. To find out how, see “To Search the Object Pane” on page 202. For an overview of the search function, see “Searching the Object Pane” on page 104. For descriptions of options in the Find dialog box, see “About the Find Dialog Box” on page 434.

2. In the Actions menu, select one of the following:

- Start -> <Application>

Starts the application without further customizing the application. Figure 2-2 on page 231 shows all operator-assigned actions as viewed from the Actions menu.

- Start Customize...

Starts the Start Customized Application wizard, which enables you to customize the application (for example, add parameters to the application call. For details, see “To Customize the Startup Attributes of an Application” on page 237.

For more information about the Actions menu, see “About the Actions Menu” on page 366.

3. Select the application you want to start.

NOTE

All outputs are displayed in a new workspace pane window. This output can also be printed. For details, see “Printing OVO Messages and Application Output” on page 243.

To Start an Application from the Object Pane

To start an application from the object pane, follow these steps:

1. In the menu bar or object pane, select the managed node or nodes on which you want to start the application.

2. Right-click the node.

A popup menu of available application groups and applications opens. For more information about this popup menu, see “About Object Pane Popup Menu Items” on page 388.

3. From the popup menu, choose one of the following items:

- Start -> <Application>

Starts the application without further customizing the application. Figure 2-2 on page 231 shows all operator-assigned actions as viewed from the Actions menu.

The list of available applications in the popup menu can be further reduced by checking the checkbox Tailored set of Applications in the General tab of the Preferences dialog box. If the Tailored set of Applications checkbox is checked, OVO automatically selects the applications that make sense for the node. That is, OVO would not offer NT applications for a UNIX node. For details, see “Customizing Popup Menus” on page 177 and “About the Preferences Dialog Box” on page 450.

- Start Customize...

Starts the Start Customized Application wizard, which enables you to customize the application (for example, add parameters to the application call. For details, see “To Customize the Startup Attributes of an Application” on page 237.

NOTE

All outputs are displayed in a new workspace pane window. This output can also be printed. For details, see “Printing OVO Messages and Application Output” on page 243.

To Start an Application from the Message Browser

OVO enables you to start applications on a node from a popup menu in the message browser, as shown in Figure 1-75 on page 179. For example, if a critical message event arrived with the message text `Error writing on disk. Disk might be full. from the node abc.hp.com`, you should immediately investigate the disk space on this node. To do so, you simply select the message and launch the `Disk Space` application from the popup menu. The application is then started on the node `abc.hp.com`.

If you start an application from multiple messages in the message browser, the application takes the node attributes from all selected messages. If some selected messages have duplicate (identical) node attributes, the application uses the node attributes only once, thereby preventing the application from being started on the node more than once.

To start an application from the message browser, follow these steps:

1. In the message browser, right-click a message.
2. From the popup menu, choose one of the following items:
 - `Start -> <Application>`

Starts the application without further customizing the application. Figure 2-2 on page 231 shows all operator-assigned actions as viewed from the `Actions` menu.

The list of available applications in the popup menu can be further reduced by checking the checkbox `Tailored set of Applications` in the `General` tab of the `Preferences` dialog box. If the `Tailored set of Applications` checkbox is checked, OVO automatically selects the applications that make sense for the node. That is, OVO would not offer NT applications for a UNIX node. For details, see “Customizing Popup Menus” on page 177 and “About the Preferences Dialog Box” on page 450.
 - `Start Customize...`

Starts the `Start Customized Application` wizard, which enables you to customize the application (for example, add parameters to the application call. For details, see “To Customize the Startup Attributes of an Application” on page 237.

Starting X-OVw Applications

Network Node Manager (NNM) is integrated into the OVO GUI by way of applications in the X-OVw application group. NNM can be installed locally or remotely.

This section describes the following:

- ❑ Types of X-OVw Applications
- ❑ To Start X-OVw Applications

Types of X-OVw Applications

There are three NNM-specific applications available to you in the X-OVw application group:

- ❑ **Highlight Message Node**

Enables you to map the node related to a selected message to an NNM system, and highlight the node in an OVw session of that NNM system. By default, the target NNM system is the OVO management server.

- ❑ **Highlight Selected Node**

Maps the selected node to an NNM system, and highlights the node in an OVw session of that NNM system. By default, the selected NNM system is the OVO management server.

- ❑ **Start OVw**

Starts an OVw session on a remote NNM system.

NOTE

OVO-specific symbols and submaps are not displayed in the accessed OVw map. The map displayed shows a pure network view, with no OVO-related status messages.

To Start X-OVw Applications

You can start X-OVw applications in the normal way from the OVO GUI. For details, see “Starting Applications” on page 232.

To Customize the Startup Attributes of an Application

You can change the preconfigured startup attributes of an application (for example, parameters, username, and password), and specify the nodes on which you want to start the application, by using the OVO Start Customized Application wizard, as shown in Figure 1-59 on page 148.

NOTE

For descriptions of options in the Start Customized Application wizard, see “About the Start Customized Application Wizard” on page 468.

To customize the startup attributes of an application, follow these steps:

1. Select managed nodes.

In the object pane, select the managed node or nodes on which you want to start the application. For an overview of the object pane, see “About the Object Pane” on page 43.

2. Select an application.

Hold down **Ctrl** and click an application in the object pane.

At this point, both the managed node(s) and the application are selected in the object pane.

3. Open the Start Customized Application wizard.

Do one of the following:

- *Menu Bar*

Select Actions: Start Customized... from the menu bar.

- *Popup Menu*

Right-click the node, then select Start Customized... from the popup menu.

The Start Customized Application wizard, Step 1 of 3, displays an application menu tree and the following four buttons:

- [<Back]
- [Next>]
- [Finish>]
- [Cancel]

NOTE

Depending on the application you chose, there are either two or three steps involved in customizing the start of an application. You can go back and forward between the steps by using the [<Back] and [Next>] buttons. For descriptions of options in the Start Customized Application wizard, see “About the Start Customized Application Wizard” on page 468.

4. Customize the application.

To customize the application, follow these steps:

- a. From the application tree in Step 1 of 3, choose the application you want to execute, then click [Next>].
- b. Choose the node or nodes on which you would like to execute the application.

A node list combination box is displayed. You can add selected nodes to this list.

- c. Specify the command you want to execute.

Include any additional parameters, the user name, and password (if necessary) under which to execute the command.

IMPORTANT

You are *not* allowed to set the \$AGENT_USER variable when specifying the additional parameters. *Only* the OVO administrator can set this variable as a startup attribute of an application. Refer to the *OVO Administrator's Reference* for more information.

5. Start the application.

Click [Finish>] to exit the Customized Startup wizard and start the application.

To Broadcast a Command

You can broadcast a command to one or more specified managed nodes to start a corrective action (see “broadcasting” on page 516). You can also broadcast a command to investigate problems (for example, by issuing the `ps -ef` command to all specified nodes to check the number of current processes).

NOTE

The `Broadcast` command may not be available if it has not been configured for you by the OVO administrator.

To broadcast a command, follow these steps:

1. Select the managed node or nodes to which you want to broadcast the command.
2. Right-click the managed node or nodes to which you want to broadcast a command, then select `Start -> Broadcast` from the popup menu.

The `Start Customized Application` wizard opens, with the `Broadcast` selected in Step 1 of 3. For descriptions of options in this wizard, see “About the Start Customized Application Wizard” on page 468.

3. Click [Next>].
4. In Step 2 of 3, verify that the correct nodes are specified.
Make corrections or enter additional nodes, as needed
5. Click [Next>].
6. In Step 3 of 3, enter the broadcast command and additional parameters you want.
7. Click [Finish].

All outputs are displayed in a new workspace pane window.

To Escalate a Message

Before you can escalate a message from your message browser, the OVO administrator must have already configured another management server as the target system.

NOTE

If message escalation has not been configured for you by the OVO administrator, the `Escalate` item is grayed out in all menus.

To escalate a message, do one of the following in the message browser (see “About the Message Browser” on page 65):

❑ **Menu Bar**

Select the message you want to escalate, then select `Actions: Messages -> Escalate` from the menu bar.

❑ **Toolbar**

Select the message you want to escalate, then click the `Escalate` button in the toolbar (see “About Toolbar Icons and Drop-down Lists” on page 376).

❑ **Popup Menu**

Right-click the message you want to escalate, then select `Messages -> Escalate` from the popup menu.

A copy of the message is sent to the management server. The original message remains active in your message browser, and is marked with the flag `T`, indicating that the message has been escalated “To” another management server.

Documenting Solutions with OVO

The final step in the OVO problem-solving model is to document your solution to a problem. This step facilitates problem management in the future. It enables you to modify message instructions and move resolved problems from the message browser to the history database by acknowledging them.

This section describes how to do the following:

- ❑ To Annotate a Message
- ❑ Printing OVO Messages and Application Output
- ❑ Acknowledging Messages

To Annotate a Message

After you have completed work on a message, you document your efforts by adding an annotation.

To annotate a message, follow these steps:

1. In the message browser, select the message you want to annotate.

For an overview of the message browser, see “About the Message Browser” on page 65.

2. Do one of the following:

- *Menu Bar*

Select Messages -> Add Annotation from the Actions menu.

- *Popup Menu*

Right-click the message you want to annotate (see “right-click” on page 526), then select Add Annotation from the popup menu.

- *Toolbar*

Click the Show Message Annotations button in the toolbar (see “About Toolbar Icons and Drop-down Lists” on page 376). Then, from the Annotations tab of the Message Properties dialog box, click [Add New Annotation]. For descriptions of options in the Message Properties dialog box, see “About the Message Properties Dialog Box” on page 438.

The Add Annotation dialog box opens. For descriptions of options in the Annotations dialog box, see “About the Add Annotation Dialog Box” on page 417.

3. In the Add Annotation dialog box, enter the text for your annotation.
4. Click [OK].

Your annotation is added to the message.

NOTE

You can read all annotations associated with a message by opening the Message Annotation dialog box. Clicking on the up arrow displays the next annotation, and clicking on the down arrow displays the previous annotation. You can also modify or delete annotations, as needed.

Printing OVO Messages and Application Output

OVO enables you to print the following:

- ❑ **Messages**

To find out how to print messages, see “To Print Messages” on page 244.

- ❑ **Message Details**

To find out how to print message details, see “To Print Message Details” on page 245.

- ❑ **Application Output**

To find out how to print application output, see “To Print Application Output” on page 246.

For an example of a print dialog box, see “Example of the Print Dialog Box (for Microsoft Windows)” on page 247.

The print output is formatted using the default monospaced font of the Java Runtime, font size 10. Lines that are too long are wrapped.

To Print Messages

To print messages, follow these steps:

1. If needed, change the page setup by selecting File: Page Setup... from the menu bar.

The new settings are saved for the current session only.

2. Select the messages in the browser.

3. Do one of the following:

- *Toolbar*

Click the `Print` button in the toolbar (see “About Toolbar Icons and Drop-down Lists” on page 376).

The selected messages (without details) are printed directly to the default printer.

- *Menu Bar*

Select one of the following from the menu bar:

— File: Print....

— Actions: Messages -> Print -> Selected Messages...

— Actions: Messages -> Print -> All Messages...

A print dialog opens (see Figure 2-3) where you can specify further options.

- *Popup Menu*

Right-click the selected messages in the message browser (see “right-click” on page 526), then select one of the following from the popup menu:

— Print -> Selected Messages...

— Print -> All Messages...

A print dialog box opens (see Figure 2-3) where you can specify further options.

To Print Message Details

To print message details, follow these steps:

1. If needed, change the page setup by selecting File: Page Setup... from the menu bar.

The new setting will be saved for the current session only.

2. Do one of the following:

- *Double-click*

Double-click the message in the message browser, then click [Print...] in the Message Properties dialog box.

- *Menu Bar*

Select the message in the message browser, then select Actions: Messages -> Print from the main menu bar, and then choose one of the following:

- Selected Messages...
- All Messages in Browser...
- Details of Selected Messages...
- Details of All Messages...

- *Popup Menu*

Right-click the selected messages in the message browser (see “right-click” on page 526), then select one of the following from the popup menu:

- Print -> Selected Messages...
- Print -> All Messages in Browser...
- Print -> Details of Selected Messages...
- Print -> Details of All Messages...

A print dialog box opens (see Figure 2-3) where you can specify further options.

To Print Application Output

1. If needed, change the page setup by selecting `File: Page Setup...` from the menu bar.

The new setting will be saved for the current session only.

2. Make sure that the application output window is active by clicking it.

The window should be the topmost window.

3. Do one of the following:

- *Menu Bar*

Select `File: Print...` from the menu bar.

A print dialog opens (see Figure 2-3) where you can specify further options.

- *Toolbar*

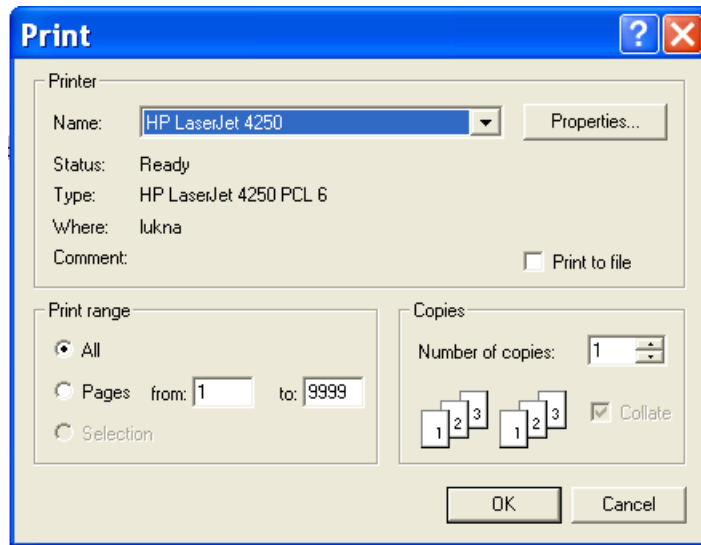
Click the `Print` button in the toolbar (see “About Toolbar Icons and Drop-down Lists” on page 376).

The application output is printed directly to the default printer.

Example of the Print Dialog Box (for Microsoft Windows)

Figure 2-3 shows the default Java Runtime print dialog box. The dialog box may vary according to the Java Runtime version installed.

Figure 2-3 Java Runtime Print Dialog Box



Acknowledging Messages

When a message has been resolved, you can acknowledge it from the message browser, and move it into the history database. Later, if you want to work on the message again, you can unacknowledge it.

NOTE

The OVO administrator can configure an automatic acknowledgment for messages with either automatic or operator-initiated actions. When the action is successfully completed for a message with an automatic action and an automatic acknowledgment, the message is sent directly to the history database. The message disappears from the message browser window, without your intervention.

Similarly, messages can be acknowledged automatically by succeeding messages if OVO establishes a relationship between them. The relationship could be that succeeding messages report a deterioration of the original problem (for example, the amount of free disk space has reduced even more). Or the relationship could be that the original problem has been solved (for example, the application is running again).

This section describes how to do the following:

- ❑ To Acknowledge Selected Messages
- ❑ To Acknowledge All Messages in the Current View
- ❑ To Unacknowledge a Message

NOTE

By default, Java GUI acknowledges, unacknowledges, owns, and disowns messages only one at a time using the common message APIs. When acknowledging more messages at once, this could result in slowing the Java GUI and the entire system performance.

With bulk operations enabled, you can handle more messages at a time. You can enable bulk operations by setting the `OPCUIWWW_BULK_MODE` parameter to `TRUE`.

To Acknowledge Selected Messages

To acknowledge selected messages, follow these steps:

1. In the message browser, select the message(s) you want to acknowledge.

For an overview of the message browser, see “About the Message Browser” on page 65.

2. Do one of the following:

- *Menu Bar*

From the menu bar, select `Actions: Messages -> Acknowledge`.

- *Toolbar*

In the toolbar, click the `Acknowledge` button (see “About Toolbar Icons and Drop-down Lists” on page 376).

- *Popup Menu*

Right-click the selected messages in the message browser, then select `Acknowledge` from the popup menu.

To Acknowledge All Messages in the Current View

You can acknowledge every single message for which you are responsible. If you have worked on all messages from node beans, you can acknowledge all messages in the current message browser. To do so, you open a filtered message browser for all messages from the node beans, then use the menu bar to acknowledge all messages in the current view.

To acknowledge all messages in the current view (for example, on a specific node), follow these steps:

1. In the object pane, select the node on which you have completed work.
2. Right-click the selected node, then select `Filter Active Messages` from the popup menu.

A `Filtered Active Messages` browser opens with active messages associated with that node.

3. Do one of the following:

- *Menu Bar*

From the menu bar, select `Actions: Messages -> Acknowledge All in Current View`.

- *Toolbar*

In the filtered message browser, select all messages. Then click the `Acknowledge Selected Objects` button in the toolbar (see “About Toolbar Icons and Drop-down Lists” on page 376).

- *Popup Menu*

In the filtered message browser, select all messages. Then right-click the selected messages in the message browser, and select `Acknowledge` from the popup menu.

All messages are moved to the history database.

To Unacknowledge a Message

Sometimes it is useful to unacknowledge a previously acknowledged message so you can work on it again.

To unacknowledge a message, follow these steps:

1. Open the filtered history message browser.
2. Select the message you want to unacknowledge.
3. In the toolbar, click the Unacknowledge button (see “About Toolbar Icons and Drop-down Lists” on page 376) to unacknowledge a message.

- *Menu Bar*

From the menu bar, select `Actions: Messages -> Unacknowledge`.

- *Toolbar*

Click the Unacknowledge Selected Objects button in the toolbar (see “About Toolbar Icons and Drop-down Lists” on page 376).

- *Popup Menu*

Right-click the selected messages in the message browser, then select Unacknowledge from the popup menu.

The message is moved back into your active message browser, where you can work on the message again.

Sending Information Messages

In some situations it may be useful to send a message to other OVO users, for example to inform them of an unexpected system failure or to remind them of a planned outage. Likewise, the OVO administrator may send a message to you, for example to ask you to reload your current configuration.

When you receive a message from another user, the OVO Communication Status dialog box opens and displays the text of the message.

To send a message to other users, follow these steps:

1. From the menu bar, choose `File: Send Message to Operator(s)`. The `Send Message to Operator(s)` dialog box opens.
2. Under `Message`, enter the text of the message to send.
3. Select the receiver of the message:
 - `Send to All Operators` sends the message to all currently logged on users.
 - `Send to Selected Operators` sends the message to the specified users only. If you want to specify more than one user, enter the OVO user names separated by commas.
4. Click `[OK]`. The message is sent to the specified OVO users and the dialog box is closed.

NOTE

Note that template administrators are not included in the distribution.

You can also use the `opcwall` command line tool to send a message to other OVO users. See the `opcwall(1)` man page for more information.

Customizing OVO

This section describes how to do the following:

- ❑ **Customizing the Java GUI**
 - To Change Your Operator Password
 - To Load the Default Configuration
 - To Reload the Configuration
 - To Refresh the Java GUI Manually
 - To Customize the Refresh Interval
 - To Customize Console Settings
 - To Customize the Look and Feel of the Java GUI
 - To Customize the Progress Dialog Box
 - Customizing Movable Panes
 - Customizing the Shortcut Bar
 - Customizing Workspace Pane Workspaces
 - To Change Your Integrated Web Browser
 - To Customize Popup Menus
 - To Customize the Toolbar
 - To Configure Message Event Notification
 - To Customize the General Font Size

- ❑ **Customizing the Message Browser**
 - To Create a Filtered Message Browser
 - To Save the Browser Filter Settings
 - To Access Filtered Message Browsers
 - Moving Filtered Message Browsers
 - Saving the Browser Layout
 - Changing the Layout of Browser Windows
 - Changing the Number of Messages Displayed
 - To Customize the Color Preferences for the Message Browser

To Change Your Operator Password

OVO enables you to change your own operator password as often as you want.

IMPORTANT

On first login as any of the default users, you must change your default password for security reasons. You can change your password again at a later time, but you will not be allowed to set the password back to default.

NOTE

You can change only your own operator password, not the passwords of other OVO operators. When you change your password, you must use it for all future OVO sessions, or until you change it again.

To change your operator password, follow these steps:

1. From the menu bar, choose `File: Change Password`.
2. Under `Old Password`, enter your current password.
3. Under `New Password`, enter your new password.
4. Under `Confirm New Password`, enter your new password again.

You receive a system message confirming your password change, as shown in Figure 2-4.

Figure 2-4

System Message Confirming the Password Change



To Load the Default Configuration

The first time you login to the OVO Java GUI, you receive a set of default components. OVO administrators can change this configuration globally for all operators. As an operator, you can accept the latest default configuration through a Reload Assigned Defaults action.

To load the latest default configuration assigned by OVO or your OVO system administrator, do the following:

- ❑ From the menu bar, select File: Reload Assigned Defaults.

To Reload the Configuration

When the OVO administrator changes your configuration (for example, adds more nodes or services to your responsibilities), you do not need to log out of the Java GUI. OVO allows you to reload your new configuration from the OVO management server.

To reload the configuration, do this:

- ❑ From the menu bar, select File: Reload Configuration.

The Java GUI automatically refreshes the node status, message group status, service status, browser status summary line, and all messages in the message browser at a preset interval. You can also refresh the message browser manually. For details, see “To Refresh the Java GUI Manually” on page 257.

To Refresh the Java GUI Manually

The Java GUI automatically refreshes the node status, message group status, service status, browser status summary line, and all messages in the message browser at a preset interval. You may also refresh this information manually.

To refresh the message browser manually, do one of the following:

❑ **Menu Bar**

From the menu bar, select `View: Refresh`.

❑ **Toolbar**

In the toolbar, click the `Refresh` button.

The number of messages refreshed depends on whether the `Show All Messages` icon or the `Show Latest Messages` icon is selected in the toolbar. For descriptions of icons in the toolbar, see “About Toolbar Icons and Drop-down Lists” on page 376

To find out how to change the browser refresh preset interval for the current session, see “To Customize the Refresh Interval” on page 258. For descriptions of toolbar icons, see “About Toolbar Icons and Drop-down Lists” on page 376.

To Customize the Refresh Interval

Refreshing a browser updates the node status, message group status (see message groups), browser status summary line, all messages in the browser, and the service status (see “Types of Message Attributes” on page 473). The OVO GUI automatically refreshes at a preset interval. By default, this interval is set to 30 seconds.

To customize the refresh interval, follow these steps:

1. From the menu, select `Edit: Preferences`.

For a description of each option on the `Preferences` dialog box, see “About the Preferences Dialog Box” on page 450

2. In the `Refresh Interval` fields of the `General` tab, enter the refresh interval you want hours, minutes, and seconds (`hh:mm:ss`).

CAUTION

If you set the refresh interval too high (for example, `24:00:00`), you may not be informed of status changes in a timely manner.

3. Click `[OK]`.

The refresh interval is only used for retrieving the latest messages or service status.

CAUTION

If your OVO administrator has changed your responsibilities, managed nodes, or applications, you *must* reload your configuration manually. Otherwise, you will not see the new configuration. For details, see “To Reload the Configuration” on page 256.

To Customize Console Settings

To customize console settings, follow these steps:

1. Make any of the following changes to the console:

- *Movable Panes*

Change the position of moveable areas, or switch them on or off.

For instructions, see “Customizing Movable Panes” on page 262.

- *Shortcut Bar*

Change the following in the shortcut bar:

- Switch buttons on and off, and add shortcuts.

- Add, change, or delete names and locations of URL shortcuts.

For instructions, see “Customizing the Shortcut Bar” on page 264.

- *Workspace Pane*

Change the following in the workspace pane:

- Add, change, or delete tab names, descriptions, and so on.

- Add, change, or delete message browsers, service graphs, and web browsers.

For instructions, see “Customizing Workspace Pane Workspaces” on page 268.

- *Browser Pane*

Add, change, or delete tab names, descriptions, and so on.

For instructions, see “Changing the Layout of Browser Windows” on page 283.

2. From the menu bar, choose `File: Save Console Session Settings`.

The next time you start the Java GUI, the stored settings are read and restored in the Java GUI.

To Customize the Look and Feel of the Java GUI

To customize the look and feel of the OVO and Service Navigator graphical user interface (GUI), follow these steps:

1. From the menu bar, select `Edit: Preferences`.

For a description of each option on the `Preferences` dialog box, see “About the Preferences Dialog Box” on page 450

2. In the `Look and Feel` pulldown menu of the `General` tab, select one of the following styles:

- `Metal`
- `Motif`
- `Hewlett-Packard (default look)`
- `Windows` (available *only* on Windows systems)
- `Aqua` (available *only* on Mac OS systems)

3. Click `[OK]`.

To Customize the Progress Dialog Box

When OVO performs tasks that take a long time to complete, a progress dialog box with a sawing lumberjack appears.

To change the image that is used inside of the dialog box, follow these steps:

1. Choose a custom image in GIF format and name it `customImg.gif`.
2. Place `customImg.gif` in your home directory.

This file is usually stored in the following directories:

- *Windows 2000, 2003, and XP*
`C:\Documents and Settings\`
- *UNIX*
`/home/<user>`

3. Restart the Java GUI.

Note that OVO resizes the image to fit into the Progress dialog box.

Customizing Movable Panes

The movable panes contain the following interface elements:

- ❑ **Position Controls**

For an overview of the position controls, see “About the Position Controls” on page 81.

- ❑ **Shortcut Bar**

For an overview of the shortcut bar, see “About the Shortcut Bar” on page 41.

- ❑ **Object Pane**

For an overview of the object pane, see “About the Object Pane” on page 43.

- ❑ **Workspace Pane**

For an overview of the workspace pane, see “About the Workspace Pane” on page 53.

This section describes how to do the following:

- ❑ To Show or Hide the Position Controls
- ❑ To Move the Shortcut Bar or Object Pane
- ❑ To Show or Hide the Shortcut Bar
- ❑ To Show or Hide the Object Pane

To Show or Hide the Position Controls

The position controls are the narrow band of horizontal bars near the top of the Java GUI that enable you to move the shortcut bar and object pane horizontally.

To show or hide the position controls, do the following:

- ❑ To *enable* the position controls, select `View: Position Controls` from the menu bar.
- ❑ To *disable* the position controls, deselect `View: Position Controls` from the menu bar.

To Move the Shortcut Bar or Object Pane

To move the shortcut bar or object pane horizontally, drag the narrow band of horizontal bars immediately above the pane and drop it in the desired location.

To Show or Hide the Shortcut Bar

To show or hide the shortcut bar, do one of the following:

- To enable the shortcut bar, select `View: Shortcut Bar` in the menu bar.
- To disable the shortcut bar, deselect `View: Shortcut Bar` in the menu bar.

To Show or Hide the Object Pane

To show or hide the object pane, do one of the following:

- To enable the object pane, select `View: Object Pane` in the menu bar.
- To disable the object pane, deselect `View: Object Pane` in the menu bar.

Customizing the Shortcut Bar

You can add object pane items to the shortcut bar, and customize shortcuts and shortcut groups. For an overview of the shortcut bar, see “About the Shortcut Bar” on page 41.

This section describes how to do the following:

- ❑ To Add Object Pane Items to the Shortcut Bar
- ❑ To Add a New Shortcut
- ❑ To Modify a Shortcut
- ❑ To Remove a Shortcut
- ❑ To Add a Shortcut Group
- ❑ To Rename a Shortcut Group
- ❑ To Remove a Shortcut Group
- ❑ To Customize the Size of Shortcut Bar Icons

To Add Object Pane Items to the Shortcut Bar

To add selected object pane items to the shortcut bar, follow these steps:

1. In the object pane, select the items you want to add to the shortcut bar.
2. In the object pane, right-click the selected items to open the popup menu.
3. From the popup menu, select `Add to Shortcut Bar`.

The selected items are displayed in the shortcut bar.

To Add a New Shortcut

To add a new shortcut to the shortcut bar, follow these steps:

1. Right-click the shortcut immediately above where you want to add a new shortcut.

NOTE

The new shortcut is added immediately below the currently selected shortcut.

2. Select **Add New URL Shortcut...** from the popup menu.

The `Add New URL Shortcut` dialog box opens. For descriptions of options in this dialog box, see “About the Add New URL Shortcut Dialog Box” on page 418

3. From the input text fields, add the following:

- Shortcut group label
- URL string (for URL shortcuts only)

4. Click [OK].

To Modify a Shortcut

To modify a shortcut in the shortcut bar, follow these steps:

1. Right-click the shortcut you want to rename.
2. From the popup menu, select **Modify Shortcut**.

The `Modify Shortcut` dialog box opens. For descriptions of options in this dialog box, see “About the Modify Shortcut Dialog Box” on page 448

3. From the input text fields, change one or both of the following:

- Shortcut label
- URL string (for URL shortcuts only)

4. Click [OK] to confirm the changes.

To Remove a Shortcut

To remove a shortcut in the shortcut bar, follow these steps:

1. Right-click the shortcut you want to remove.
2. From the popup menu, select `Remove Shortcut`.

To Add a Shortcut Group

To add a shortcut group to the shortcut bar, follow these steps:

1. Select and right-click the shortcut group immediately above the place where you want to add a new shortcut group.

NOTE

The new group is added immediately below the currently selected shortcut group.

2. From the popup menu, select `Add New Group`.

The `Add New Group` dialog box opens. For descriptions of options in the `Add New Group` dialog box, see “About the Add New Group Dialog Box” on page 417.

3. Type a label for the new shortcut group into the text field.
4. Click `[OK]`.

To Rename a Shortcut Group

To rename a shortcut group in the shortcut bar, follow these steps:

1. Right-click the shortcut group you want to rename.
2. From the popup menu, select `Modify Current Group`.

The `Modify Group` dialog box opens.

3. In the `Enter Label` field, enter a new name for the shortcut group.
4. Click `[OK]` to confirm the new name.

To Remove a Shortcut Group

To remove a shortcut group in the shortcut bar, follow these steps:

1. Right-click the shortcut group you want to remove.
2. From the popup menu, select `Remove Current Group`.

You are asked to confirm the deletion:

`Are you sure you want to remove current group?`

3. Click `[OK]` to confirm the deletion.

To Customize the Size of Shortcut Bar Icons

To customize the size of icons in the shortcut bar, follow these steps:

1. Open the `General` tab of the `Preferences` dialog box.

For descriptions of options in the `Preferences` dialog box, see “About the Preferences Dialog Box” on page 450.

2. In the `Icon Size in Shortcut Bar` field, enter a new icon size.

The default is 32 pixels wide.

3. Click `[OK]` to confirm the new width.

Icons in the shortcut bar are resized to your specification.

Customizing Workspace Pane Workspaces

In the workspace pane, you can define several workspaces. Each of these workspaces can contain several message browsers, application outputs, service graphs, or web browsers. You can create new workspaces, rename and add descriptions to existing workspaces, and delete existing workspaces.

NOTE

Regular workspaces cannot contain ActiveX controls. Likewise, if you want to use ActiveX controls, you must create a special workspace that contains only ActiveX controls.

This section describes how to do the following:

- ❑ To Create a New Workspace
- ❑ To Modify an Existing Workspace
- ❑ To Remove an Existing Workspace

To Create a New Workspace

To create a new workspace in the workspace pane, follow these steps:

1. Right-click an empty area in the workspace pane.

Make sure to click immediately to the right of where you want the workspace tab to appear.

2. In the popup menu, select `New Workspace`.

3. In the `Workspace Properties` dialog box, enter the name you want to appear on the workspace tab, a description of the workspace, and indicate whether the workspace is for an ActiveX control.

For descriptions of the options in the `Workspace Properties` dialog box, see “About the Workspace Properties Dialog Box” on page 467. There you will also find a description of the AWT (heavy weight) container option.

For an overview of ActiveX controls in the workspace pane, see “About Integrated Web Browsers” on page 74.

To Modify an Existing Workspace

To modify an existing workspace in the workspace pane, follow these steps:

1. Right-click the tab you want to modify in the workspace pane.
2. In the popup menu, select `Workspace Properties`.
3. In the `Workspace Properties` dialog box, edit the name or description of the workspace, as needed.

For descriptions of the options in the `Workspace Properties` dialog box, see “About the Workspace Properties Dialog Box” on page 467. There you will also find a description of the AWT (heavy weight) container option.

To Remove an Existing Workspace

To remove an existing workspace in the workspace pane, follow these steps:

1. Right-click the tab you want to delete from the workspace pane.
2. In the popup menu, select `Delete Workspace`.

A confirmation box with the following text is displayed:

Are you sure you want to delete the workspace?

3. Click [OK] to confirm the deletion.

To Change Your Integrated Web Browser

By default, OVO embeds a web browser in the workspace pane. You can change this default to your favorite web browser.

To change your integrated web browser, follow these steps:

1. Select `Edit: Preferences...` from the menu bar.

The Preferences dialog box opens.

2. In the Preferences dialog box, click the `Web Browser` tab.

CAUTION

If you want to change to an ActiveX control, you need to first create and ActiveX container in the workspace pane. For details, see “To Create a New Workspace” on page 268.

3. In the `Web Browser` tab, select one of the following options:

- `Always Use External Web browser`

Click `[Browse]` to select an external web browser (for example, Netscape Communicator) installed on your computer.

- `Automatic Selection of Internal Web Browser`

OVO configures the embedded web browser automatically.

- `Custom Selection of Internal Web Browser`

Choose one of the following suboptions:

- `ActiveX Internet Explorer Control`

Before you choose this option, you must create a workspace pane that is an ActiveX container. For details, see “To Create a New Workspace” on page 268.

NOTE

The `ActiveX Internet Explorer Control` option is available on Windows systems only.

— Embedded Web Browser

If you choose this option, you can configure a proxy server.

For a description of each option on the `Web Browser` tab of the Preferences dialog box, see “About the Preferences: Web Browser Tab” on page 453

4. *Optional:* If you chose `Embedded Web Browser` in the previous step, you can click `[Embedded Web Browser Settings]` to configure proxy servers.

The `Embedded Web Browser Settings` dialog box opens. For descriptions of options in this dialog box, see “About the Embedded Web Browser Settings Dialog Box” on page 424.

5. Click `[OK]` to confirm your changes.

NOTE

For your changes to take effect, you need to save your console settings. For details, see “To Customize Console Settings” on page 259.

To Customize Popup Menus

OVO enables you to limit the number of applications that are displayed in popup menus. The Tailored Set of Applications limits popup menu items to application that are related to currently selected messages. Related applications are defined with the \$OPC_MSG string in the application call. If there are no applications with currently selected \$OPC_MSG string, the popup menu does not contain any applications.

To Enable Tailored Popup Menus

To enable tailored popup menus, follow these steps:

1. Select `Edit: Preferences...` from the menu bar.
2. In the `General` tab of the `Preferences` dialog box, select the `Tailored Set of Applications` checkbox.

To Disable Tailored Popup Menus

To disable tailored popup menus, follow these steps:

1. Select `Edit: Preferences...` from the menu bar.
2. In the `General` tab of the `Preferences` dialog box, deselect the `Tailored Set of Applications` checkbox.

To Customize the Toolbar

You can customize the toolbar in the following ways:

❑ **Hide or make visible any of the toolbar components**

By default, all components of the toolbar are visible. You can hide any of them by deselecting the option from the View: Main Toolbar menu, or from the toolbar popup menu. You can make any of the components visible again by re-selecting these options.

For information about the toolbar and its components, see “About the Toolbar” on page 79.

❑ **Reposition the toolbar components**

You can reposition the toolbar in the following ways:

- *Create a floating toolbar*

You can create a floating toolbar from any of the components by pointing to the vertical bar on the left side of the toolbar and dragging it from the taskbar anywhere on the screen, even outside the Java GUI window. However, when you place any of the floating toolbar components back to the taskbar, it is automatically placed as the last toolbar component in the order.

- *Move a component within the docked toolbar*

You can move any of the toolbar components to another location on the taskbar by pointing to the vertical bar on the left side of the toolbar and dragging it to the left or right.

To Configure Message Event Notification

You can enable or disable message event notification, or reset the severity threshold for notification, from the `Preferences` dialog box.

NOTE

For an overview of message event notification, see “About Message Event Notification” on page 106. To find out how to respond to message event notification, see “To View Message Event Notifications” on page 203.

To configure message event notification, follow these steps:

1. Select `Edit: Preferences...` from the menu bar.
2. In the `Preferences` dialog box, click the `Events` tab.
3. In the `Events` tab, modify your message event notification preferences, as needed.

For descriptions of options in the `Events` tab of the `Preferences` dialog box, see “About the Preferences: Events Tab” on page 454.

4. Click `[OK]`.

NOTE

To save your message event notification preferences for future sessions, select `File: Save Console Session Settings` from the menu bar.

To Customize the General Font Size

To set the general font size in the Java GUI, do the following:

1. Select `Edit: Preferences...` from the menu bar.
2. In the `General` tab of the `Preferences` window, specify a value in the `Application Font Size` text field.
3. Click `[OK]`.

The changes will take effect immediately.

For a description of each option on the `General` tab of the `Preferences` dialog box, see “About the Preferences: General Tab” on page 451.

IMPORTANT

You *cannot* set the font size in service graphs and services maps in this way. To customize the font size in service graphs and service maps, refer to the *HP OpenView Service Navigator Concepts and Configuration Guide* for more information.

To Create a Filtered Message Browser

OVO enables you to create your own filtered active, history, and pending message browsers. You can then save and reuse the filters, as needed.

To create a filtered message browser, you can choose one of two methods:

❑ Create New Filter

You can create a new filter in one of two ways:

- *Menu Bar*

In the menu bar, choose `Actions: Filtering` and one of the following:

- `New Active Filtered Browser`
- `New History Filtered Browser`
- `New Pending Filtered Browser`

Then define the new filter in the `Filter Messages` dialog box.

For detailed instructions, see “Setting Up Filtered Message Browsers” on page 181. For descriptions of options in the Filter Messages dialog box, see “About the Filter Messages Dialog Box” on page 427.

- *Popup Menu*

In the object tree, right-click Personal Filter Settings, then select Add New Filter from the popup menu. Then define the new filter in the Filter Messages dialog box.

For descriptions of options in the Filter Messages dialog box, see “About the Filter Messages Dialog Box” on page 427.

- **Re-use Existing Filter**

Choose Actions: Filtering -> Use Saved Settings, choose an existing filter, rename the filter, and update the filter, as needed.

For detailed instructions, see “To Reload the Layout of a Filtered Browser” on page 282.

To Save the Browser Filter Settings

If you find that you use the same filtered active, history, or pending messages browser during several OVO sessions, you may want to save the browser filter settings for future use. By saving the browser filter settings, you save yourself having to recreate the same filtered message browser each time you start the OVO GUI.

CAUTION

Saving browser filter settings saves only the filter used to view messages, not the layout of the browser columns. If you want to save the size and layout of the message browser, see “Saving the Browser Layout” on page 280.

To save the browser filter settings, follow these steps:

1. From the menu bar, select Actions: Filtering, then one of the following:
 - New Active Filtered Browser
 - New History Filtered Browser
 - New Pending Filtered Browser

The `Filter Messages` dialog box opens.

2. In the `Filter Messages` dialog box, select your filtering criteria.

For descriptions of options in the `Filter Messages` dialog box, see “About the `Filter Messages` Dialog Box” on page 427.

3. Click `[Save...]`.

The `Save Browser Settings` dialog box opens.

4. In the `Save Browser Settings` dialog box, enter a name for the filter.

Enter a name that is as descriptive as possible, so you can easily identify the filter when you want to use it again.

For descriptions of options in the `Save Browser Settings` dialog box, see “About the `Save Browser Filter Settings` Dialog Box” on page 458.

5. Click `[OK]`.

Your browser settings are now saved.

NOTE

Your OVO administrator may also save browser settings that are available to you. These browser settings are of the type `global`, and can be used by any OVO operator.

To Access Filtered Message Browsers

After you have created filtered message browsers, you can access them quickly and easily.

To access filtered message browsers, select the `Filter Settings` group of a popup menu in one of two locations:

- ❑ **Shortcut Bar**

For details, see “About the Shortcut Bar Popup Menu” on page 83.

- ❑ **Object Pane**

For details, see “About the Object Pane Popup Menu” on page 84.

Moving Filtered Message Browsers

When you open a filtered message browser, it is automatically displayed in the workspace pane. You can move the filtered message browser from the workspace pane to the browser pane, and vice versa.

To Move a Message Browser to the Browser Pane

To move a filtered message browser from the workspace pane to the browser pane, follow these steps:

1. Select the filtered message browser you want to move.
2. Click the `Put Message Browser to Browser Pane` in the toolbar (see “About Toolbar Icons and Drop-down Lists” on page 376).

To Move a Message Browser to the Workspace Pane

To move the filtered message browser from the browser pane to the workspace pane, follow these steps:

1. Select the filtered message browser you want to move.
2. Click the `Put Message Browser to Workspace Pane` in the toolbar.

Saving the Browser Layout

If you change the size of the browser or customize the columns during several OVO sessions, you may want to save the browser layout for future use. Saving the browser layout saves you having to change the size of the browser or change the sorting order, column width, column labels, and so on every time you start the OVO GUI.

NOTE

Any changes to the browser filters must be saved separately. For details, see “To Save the Browser Filter Settings” on page 276.

This section describes how to do the following:

- To Save the Physical Layout of a Non-filtered Message Browser
- To Save the Physical Layout of a Filtered Browser
- To Reload the Layout of a Filtered Browser

To Save the Physical Layout of a Non-filtered Message Browser

To save the physical layout of a non-filtered message browser, follow these steps:

1. Change the message browser size, as well as the sorting order, column width, column labels, and so on, as needed.

For instructions, see “Changing the Layout of Browser Windows” on page 283.

2. Make sure the browser for which you want to save the layout is active.
3. In the menu bar, select `View: Save Message Browser Layout -> Save as Default For` and one of the following:

- `Active`
Saves the current browser as the default active message browser.
- `History`
Saves the current layout as the default for filtered history message browsers.
- `Pending`
Saves the current browser layout as the default for filtered pending message browsers.

OVO saves the layout in the `itoopbrw` file in your home directory.

This file is usually stored in the following directories:

- *Windows 2000, 2003, and XP*
`C:\Documents and Settings\<user>`
- *UNIX*
`/home/<user>`

To Save the Physical Layout of a Filtered Browser

To save the physical layout of a filtered browser, follow these steps:

1. Open a browser with the saved filter settings.

NOTE

If you have not already done so, define the filter and save it. Then open a browser with the new saved filter settings. To find out how to define a message browser filter, see “To Create a Filtered Message Browser” on page 275.

2. Change the message browser size, as well as the sorting order, column width, column labels, and so on, as needed.

For instructions, see “Changing the Layout of Browser Windows” on page 283.

3. Make sure that the browser for which you want to save the layout is active.
4. Select View: Save Message Browser Layout -> Save For Filter Name.

OVO saves the layout in the `itoopbrw` file in your home directory.

This file is usually stored in the following directories:

- *Windows 2000, 2003, and XP*
`C:\Documents and Settings\user`
- *UNIX*
`/home/user`

The new layout is read from the configuration file the next time you start the GUI. The new layout is used as the default layout for subsequent sessions.

To Reload the Layout of a Filtered Browser

To reload a previously saved browser layout with a filter name, do this:

Select Actions: Filtering -> Use Saved Setting.

Changing the Layout of Browser Windows

The layout of browser windows can be changed to help you browse messages according to your requirements:

❑ Changing Attribute Columns

You can move or resize the attribute columns themselves by dragging the column borders to the left or right. You can also hide the columns.

❑ Reordering Browser Columns

You can reorder browser columns by dragging the column labels.

❑ Sorting Messages

You can sort messages according to attributes by clicking column labels. An arrow appears in the column labels to indicate by which attribute the messages are sorted.

Message fields with numerical values can also be sorted. Numerical values can be integer values or floating point numbers; scientific notation is supported also. Example values of message fields are:

- 982374 (integer)
- 123.045 (floating point)
- 10e-2 (scientific notation)

See Figure 1-80 on page 189 for an example of a sorted browser column with numerical values.

❑ Aligning the Column Content

You can align the column content using a popup menu in the Message Browser opened on the message browser headline. Alignment can be set to left, right or center. See Figure 2-1 on page 209.

❑ Customizing Columns

You can show or hide message browser columns, and change their labels by selecting the message browser you want to customize, then selecting `View: Customize Message Browser Columns...` from the menu bar. Or right-click the message browser headline and select `Customize Message Browser Columns...` from the popup menu. For details, see “About the Customize Message Browser Columns Dialog Box” on page 422.

NOTE

Changing the layout of a browser window is effective for the current session only unless you save the new layout for future use. To find out how to save the browser layout, see “Saving the Browser Layout” on page 280.

Changing the Number of Messages Displayed

You may view all messages in the message browser or history message browser, or only the most recent messages.

This section describes how to do the following:

- ❑ To View All Messages in the Message Browser
- ❑ To View Only the Latest Messages in the Message Browser
- ❑ To Change the Number of Messages in the Messages Browser

NOTE

The following procedures are effective for the current session only.

To View All Messages in the Message Browser

To view all messages in the message browser or history message browser, do one of the following:

- ❑ **Toolbar**

In the toolbar, click the Show All Messages icon (see “About Toolbar Icons and Drop-down Lists” on page 376).

- ❑ **Menu Bar**

From the menu bar, select View: Number of Messages -> All Messages.

To View Only the Latest Messages in the Message Browser

To view only the latest messages in the message browser, do one of the following:

- ❑ **Toolbar**

In the toolbar, click the Show Latest Messages icon (see “About Toolbar Icons and Drop-down Lists” on page 376).

- ❑ **Menu Bar**

From the menu bar, select View: Number of Messages -> Latest Messages.

The default number of messages displayed in the Latest Messages view is 50.

To Change the Number of Messages in the Messages Browser

In the menu bar, you can choose to view Latest Messages or All Messages in the message browser or history message browser. For details, see “About the View Menu” on page 361. If you choose Latest Messages, you can change the number messages displayed at one time.

To change the number of messages displayed in a message browser or history message browser, follow these steps:

1. From the menu bar, choose **Edit: Preferences**.

For a description of each option on the Preferences dialog box, see “About the Preferences Dialog Box” on page 450

2. In the **General** tab, type the maximum number of messages displayed in an active or history message browser:
 - Display the latest messages for active message browsers.
 - Display the latest history messages for history message browsers.
3. Click **[OK]**.

To Customize the Color Preferences for the Message Browser

Normally, OVO colors just the *Severity* column in the message browser. If you want, you can configure OVO to color the entire line in the message browser according to the severity of each message. Coloring the entire line is useful when running OVO in an environment where at-a-glance classification of message severity is of primary importance. To make this change, you simply toggle the *Colored Lines* check box in the *Preferences* window.

To customize the color preferences for the message browser, follow these steps:

1. From the menu bar, select *Edit: Preferences*.

For a description of each option on the *Preferences* dialog box, see “About the Preferences Dialog Box” on page 450

2. In the *General* tab, select or deselect the check box marked *Colored Lines*.

By default, the box is unchecked.

3. Click *[OK]*.

NOTE

The preferences settings are saved on the computer where the Java GUI is running, and apply to all Java GUIs running on that client. If you start the Java GUI on another client, the setting on the other client are used.

Configuring Secure HTTPS-based Java GUI Communication

This section provides you with instructions for configuring secure communication between HTTPS-based Java GUI and the OVO management server. The following topics are discussed:

- ❑ **Configuring the HTTPS-based Communication on the Java GUI Client**
Details the parameters in the `ito_op` (`ito_op.bat`) startup script related to HTTPS-based Java GUI.
- ❑ **Installing Core Functionality**
Outlines the role that Core functionality has in the process of establishing the secure communication and explains how to install it.
- ❑ **Providing Certificates**
Explains how to provide certificates for both, server and full, modes of authentication.
- ❑ **Configuring the HTTPS-based Java GUI Connection through Firewalls**
Explains how to configure the connection between the OVO management server and the Java GUI client through the proxy server.

For more information about the HTTPS-based Java GUI underlying concepts and architecture, see “The HTTPS-based Java GUI Architecture” on page 194.

Configuring the HTTPS-based Communication on the Java GUI Client

To configure the HTTPS-based communication between Java GUI and the management server, you can set some parameters in the `ito_op` (`ito_op.bat` on Windows) Java GUI startup script.

Table 2-1 presents the available startup options for setting the HTTPS-based communication type.

Table 2-1 Startup Script Options for Setting the HTTPS Protocol

Option	Format	Default	Description
<code>https</code>	<code>yes no</code>	<code>yes^a</code>	Sets a HTTPS-based communication type to be used at the startup. If set to no , the standard non-secure communication is used.
<code>lcore_defaults</code>	<code>yes no</code>	<code>no</code>	This option is necessary for setting the full SSL authentication. If set to yes , the default Core functionality directories are used.
<code>https_only</code>	<code>yes no</code>	<code>no</code>	If set to yes , disables the communication fallback to the standard socket communication.
<code>https_port</code>	<code><number></code>	<code>35211^b</code>	A port on which <code>opcuihttps</code> is listening.

- a. In the OVO Java GUI A.08.14 `ito_op` script (`ito_op.bat` on Windows), the value of the `https` parameter (including the value set in the `itooopc` configuration file) is overridden and automatically set to `no` upon the Java GUI startup. This means that, by default, Java GUI is started with standard non-secure communication in the OVO Java GUI version A.08.14.
- b. The port on which `opcuihttps` is listening, used to establish a secure HTTPS-based connection. The standard Java GUI uses the port 2531.

NOTE

When starting the Java GUI from the command line using `ito_op` (`ito_op.bat` on Windows), you can specify *only* the `https` parameter. You can set all other startup parameters by adding them to the `ito_op` (`ito_op.bat` on Windows) script at the end of line where the Java GUI startup command is stated, or to the `itooopc` configuration file, which is located in the user's home directory.

IMPORTANT

Startup parameters specified in the `itooopc` configuration file using the global settings mode on the OVO management server are ignored upon OVO Java GUI startup; only locally specified startup parameters are applied. Refer to the *OVO Administrator's Reference* for more information about global settings mode.

For information about how to configure `opcuihttps` settings as well as for the list the parameters related to HTTPS-based Java GUI, refer to the *OVO Administrator's Reference*.

For information about configuring the connection between the OVO management server and the Java GUI client through the proxy server, see “Configuring the HTTPS-based Java GUI Connection through Firewalls” on page 296.

The process for establishing a secure communication is described in “Establishing a Secure Communication” on page 195.

Installing Core Functionality

The Core functionality is required on the client system for the following reasons:

- ❑ If you have chosen to set the full authentication mode, but there is no HTTPS OVO agent installed on the Java GUI client.
- ❑ If you want to configure the connection between the OVO management server and the Java GUI client through the proxy server.

NOTE

Instructions on how to install and enable the HTTPS-based Java GUI, as well as to disable the non-secure communication between the Java GUI client and the OVO management server are detailed in the *OVO Installation Guide for the Management Server*.

To Install the Core Functionality

1. Copy the following packages:

```
HPOvXpl  
HPOvBbc  
HPOvSecCo  
HPOvSecCC
```

from the OVO management server vendor tree, at the following location:

```
/var/opt/OV/share/databases/OpC/mgd_node/vendor/\  
<VENDOR>/<FAMILY>/<OS>/<OVO_VERSION>/RPC_BBC
```

to the Java GUI client system.

For example, for Windows XP, these packages are located in the following directory:

```
/var/opt/OV/share/databases/OpC/mgd_node/vendor/ms/x86/\  
winnt/A.08.10.160/RPC_BBC/
```

2. Install the packages. On Windows XP, for example, these packages are as follows:

```
HPOvXpl.msi  
HPOvBbc.msi  
HPOvSecCo.msi  
HPOvSecCC.msi
```

Providing Certificates

This section describes providing certificates for the following authentication modes:

- Server authentication
- Full authentication

For more information about certificates and the authentication modes, see “About Certificates” on page 198.

Providing Certificates for Server Authentication Mode

To use HTTPS-based Java GUI, it is not necessary to have any certificate installed, since it is possible to connect to the OVO management server anonymously.

The certificates are generated upon first connection to the OVO management server, and stored, together with the public key, in the local Certificate Store. The certificates are then used by the `opcuhttps` server in the process of authentication.

Depending on whether the certificate exists in the local Certificate Store, the following scenarios are possible:

- Certificate is already stored on the client.*

The communication between Java GUI and the OVO management server is established without any notice.

- Certificate does not exist on the client.*

The OVO Server Certificate dialog window is displayed. This dialog window prompts you to accept the HP OVO server certificate. The following selections are available:

- If you choose **Yes**, the HP OVO server certificate is accepted only for the current session. You will be prompted again to accept this certificate upon next login.
- If you choose **No**, the connection to the OVO management server is cancelled. In the newly displayed login window, you can choose either the other OVO management server, or cancel login procedure.
- If you choose **Always**, the HP OVO server certificate will be used for the current and all subsequent Java GUI sessions.

Providing Certificates for Full Authentication Mode

To provide the certificates for the full authentication mode, the following has to be performed:

- ❑ Enable the full authentication mode by properly configuring the `opcuihttps` process. To do so, enter the following and then restart the `opcuihttps` process:

```
ovconfchg -ovrg server -ns opc.opcuihttps -set\  
SSL_CLIENT_VERIFICATION_MODE RequireCertificate
```

Refer to the *OVO Administrator's Reference* guide for more information about configuring the `opcuihttps` parameters.

- ❑ Ensure that the client certificate is present on the client system.
If the HTTPS OVO agent is installed on the Java GUI client system, you can use its OVO client certificate for authentication; otherwise you should install the client certificate manually. See “Installing the Client Certificate Manually” on page 294 for details about the manual client certificate installation.
- ❑ Set the Java GUI startup parameter `lcore_defaults` to **yes**, so that Java GUI can use the default Core functionality. The Core functionality is either installed with the OVO agent in case it exists on the Java GUI client, or you have to install it additionally. See “Installing Core Functionality” on page 291 for more information.

Installing the Client Certificate Manually

IMPORTANT

To install the client certificate manually, it is necessary to have installed the Core functionality beforehand. For details on the Core functionality installation, see “Installing Core Functionality” on page 291.

To install the client certificate manually on the client system, follow these steps:

1. On the Java GUI client system, create a client core id using the following command:

```
ovcoreid
```

2. On the OVO management server, create a new certificate, associate the public key for this certificate and store it in a file. Enter the following:

```
ovcm -issue -file <filename> -name <system_name> -pass  
<passphrase> -coreid <client_coreid>
```

Where the <system_name> is the OVO management server hostname, <passphrase> is a password, <client_coreid> is the client core id, and the <filename> is the name of the file where the certificate is stored.

3. Transfer the file containing the certificate to the client system by means of floppy disk or using the ftp service.
4. Install the certificate on the client system. Enter the following:

```
ovcert -importcert -file <filename> -pass <passphrase>
```

Configuring the HTTPS-based Java GUI Connection through Firewalls

For the HTTPS-based Java GUI to communicate with an OVO management server through a firewall, you can either configure the firewall to allow the HTTPS-based Java GUI direct access to the OVO management server, or you can configure the HTTPS-based Java GUI to use a proxy server for all communication with the OVO management server. The default port on which the `opcuhttps` process is listening on the management server, is 35211. (The standard Java GUI uses port 3521.)

There are several different methods for specifying a proxy server for the HTTPS-based Java GUI:

- ❑ “Configuring a Proxy Server Using the `ito_op` Command Line Tool” on page 298.
- ❑ “Configuring a Proxy Server Using the `itoopec` File” on page 298.
- ❑ “Configuring a Proxy Server in the Login Dialog Box” on page 299.
- ❑ “Configuring a Proxy Server for Java GUI Applets” on page 300.
- ❑ “Configuring a Proxy Server with the Core Functionality” on page 301.

For each method, configure the proxy server `<proxy_config>` using the following syntax:

```
<proxy>:<port>+(<a>)-(<b>);<proxy2>:<port2>+(<a>)-(<b>);...
```

`<proxy>` The full hostname of the proxy server.

`<port>` The port on which the proxy server is running.

`<a>` A comma or semicolon separated list of hostnames for which this proxy server will be used; for example the name of the OVO management server to which the connection is made.

`` A comma or semicolon separated list of hostnames for which this proxy server will not be used; for example the name of the OVO management server to which a connection is not allowed.

Note that for `<a>` and ``, the first matching proxy will be used.

Example: `web-proxy:8088-(*.hp.com)+(*.deu.hp.com; *)`

In this example, the proxy web-proxy will be used with port 8088 for every server (*) except hosts that match *.hp.com, for example www.hp.com. If the hostname matches *.deu.hp.com, for example merlin.deu.hp.com, the proxy server will also be used.

It is also possible to use IP addresses instead of hostnames, for example, 15.*.*.*. Make sure that you specify the correct number of dots.

Default is an empty string; no proxy server specified.

Configuring a Proxy Server Using the `ito_op` Command Line Tool

To specify a proxy server for the `ito_op` (`ito_op.bat`) command line tool, specify the `bbc.http:proxy` parameter:

```
ito_op ... -bbc.http:proxy <proxy_config>
```

For example, to enable a connection to the OVO management server `barney.hp.com` through the proxy server `proxy.hp.com`, which runs on the port 8088, type the following:

```
ito_op -bbc.http:proxy proxy.hp.com:8088+(barney.hp.com)
```

See “Configuring the HTTPS-based Java GUI Connection through Firewalls” on page 296 for details of `<proxy_config>`.

Configuring a Proxy Server Using the `itopr` File

You can also set the parameter `bbc.http:proxy <proxy_config>` in the `itopr` file. The `itopr` file is located in the user’s home directory.

For example, to enable a connection to the OVO management server `barney.hp.com` through the proxy server `proxy.hp.com`, which runs on the port 8088, add the following line to the `itopr` file:

```
bbc.http:proxy proxy.hp.com:8088+(barney.hp.com)
```

See “Configuring the HTTPS-based Java GUI Connection through Firewalls” on page 296 for details of `<proxy_config>`.

See “About the `itopr` Resource File” on page 507 for more information about available options.

Configuring a Proxy Server in the Login Dialog Box

If the Java GUI is configured to use HTTPS communication, the Login dialog box displays an additional field for selecting a proxy server. The Proxy field offers the following options:

Add New

Select Add New to type a new proxy server into the Proxy field of the Login dialog box. The value is stored in your local `itoooproxy` configuration file. See “Configuring the HTTPS-based Java GUI Connection through Firewalls” on page 296 for details of the proxy configuration syntax.

For example, to enable a connection to the OVO management server `barney.hp.com` through the proxy server `proxy.hp.com`, which runs on the port 8088, type the following:

`proxy.hp.com:8088+(barney.hp.com)`

None

Select None if you do not want to use a proxy server for this connection.

Default

Select Default if a proxy server is already specified for through `ito_op` command line tool or in the `ito_for_activator.html` applet file.

`<proxy_server>`

Select an already defined `<proxy_server>` to use for the connection to the OVO management server.

When you select a proxy server in the Login dialog box, this proxy server becomes the default for any subsequent connections to the OVO management server. The default proxy server setting is stored in your local `itoooproxy` configuration file.

If the Java GUI is accessed directly, without the Login dialog box being displayed, the default proxy server is used.

Configuring a Proxy Server for Java GUI Applets

To configure a proxy for the HTTPS-based Java GUI running as an applet, ask your OVO administrator to modify the `ito_for_activator.html` file on the management server:

1. Edit the `ito_for_activator.html` file:

```
/opt/OV/www/htdocs/ito_op/ito_for_activator.html
```

2. Set the proxy definition in the following line:

```
<PARAM NAME = bbc.http:PROXY VALUE = "proxy_config">
```

See “Configuring the HTTPS-based Java GUI Connection through Firewalls” on page 296 for details of `<proxy_config>`.

3. Restart the HTTPS-based Java GUI applet.

For example, to enable a connection to the OVO management server `barney.hp.com` through the proxy server `proxy.hp.com`, which runs on the port 8088, type the following:

```
<PARAM NAME = bbc.http:PROXY VALUE = "proxy.hp.com:8088+(barney.hp.com)">
```

NOTE

If the Java GUI is installed locally, you can modify your local copy of the `ito_for_activator.html` file.

Configuring a Proxy Server with the Core Functionality

Use the following procedure to configure a proxy server using Core functionality:

1. Install the Core functionality.

See “Installing Core Functionality” on page 291 for more information.

NOTE

If the HTTPS OVO agent is present on the Java GUI client system, there is no need to install the Core functionality because it is already installed with the OVO agent.

2. Configure the Core functionality on the HTTPS-based Java GUI system:

- a. In the `bbc.http` namespace, set the `PROXY` parameter using the `ovconfchg` command:

```
ovconfchg -ns bbc.http -set PROXY <proxy_config>
```

See “Configuring the HTTPS-based Java GUI Connection through Firewalls” on page 296 for details of `<proxy_config>`.

For example, to enable a connection to the OVO management server `barney.hp.com` through the proxy server `proxy.hp.com`, which runs on port 8088, type the following:

```
ovconfchg -ns bbc.http -set PROXY \  
proxy.hp.com:8088+(barney.hp.com)
```

See also the man page `ovconfchg(1)` for more information.

- b. Set the Java GUI parameter `lcore_defaults` to **yes** in the `ito_op(ito_op.bat)` startup script.

Performing Daily Tasks

Configuring Secure HTTPS-based Java GUI Communication

3 **About Service Navigator**

What is Service Navigator?

HP OpenView Service Navigator is an add-on component to the standard HP OpenView Operations (OVO) product. It enables you to manage your information technology (IT) environment while focusing on the IT services you provide.

OVO detects, solves, and prevents problems occurring in networks, systems, and applications in your IT environment. Service Navigator takes you one step further. Service Navigator maps the problems discovered by OVO to the IT services for which you are responsible. Instead of focusing on single elements within a complex IT environment, you can now manage your IT environment by monitoring IT services.

Service Navigator depends on the monitoring, message, and action capabilities OVO provides. If a problem occurs on one of the objects managed by OVO, a message about this problem is generated and sent to the operator responsible for the area concerned. With Service Navigator installed and configured, this message is mapped to the service that is impacted by the problem, and sent to the operator responsible for that service.

The severity status of the problem also changes the severity status of the service so you can easily identify the services that are in a problematic state. To solve service-related problems, the OVO problem resolution capabilities have been further extended to include service-specific analysis operations and actions.

Service Navigator can be set up using XML-based configuration files, which is the standard method, or using HP OpenView Service Configuration for Service Navigator. Service Configuration is a graphical user interface designed to simplify the configuration of services while giving more flexibility to the administrator. The way Service Navigator is configured also affects the way services are presented in the Java GUI and the way you work with them.

How Service Navigator Works

The concept behind Service Navigator is that of a hierarchical service structure. Service Navigator builds a service hierarchy that reflects the relationships and dependencies between the service-relevant managed objects in your IT environment.

The relationship between services in a hierarchy can be one of two types:

❑ **Containment**

Subservice is contained in a parent service as part of another service.

❑ **Usage**

Subservice is contained in a parent service, but is used by another service at the same time.

Services contain or use several subservices. Each subservice, in turn, contains or uses other subservices. As a result, problems affecting subservices also affect their parent services.

To help you quickly get to the root cause of problems, Service Navigator enables you to draw a service graph with all the subservices that have affected the parent service. Service Navigator also enables you to quickly determine which other services are impacted by the problem so you can act before the problem occurs on other systems.

With Service Configuration for Service Navigator, a service can have more than one parent service and can therefore appear in more than one service hierarchy. A change in status of one occurrence of the service does not necessarily mean that the status of all other occurrences also changes because each occurrence of a service may have different subservices.

How OVO Maps Messages to Services

OVO generates a message as a result of an event or change of status on a managed node. If the event matches preconfigured filters, a message is generated, formatted, and then sent to the responsible operator. If the event does not match the filtering criteria, the event is ignored. Filters are set in templates and conditions.

Formatting takes place by attaching attributes to a message. Attributes are, for example, the node or application on which an event happened, or the message group of the message.

Service Navigator allows the OVO administrator to attach a service name as an additional attribute to the message. If an event occurs on a managed object, and this event matches the filtering criteria, OVO generates a message and attaches the service name as an attribute to this message. The service name of the message is then compared with the service names in the service hierarchy. If it matches a service name in the service hierarchy, the message is sent to the GUI of the operator who is responsible for that service.

The comparison of a service message with a service can take place on the node that generated the message or on the management server, depending on how the OVO administrator has configured the system.

With Service Configuration for Service Navigator, a service has an additional attribute called “service name in message” which can have multiple values. Multiple services can have the same “service name in message” attribute which means that one message can target multiple services.

Managing Problems with Service Navigator

In addition to monitoring the managed objects in your environment, Service Navigator allows you to monitor services. As a result, you can focus on the status of the services for which you are responsible, and watch for any changes in their severity levels.

NOTE

For an overview of the OVO problems solving process, see “About the Problem Solving Process” on page 100.

In general, the OVO logical problem-solving model also applies to Service Navigator:

❑ **Detecting Problems**

If a problem occurs on one of the managed objects that affects one of your managed services, a message arrives in your message browser informing you of the problem. The severity status of the service also changes to reflect the new situation. For details, see “Detecting Problems with OVO and Service Navigator” on page 322.

❑ **Investigating Problems**

Using a filtered message browser, you can find out where and why the problem affecting the service has occurred. In addition, `Get Root Cause` and `Get Impacted Services` analyses show you where the cause of the problem lies, and which other services are affected. For details, see “Investigating Problems with OVO and Service Navigator” on page 328.

❑ **Solving Problems**

OVO provides a number of tools to help you solve the problem (for example automatic or operator-initiated actions, operator instructions, and applications). In addition, the OVO administrator may have configured service-specific actions. For details, see “Solving Problems with OVO and Service Navigator” on page 331.

❑ **Documenting Solutions**

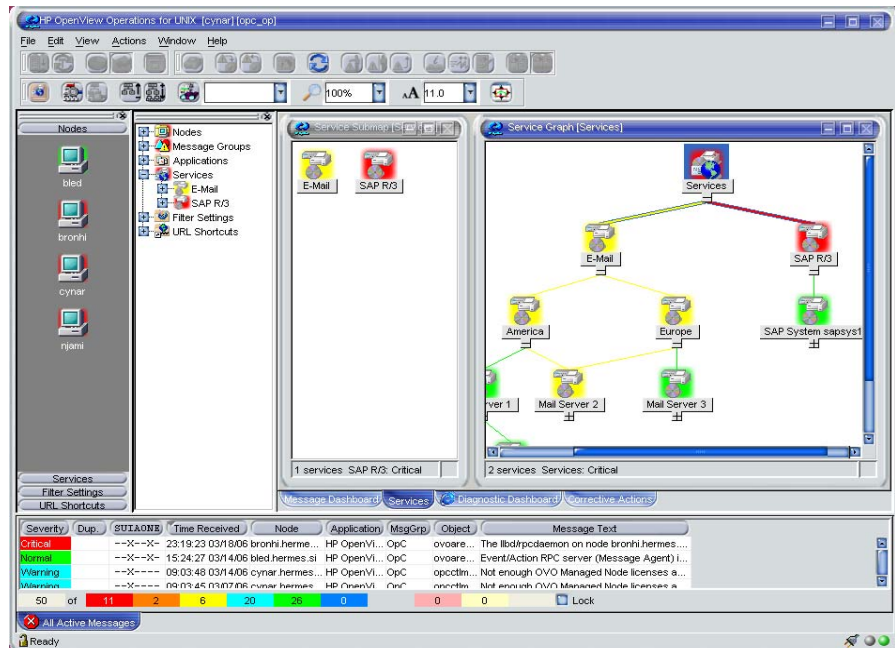
The problem management process is documented by instructions and annotations associated with each message. Instructions and annotations can serve as a helpful reference the next time the problem arises. For details, see “Documenting Solutions with OVO and Service Navigator” on page 334.

After you have solved a problem and documented its solution, you acknowledge the message that alerted you to the problem in the first place. Acknowledging a message moves it from your active message browser to the history database. You can access the message again by opening the filtered history message browser.

About Service Graphs, Submaps, and Custom Service Maps

Figure 3-1 shows a service submap and service graph.

Figure 3-1 Service Submap and Service Graph



❑ Service graphs

A service graph shows you the hierarchical organization of a service and all subservices. In essence, it displays the service tree from the object pane, but uses a graphical view. To expand the hierarchy, click the plus sign (+) below the icon label. To collapse the hierarchy, click the minus sign (-). You can select one or more service icons, and apply any operation from the right-click popup menu.

NOTE

You can also double-click a service icon in the service graph to expand or collapse the service hierarchy below. If this service's submap is defined to be displayed with the background image display, it will be opened instead.

❑ **Service submaps**

A service submap is similar to a service graph. Like a service graph, a service submap represents the services as icons. A service submap can be displayed as a service submap or as a custom service submap. Unlike a service graph, a service submap does not have a hierarchical structure.

A service submap shows you only the subservices of the selected service.

❑ **Custom service maps**

A custom service map is very useful in a situation where you have many services in the tree, but only want to monitor specific ones. You can collect and observe these services in a separate customized map.

Personalizing Your Service Graph and Map View

You can personalize your service graph and map views in Service Navigator to obtain a more focused overview of the services and make easier to work with them.

You can achieve this by using the following Service Navigator features:

❑ **Service graph and map zooming**

You can magnify or reduce the size of service graph or map in the following ways:

- Instantly, by using 'zoom' drop-down list from the toolbar or the Zoom Settings popup menu.
- By setting the zoom ratio that is used every time when a new service graph or map is opened, in the Services tab of the Java GUI Edit-> Preferences dialog. See "About the Preferences Dialog Box" on page 450 for a description of each option on the Preferences dialog box.

❑ **Navigating through service graphs and maps**

You can navigate through service graphs and maps by using the Navigation Panel and the Go to Service drop-down list from the toolbar.

❑ **Making selections in service graphs**

To easily distinguish between particular service icons and determine the relationships among them, you can highlight the icons together with all connection lines to their subsequent services as well as particular connection lines among service icons.

❑ **Easy scrolling and repositioning of services in service graphs**

You can scroll the whole service graph area without the need to use the scroll bars, by pressing **ALT** and dragging it with the mouse. Using drag-and-drop, you can also reposition service icons all over the service graph.

❑ **Customizing font size**

You can specify a font size in service graphs and maps in the following ways:

- Instantly, by setting a value in the Zoom Settings Dialog window. This window opens when you choose the Custom option in the 'zoom'drop down list from the toolbar or in the Zoom Settings popup menu.
- By setting a value that is used each time a new service graph or map is opened in the Services tab of the Java GUI Edit-> Preferences dialog. See "About the Preferences Dialog Box" on page 450 for a description of each option on the Preferences dialog box.

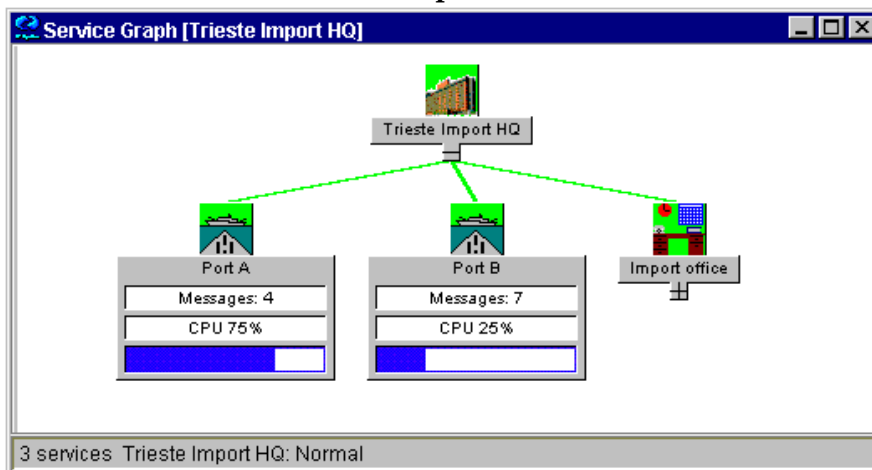
To learn more on how to personalize your service graph and map view, refer to the *HP OpenView Service Navigator Concepts and Configuration Guide*.

Understanding Service Labels

All service icons are identified using a label. The label is displayed below an icon in the shortcut bar, service submap, and custom map. Additional text or image labels can also be displayed by service icons. An unlimited number of labels could have been applied to an icon, the practical limitation being the space available on the display. Additional labels are used to display information that is important for monitoring the service. For example, the CPU load of the systems that are hosting the service can be displayed as a numerical value and as a bar graph for at-a-glance information.

Figure 3-2 shows a service graph with service labels.

Figure 3-2 Service Labels in a Service Graph



NOTE

These options are available in the Java GUI only if previously configured by the OVO administrator.

Enhanced Service Submaps

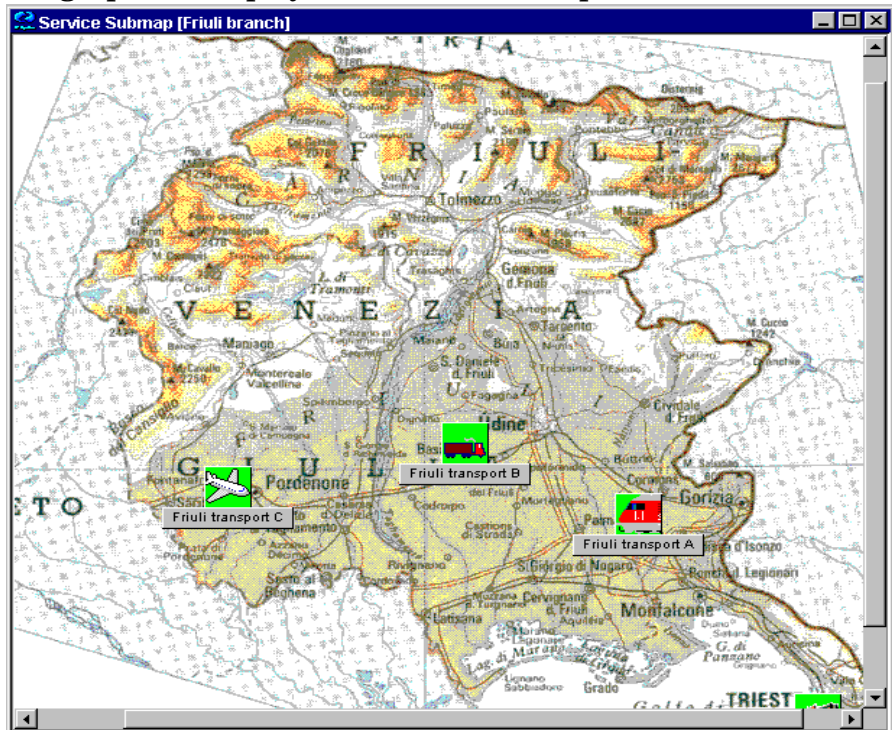
Service submaps can be enhanced with alternative background images, for example a network schematic or a country map. The administrator can also define the display position of subservice icons on the background image to create a clearer overview of the services being managed. For example, the service icons could be positioned over their geographical locations on a country map.

The customized Service Submap window of a service may be split into two horizontal panes, when there are services which have not been allocated any positional information. These icons are then placed in the lower pane.

Figure 3-3 shows geographical display in a service submap.

Figure 3-3

Geographical Display in a Service Submap



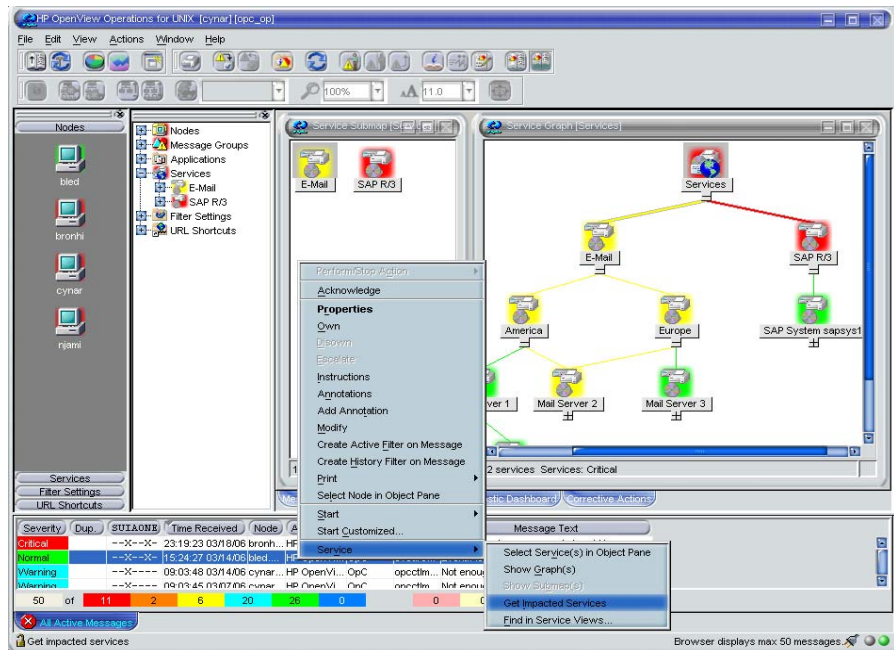
NOTE

These options are available in the Java GUI only if previously configured by the OVO administrator.

Identifying Impacted Services

After you have identified a service in a problematic state, you can easily get to the root cause of the problem. Service Navigator draws a graph for you, displaying the services that have contributed to the problem. You can also quickly find out which other services are impacted by the current problem by displaying the graph, as shown in Figure 3-4.

Figure 3-4 Show Impacted Service Graph



NOTE

With Service Configuration for Service Navigator, a service that requires your attention can appear in more than one service hierarchy. To help you locate all occurrences of the service, you can search for all services that have the same identifier (original ID) as the affected service.

Loading Services on Demand

Loading services on demand enables you to specify the number of levels in a service hierarchy that are retrieved from the management server, instead of retrieving the entire service tree.

This is especially useful in environments with slow connection lines, such as ISDN or PSTN, or in environments with large service configurations. It enables you to load only the necessary configuration, and therefore to reduce the time needed for Java GUI startup and decrease the overall load of the Java GUI.

Retrieval of levels in a service hierarchy is a transfer of service information from the management server to the Java GUI. The retrieved service information is stored in the Java GUI cache.

However, not all service information stored in the Java GUI cache is displayed at once. It can be displayed as follows:

- ❑ At Java GUI startup, by default only the toplevel service and its subservices (level 1) are displayed in the service tree or graph, regardless of the number you have specified for the hierarchical levels to be retrieved. Nevertheless, if you have saved services to console settings from any previous Java GUI session, the saved configuration will be displayed.
- ❑ After Java GUI startup, you can display the retrieved levels in a service hierarchy in one of the following ways:
 - By expanding any service icon from the last displayed hierarchical level. This displays the next level in a graph or object pane.
 - By using the `Expand Service Graph Level` toolbar icon. The next level is expanded from the selected service. This icon can be used to expand services only in a service graph.
 - By expanding the services using the popup menu of the selected service, in a service graph and in a object pane. This way you can expand more than one level at once, as described in the “Example of Expanding More Hierarchical Levels Using the Popup Menu” on page 319.

The hierarchical levels of services are retrieved by the Java GUI at its startup and on every subsequent user's request.

A user's request is any request for particular services that are currently not present in the Java GUI, such as expanding services. Services can be expanded, for example, using the `Expand Service Graph` option from the popup menu of the selected service.

Every user's request retrieves the specified number of levels in a service hierarchy from the management server. However, there are special cases when more levels than specified are retrieved. These are the following:

- ❑ A message arrives with the name of the service that has not yet been retrieved from the management server. If you choose `Select Service` in `Object Pane` from the popup menu of the message, this service, together with all missing services on its path from the root service are retrieved from the management server.
- ❑ Services that have been saved to console settings, as well as all missing services on their path from the root service, will also be retrieved from the management server at Java GUI startup.

Loading services on demand is enabled by default. You can disable this feature, or change the settings in the `Services` tab of the Java GUI Preferences dialog. All changes made in the `Services` tab are automatically stored in the `itooprc` file and will take effect immediately.

NOTE

The `Services` tab is grayed out and thus *not* accessible if no services are assigned to the operator currently using the Java GUI.

For more information about the `Services` tab of the Java GUI Preferences dialog, see “About the Preferences: Services Tab” on page 455.

When you disable loading services on demand, you will be notified through the `OVO Communications Status` window that the reload of configuration is in progress. This is because the Java GUI retrieves the entire service tree from the management server. When this option is enabled again, the configuration will not reload, because it is already present in the Java GUI.

To learn more about reload of the configuration, see “To Reload the Configuration” on page 256.

In addition to setting the number of levels in a service hierarchy, the following can also be configured:

- An automatic reload of the service configuration when a change occurs on the management server.

When this is enabled, the service tree or graph always reflects the latest configuration on the management server. After the automatic reload, the service graph and the object pane layout remains unchanged.

- A possibility to retain services in the Java GUI cache displayed in any service graph or object pane, visible or minimized. All other retrieved services are removed from cache. Next time you make a request for services that are no longer stored in cache, they must be reloaded from the management server.

This reduces memory consumption in the Java GUI while maintaining performance.

For more information on how to configure these settings, see “About the Preferences: Services Tab” on page 455.

Example of Expanding More Hierarchical Levels Using the Popup Menu

The following example describes how to expand more than one hierarchical level at once, using the popup menu of a selected service.

In Figure 3-5, the service graph marked with number 1 shows the selected E-mail service and its subservices America and Europe. The Europe service is expanded by one hierarchical level.

If you choose the `Expand Service Graph` option from the E-mail service popup menu, the `Expanding Tree or Graph` dialog box is displayed. In the dialog box, you can choose to expand one of the following:

OK

Only part of the service tree or graph, which means the part that is already retrieved from the management server.

Expand All

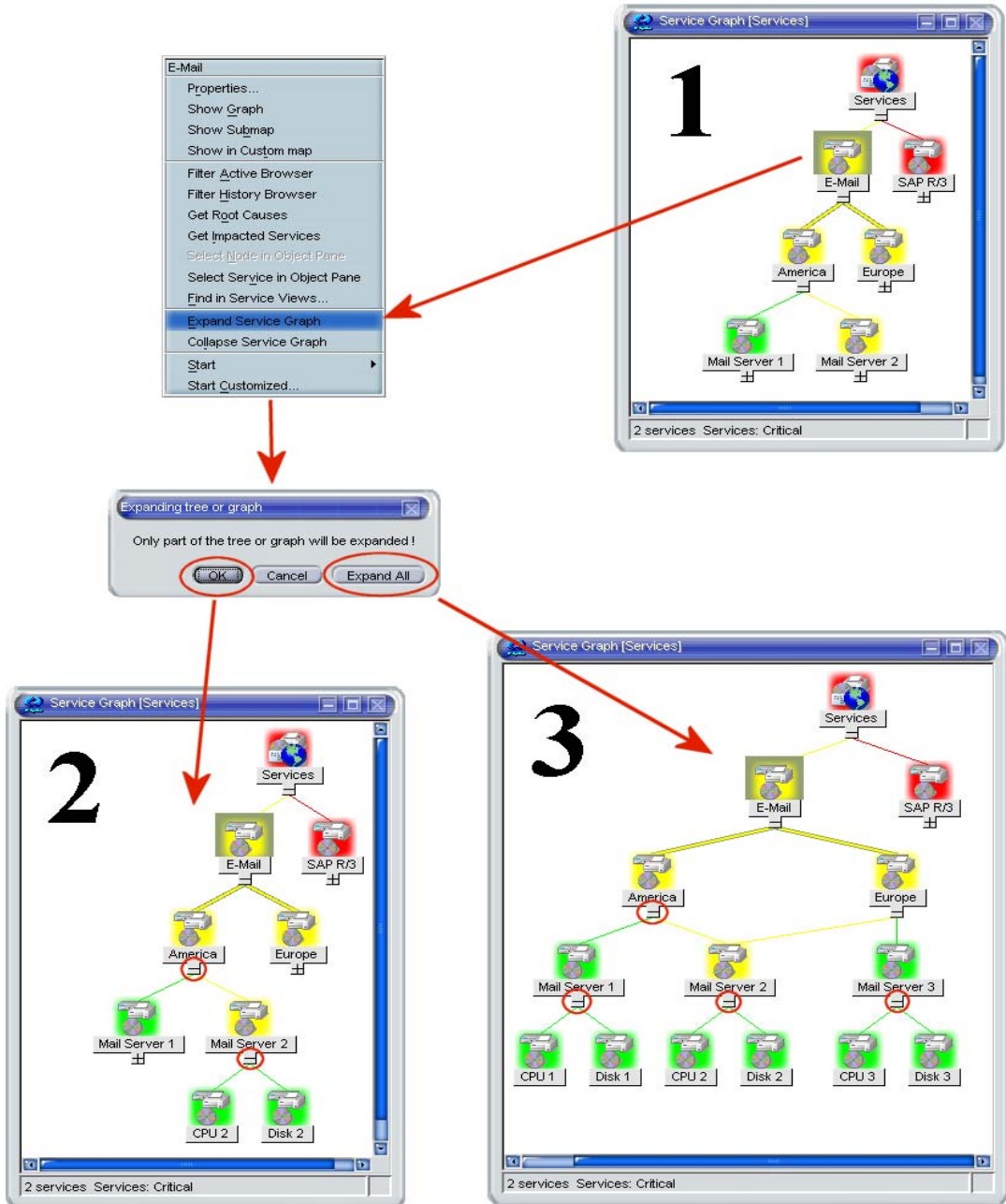
Service tree or graph that shows all subservices of the selected service.

In the service graph marked with number 2, where only part of the service graph was expanded, you can observe which services are retrieved from the management server when the Europe service was expanded.

The service graph marked with number 3 shows all subservices of the E-mail service.

During the retrieval of services from the management server, indication lights in the Java GUI status bar change their color to indicate that services are being transferred. For more information, see “About the Status Bar” on page 77.

Figure 3-5 Expanding Service Graph with Use Service Load on Demand



Detecting Problems with OVO and Service Navigator

OVO and Service Navigator detect problems and potential problems in the managed environment.

You can use Service Navigator to detect problems in your managed environment, as follows:

- ❑ “Viewing Services” on page 323
- ❑ “Viewing Service Details” on page 324
- ❑ “To View Service-related Messages” on page 325
- ❑ “Finding a Service in Multiple Service Hierarchies” on page 326

NOTE

For an overview of the Service Navigator problem solving process, see “Managing Problems with Service Navigator” on page 307.

You can use OVO to detect problems in your managed environment, as follows:

- ❑ “To View a Message Node Manually” on page 201
- ❑ “Viewing Messages” on page 204
- ❑ “To Refresh the Java GUI Manually” on page 257
- ❑ “To Reload the Configuration” on page 256

NOTE

For an overview of the OVO problems solving process, see “About the Problem Solving Process” on page 100.

Viewing Services

Services in the managed environment are displayed hierarchically in the object pane. If a problem occurs on one of your managed objects that affects a service for which you are responsible, the severity status of the service changes to reflect the new situation.

The service can change severity because one of its subservices changes severity, or because a message that directly affects the service arrives. In this case, the subservices of the service do not change severity, only the parent service itself adopts a new status.

To View Services in the Object Pane

To view services in the object pane, do one of the following:

❑ Expand the Object Tree

In the object pane, do one of the following:

- Double-click the *Services* icon.
- Click the plus icon (+).

❑ Collapse the Object Tree

In the object pane, click the minus icon (–).

To View Services in a Custom Map

To view services in a custom map, follow these steps:

1. In the *Services* tab of the object pane, right-click the service you want to monitor.
2. From the popup menu, select *Show in Custom Map*.

A new client window opens, displaying the subservices of the selected service in a service submap.

NOTE

If configured by the OVO administrator, icons in the custom map can also show dynamic labels with textual information and images which give you more information about the specific services at a glance. For details, see “Understanding Service Labels” on page 312.

Viewing Service Details

It may be useful to get detailed information about the general configuration of a service. The `Service Properties` dialog box contains details of the current configuration of the service.

To View Service Details

To view service details, follow these steps:

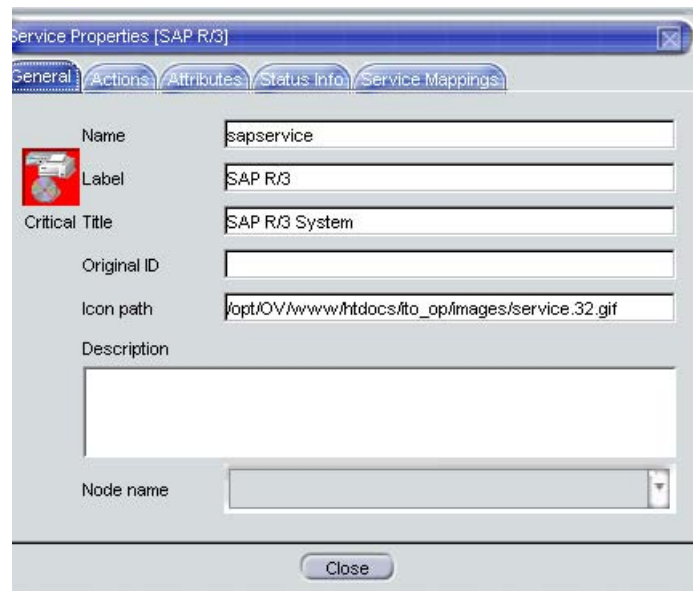
1. In the object pane, right-click the service for which you want details.
2. From the popup menu, select `Properties`.

The `Service Properties` dialog box opens, as shown in Figure 4-1.

For information about the options in the `Service Properties` dialog box, see “About the Service Properties Dialog Box” on page 460.

3. When you have finished reviewing the details of the service, click `[OK]`.

Figure 4-1 Service Properties Dialog Box



To View Service-related Messages

The standard OVO message browser displays all messages generated from the managed objects for which you are responsible. If you want to view only the messages that are related to a specific service, open a filtered message browser with corresponding filtering criteria.

To view service-related messages, follow these steps:

1. In the object pane, select the service that is affected.
2. Do one of the following:
 - Right-click the selected message to open a popup menu, then select one of the following:
 - Filtered Active Browser
 - Filtered History Browser
 - From the menu bar, select **Actions: Filtering -> New Active Filtered Browser**, then select the filter criteria in the Filter Messages dialog box, as shown in Figure 1-55 on page 131.

For descriptions of the options in this dialog box, see “About the Filter Messages Dialog Box” on page 427.

Finding a Service in Multiple Service Hierarchies

NOTE

This section is only relevant for you if the OVO administrator uses HP OpenView Service Configuration for Service Navigator to configure services. Service Configuration is a graphical user interface for configuring service hierarchies for Service Navigator.

In Service Configuration, a service can have multiple parent services. This means that in the Java GUI, the same service can appear in multiple service hierarchies, each time having a different status and different associated actions.

A change in status of one occurrence of the service does not necessarily mean that the status of all other occurrences also changes. However, it is good practice to identify all hierarchies that contain the service to ensure that other services are not impacted. Since all occurrences of the same service share the same identifier (the original ID), the Java GUI lets you easily identify all occurrences of the service.

To Find a Service in Multiple Service Hierarchies

To find a service in multiple service hierarchies, follow these steps:

1. In the object pane, right-click the service for which you want to find other services with the same original ID.
2. From the popup menu, select `Find in Service Views...`

The `Service Views` dialog box opens, as shown in Figure 4-1. The `Service` column contains all services that have the same original ID as the service for which you started the search. The `Root Service` column lists the root service of each service hierarchy that contains an identified service.

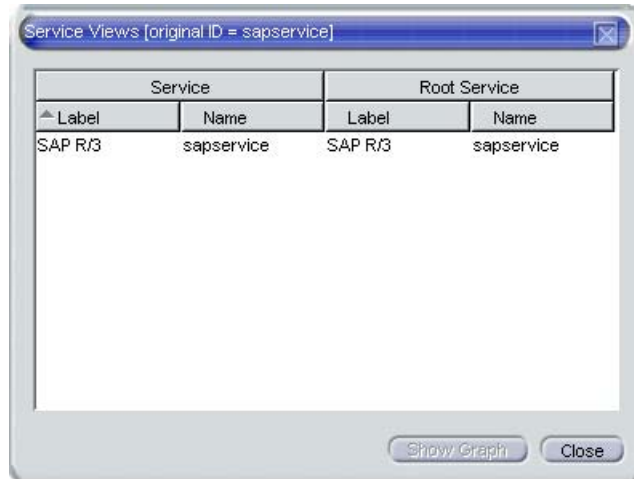
3. Select one of the identified services and click `[Show Graph]`. A service graph opens with the selected service highlighted.

TIP

You can also double-click a service to open the service graph.

4. When you are finished with the search results, click [Close] to close the Service Views dialog box.

Figure 4-2 Service Views Dialog Box



Investigating Problems with OVO and Service Navigator

After OVO has detected a problem in your managed environment, you should investigate the problem. This section explain how to use either the message browser headline or the `Message Properties` dialog box to determine the details of the problem, including when it happened, on what node, how severe the problem is, and if any actions are preconfigured to solve the problem. The history database is also a good resource for investigating how similar problems have been solved previously.

You can use Service Navigator to investigate problems in your managed environment, as follows:

- ❑ “To Highlight an Affected Service” on page 329
- ❑ “To Identify the Root Cause of a Problem” on page 329
- ❑ “To Identify Impacted Services” on page 330

NOTE

For an overview of the Service Navigator problem solving process, see “Managing Problems with Service Navigator” on page 307.

You can use OVO to investigate problems in your managed environment, as follows:

- ❑ “Investigating Problems with the Message Browser” on page 211
- ❑ “To View Detailed Message Information” on page 213
- ❑ “Investigating Message Histories” on page 217
- ❑ “To View a Message Node Automatically” on page 202

NOTE

For an overview of the OVO problems solving process, see “About the Problem Solving Process” on page 100.

To Highlight an Affected Service

After you have investigated the problem, you can easily highlight the service which is affected in the object pane.

To highlight an affected service with a fastlink, follow these steps:

1. In the message browser, right-click the message you are investigating.
2. From the popup menu, select `Select Service in Object Pane`.

OVO highlights the service in the object pane. You can now further investigate the problem by starting a detailed `Get Root Cause` or `Get Impacted Services` analysis. For details, see “To Identify the Root Cause of a Problem” on page 329 and “To Identify Impacted Services” on page 330.

To Identify the Root Cause of a Problem

It may be difficult for you to determine whether the service itself or one or more subservices has caused the service to change its severity. Service Navigator provides you with a `get-root-cause` analysis tool that lets you quickly find the service that caused the severity to change.

To identify the root cause of a problem, follow these steps:

1. Select the service in the object pane for that caused the severity change.
2. Right-click the service and select `Get Root Causes` from the popup menu.

A new client window opens displaying the `Service Root Cause Graph` for the service. You can now identify the subservice that caused the status change.

To Identify Impacted Services

A subservice contained in a parent service can also be used by another service. As a result, a change of severity not only affects the immediate parent service but also all other services that use the subservice. To quickly determine which other services are affected by a change of severity, Service Navigator displays all impacted services in a Service Impact Graph.

NOTE

Subservices not impacted by the problem are not displayed in the Service Impact Graph although they are subservices of the selected parent service.

To identify impacted services, follow these steps:

1. In the object pane, right-click the service.
2. From the popup menu, select Get Impacted Services.

A new client window opens displaying the Service Impact Graph for your service. The service you had selected and all services that are affected by the problem appear as icons in the graph.

Solving Problems with OVO and Service Navigator

After you have investigated a problem, you should solve the problem in your managed environment.

You can use Service Navigator to solve problems in your managed environment, as follows:

- ❑ “To Perform a Service Action” on page 332
- ❑ “To Start an Application from a Service” on page 333

NOTE

For an overview of the Service Navigator problem solving process, see “Managing Problems with Service Navigator” on page 307.

You can use OVO to solve problems in your managed environment, as follows:

- ❑ “To Unbuffer a Pending Message” on page 223
- ❑ “To Modify the Attributes of a Message” on page 214
- ❑ “Owning Messages” on page 221
- ❑ “Verifying Automatic Actions” on page 224
- ❑ “Verifying Operator-initiated Actions” on page 227
- ❑ “To View Operator-assigned Applications” on page 230
- ❑ “Starting Applications” on page 232
- ❑ “Starting X-OVw Applications” on page 236
- ❑ “To Customize the Startup Attributes of an Application” on page 237
- ❑ “To Broadcast a Command” on page 239
- ❑ “To Escalate a Message” on page 240

NOTE

For an overview of the OVO problems solving process, see “About the Problem Solving Process” on page 100.

To Perform a Service Action

You can check if an action is configured for the service by viewing the service details.

To perform a service action, follow these steps:

1. In the object pane, right-click a service.
2. From the popup menu, select `Start` and the service action you want to execute.

The type of service action, either a web application or a command, determines how the output of the action is displayed:

- If a web application is started, a web browser opens.
- If a command is started, the output is displayed in a new workspace pane window.

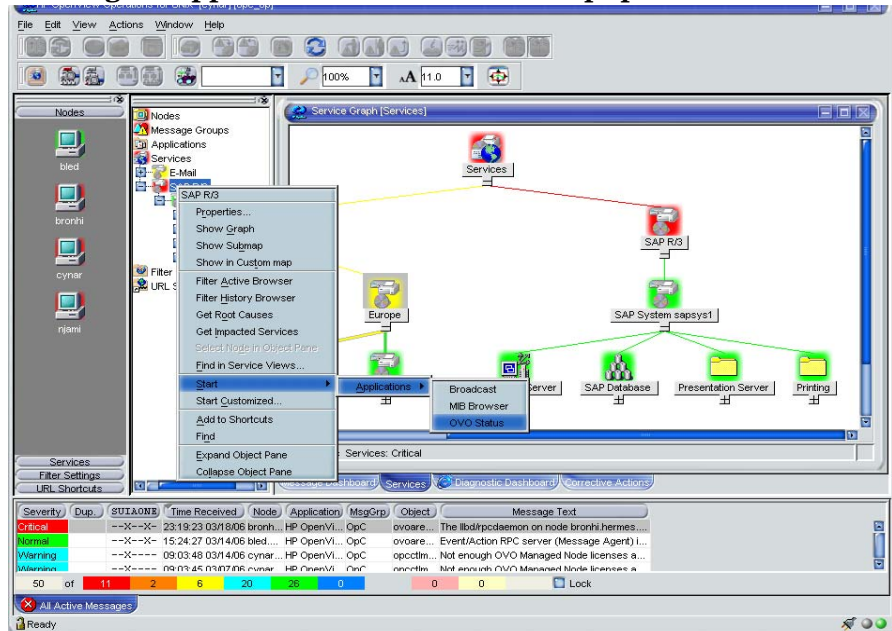
To Start an Application from a Service

To start an application from a service, follow these steps:

1. In the Services tab of the object pane, right-click a service or subservice.
2. From the popup menu, choose the application you want to start, as shown in Figure 4-3.

In the figure, applications in the red box are service applications.

Figure 4-3 Starting an Application from a Service Popup Menu



NOTE

You can also start regular applications from Service menus. For example, can quickly run a background task on the management server while simultaneously viewing the service tree.

Documenting Solutions with OVO and Service Navigator

The final step in the OVO problem-solving model is to document solutions. This step facilitates problem management in the future. To document solutions, you modify message instructions and move resolved problems from the message browser to the history database by acknowledging them.

NOTE

For an overview of the Service Navigator problem solving process, see “Managing Problems with Service Navigator” on page 307.

You can use OVO to solve problems in your managed environment, as follows:

- ❑ “To Annotate a Message” on page 242
- ❑ “Printing OVO Messages and Application Output” on page 243
- ❑ “Acknowledging Messages” on page 248

NOTE

For an overview of the OVO problems solving process, see “About the Problem Solving Process” on page 100.

Customizing OVO and Service Navigator

You can customize OVO and Service Navigator to help streamline your IT tasks.

You can customize your managed environment, as follows:

- ❑ “To Change Your Operator Password” on page 255
- ❑ “To Load the Default Configuration” on page 256
- ❑ “To Customize Console Settings” on page 259
- ❑ “Customizing Movable Panes” on page 262
- ❑ “Customizing the Shortcut Bar” on page 264
- ❑ “Customizing Workspace Pane Workspaces” on page 268
- ❑ “To Change Your Integrated Web Browser” on page 270
- ❑ “To Customize the Toolbar” on page 273
- ❑ “To Create a Filtered Message Browser” on page 275
- ❑ “To Save the Browser Filter Settings” on page 276
- ❑ “Saving the Browser Layout” on page 280
- ❑ “Changing the Layout of Browser Windows” on page 283
- ❑ “Changing the Number of Messages Displayed” on page 285
- ❑ “To Customize the Refresh Interval” on page 258
- ❑ “To Customize the Look and Feel of the Java GUI” on page 260
- ❑ “To Customize the Color Preferences for the Message Browser” on page 287
- ❑ “To Customize the General Font Size” on page 275

A Troubleshooting

General Troubleshooting

In general, if you encounter problems with OVO, you should check error messages and make a note of all related symptoms.

❑ **Checking Error Messages**

You can check for error messages in the error dialog box, MS-DOS or terminal window, and error logfiles.

❑ **Analyzing Symptoms**

You can analyze the facts, scope, context, and duration of the problem.

NOTE

For specific troubleshooting procedures, see “Specific Troubleshooting” on page 342.

Checking Error Messages

If you encounter a problem, you can check for error messages in the following locations:

- ❑ **Error Dialog Box**

Error dialog box which pops up when an error occurs.

- ❑ **MS-DOS or Terminal Window**

MS-DOS or terminal window that was used to start the GUI.

- ❑ **Error Logfiles**

Error logfiles on the management server for HP-UX or Solaris:

```
/var/opt/OV/log/OpC/mgmt.sv
```

For other supported agent platforms, ask your OVO administrator for the location of the error logfiles.

Analyzing Symptoms

If you encounter a problem, make a note of all related symptoms:

1. Facts

What actually happened?

Write down the facts:

- Did you receive an error message?
- Did the user interface hang or crash?
- Did you receive a communication error?

2. Scope

What is affected?

Determine which components are affected by the problem:

- Distinguish between GUI and server problems.
- If you suspect a problem is related to the server, try to duplicate the problem on a different GUI client to find out whether it is client-specific.

3. Context

What has changed?

Determine if anything has changed in your managed environment or with the product configuration:

- Hardware
- Software
- Files
- Security
- Name services
- Routing
- Utilization

4. Duration

When did the problem occur?

Determine a time pattern, if any:

- How long did the problem last?
- How often did the problem occur?
- Is the problem consistent or intermittent?
 - *Consistent*
Fails every time
 - *Intermittent*
Fails only sometimes

Specific Troubleshooting

This sections describes solutions to specific problems you may encounter:

❑ **If the OVO GUI Does Not Start**

What to do if you receive the error message in a MS-DOS terminal window.

❑ **If an OVO Application Does Not Start**

What to do if an application set up in OVO can no longer be started on a managed node.

❑ **If an Action Does Not Complete**

What to do if an automatic action, an operator-initiated action, or a scheduled action hangs and does not terminate.

❑ **If Colors Do Not Display Properly**

What to do if window contains nothing but a single color or squares of colors.

❑ **If Applets Do Not Start in a Workspace**

What to do if Java2 applets do not start in a workspace.

❑ **If Service Navigator Cannot Find the Service Definition**

What to do if Service Navigator cannot find the service definition.

❑ **If Error Message is Displayed upon Exiting or Logging off from the HTTPS Java GUI**

What to do if you get an error message when exiting or logging off from the HTTPS-based Java GUI.

❑ **If Error Messages are Displayed upon Application Startup in the Windows Java GUI**

What to do if you get error messages upon startup of some applications in the Java GUI on Windows.

NOTE

For general troubleshooting procedures, see “General Troubleshooting” on page 338.

If the OVO GUI Does Not Start

If you receive the error message when trying to login, make sure the management server is reachable and that the OVO server processes are running on the management server.

Problem

After entering the login information, you get an error box with the following message:

```
Management server is not running.
```

Solution

Do the following:

1. Make sure the OVO management server is reachable.

Try the `ping` command from an MS-DOS terminal window:

```
ping <OVO_management_server>
```

2. Make sure the OVO server processes are running on the management server.

Ask your OVO administrator to check the status of the server processes.

If an OVO Application Does Not Start

If you can no longer start an application set up in OVO on a managed node, either adapt the OVO default application startup configuration or use customized startup options.

Problem A

An application has been upgraded, and its command path, access security, or something else has been changed.

Solution A

Adapt the OVO default application startup accordingly.

Problem B

The user's password for default application startup has been changed.

Solution B

Use customized application startup options. For details, see "To Customize the Startup Attributes of an Application" on page 237.

Problem C

An application with no graphical interface, such as `cmd.exe` and `telnet`, does not appear to be running upon startup.

Solution C

Since the application has no graphical interface, it is not visible, even though it is running. Starting applications like this have to be properly configured by the OVO administrator when assigning Java GUI operator defaults. Refer to *OVO Administrator's Reference* for more information.

If an Action Does Not Complete

If an automatic action, an operator-initiated action, or a scheduled action hangs and does not terminate, kill the specific process and modify the related template condition, script, or command.

Problem

An automatic action, an operator-initiated action, or a scheduled action hangs and does not finish because of programming errors, requests for user input, and so on.

Solution

Do the following:

1. Use the `ps` command to determine the process ID of the endlessly running action.
2. Issue a `kill` command for the specific process ID.
3. To prevent the problem from recurring, do one of the following:
 - Change the related template condition.
 - Fix the script or command.

If Colors Do Not Display Properly

If a window opens but contains nothing but a single color or squares of colors, select another color scheme and restart OVO.

Problem

The color scheme on your system has identical background and foreground colors, or there is not enough color contrast between the foreground and background. This is more often a problem with UNIX systems displays than with other platforms (for example, NorthernSky and Mustard color schemes on HP-UX cause this problem).

Solution

Do the following:

1. Select another color scheme on your window manager.
2. Restart OVO.

If Applets Do Not Start in a Workspace

If you want to access Web pages that start Java2 applets in a workspace, the Java-based GUI itself must be running as applet.

Problem

When starting a Web page that starts a Java2 applet in a workspace, you receive the following error message:

```
Attachment to a running Virtual Machine failed
```

Solution

The Java GUI *itself* must be running as applet. Do the following:

1. Exit your current GUI session.
2. Start the Java GUI with the menu sequence Start: HP Operations for UNIX->JAVA Console Plugin.

If Service Navigator Cannot Find the Service Definition

With Service Configuration for Service Navigator, a message can target multiple services. Any service-related message operations, for example opening a service graph from selected message, therefore affect multiple services. If one of the affected services is not in your responsibility matrix, the following error message is displayed:

Figure A-1

Service Not Found



Problem

When starting one of the following operations, the error message Service not found is displayed:

- Select Service(s) in Object Pane
- Show Graph(s)
- Show Submap(s)
- Get Impacted Services

Solution

The service you tried to access is not part of your responsibilities and can therefore not be displayed to you.

If Error Message is Displayed upon Exiting or Logging off from the HTTPS Java GUI

Problem

When exiting or logging off from the HTTPS-based Java GUI, the following error message is displayed:

```
ERROR MSG, 7:42:47 AM, com.hp.ov.it.comm.OvEmbHttpClient:  
https status - InternalServerError:text/html,  
Message = HTTP/1.1 500 Internal Server Error  
Date: Wed, 11 May 2005 05:41:57 GMT  
Transfer-Encoding: chunked  
Server: BBC 05.20.010; opcuihttps 01.00.000  
senderid: e6979118-aca1-750b-1f6a-de6eb9cfe391  
Cache-Control: no-cache  
Content-Type: text/html
```

Solution

This message can be safely ignored.

If Error Messages are Displayed upon Application Startup in the Windows Java GUI

Applications, such as Net Activity, sometimes do not start in the Windows Java GUI, when using `opcctrloww`. Instead, the following error messages are printed in the OVO Communication Status window:

NOTE

The applications that may trigger this problem are those that display an `ovw` session to the Windows box.

Problem A

Command:

```
opcctrloww -display 15.2.118.164:0.0 -user \"opc_adm\"  
-action \"IP Tables\" AddressesForIface\"
```

produced the following output error:

```
Can't open display: <IP Address>:0.0 with Exit Code: 3
```

Solution A

An X-Windows emulator such as Reflection X or Hummingbird Exceed must be running on the Windows system.

Problem B

```
INTERNAL ERROR at: CWfong.cpp:264. Contact your HP Support  
representative. Could not conver  
\"-*-medium-f-normal*-12-***-m*-*-*\\" to XFontSet.  
Try changing your \".cwFont\" resource.
```

Solution B

The X-Windows emulator is not able to find the correct font. In this case you need to configure a font server, for example, on the OVO Management Server:

```
xfs -port 7100
```

and then configure Reflection X to use this font server.

B **References**

In this Appendix

This appendix contains the following detailed reference information:

❑ **About Keyboard Shortcuts**

Explains how to enter menu bar and popup menu commands from the keyboard without using the mouse.

❑ **Types of Menu Bar Items**

Explains options contained in the menu bar. For an overview of the menu bar, see “About the Menu Bar” on page 78.

❑ **About Toolbar Icons and Drop-down Lists**

Explains icons in the toolbar. For an overview of the toolbar, see “About the Toolbar” on page 79.

❑ **Types of Popup Menu Items**

Explains popup menu items in the Java GUI. For an overview of the Java GUI, see “Tour of the OVO Java GUI” on page 39.

❑ **Types of Dialog Boxes**

Explains options that are available within dialog boxes throughout the Java GUI.

❑ **About the Start Customized Application Wizard**

Explains how to change the preconfigured startup attributes of an application.

❑ **About the Message Browser Headline**

Describes the default elements that are available in the headline of the message browser.

❑ **About Message-related Variables**

Explains the parameters for extended message-related variables used in OVO messages. For an overview of extended message-related variables, see “Adding OVO Variables” on page 148.

❑ **Types of OVO Variables**

Explains the variables used in OVO or passed to external programs.

❑ **About the `itoopbrw` File**

Explains how to customize and save custom message attributes with the `itoopbrw` file. For an overview of custom message attributes, see “About Custom Message Attributes” on page 121.

❑ **About the `ito_op` Startup Options**

Describes the startup options evaluated by the Java GUI when it is started with the `ito_op` startup script.

❑ **About the `itoopec` Resource File**

Describes the options that can be added in the `itoopec` file, which stores operator preferences.

About Keyboard Shortcuts

The Java GUI enables you to enter many commands from the keyboard without using the mouse.

The Java GUI contains two types of keyboard shortcuts:

❑ Key Accelerators

Key accelerators directly access functionality without opening any menus. Key accelerators are available for the most commonly performed tasks in the Java GUI. An example for a key accelerator is **CRTL+S** which lets you save the console session settings.

See “Java GUI Key Accelerators” on page 355 for a list of key accelerators in the Java GUI.

❑ Key Mnemonics

Key mnemonics jump to menu items using one or more keystrokes once a menu is opened. Key mnemonics are available for almost all menu commands. Access to key mnemonics differs for commands in the menu bar and in popup menus:

- *Menu Bar*

Hold down the **ALT** key and press the underlined letter of the menu that you want to access. For example, if you want to select `File: Save Console Session Settings`, hold down the **ALT** key and press **F** then **S** (**ALT+FS**).

For descriptions of options available in the menu bar, as well as their keyboard mnemonics, see “Types of Menu Bar Items” on page 357.

- *Popup Menus*

Select an item with a right-click, or select the item and press **SHIFT+F10**, to get a popup menu. For example, if you want to create a filtered active message browser on a particular node, right-click the node, then press **A**. Or click the node, hold down **SHIFT**, press **F10**, and press **A** (**SHIFT+F10+A**).

For descriptions of options available in popup menus, as well as their keyboard mnemonics, see “Types of Popup Menu Items” on page 380.

Java GUI Key Accelerators

Table B-1 lists the key accelerators used in the Java GUI.

Table B-1 Key Accelerators in the Java GUI

Key Accelerator	Action
ALT+ENTER	Shows the Property dialog box of one selected message or multiple selected services.
CTRL+PLUS SIGN or CTRL+MINUS SIGN	Zooms in or out of all graphs and the custom map.
CTRL+F6 or CTRL+SHIFT+F6	Moves to the next or previous internal window.
CTRL+DEL	Acknowledges one or more selected messages.
CTRL+TAB or CTRL+SHIFT+TAB	Moves to the next or previous workspace tab.
CTRL+F	Find san object in the object pane.
CTRL+I	Disowns one or more selected messages.
CTRL+M	Modifies the selected message.
CTRL+N	Adds an annotation to one or more selected messages.
CTRL+P	Prints one or more selected messages.
CTRL+S	Saves the console session settings.
CTRL+U	Adds a new URL shortcut.
CTRL+W	Owms one or more selected messages.
DEL	Acknowledges one or more messages with the Confirm dialog box.
F1	Displays the contents of the Java GUI online documentation.
F5	Refreshes the status of objects in the Java GUI.
F6 or SHIFT+F6	Moves to the next or previous area pane.

See Figure B-1 on page 356 for presentation of key accelerators in the Java GUI.

Figure B-1 Java GUI Key Accelerators

The screenshot displays the HP OpenView Operations for UNIX GUI. A 'Messages' menu is open, showing various actions and their keyboard shortcuts. The main workspace contains two dashboards: 'All Active Messages' (a bar chart) and 'All Active Messages' (a pie chart). A table at the bottom lists message details.

Severity	Dup.	SUIAONE	Time Received	Node	Numeric	Application	MsgGrp	Object	Message Text
Critical		--X----	19:21:42 07/03/05	jane.hermes.si		HP OpenVi...	OpC	opcctlm (Control Manager)	Number of 375034 messages in hist...
Critical		--X----	21:21:44 07/03/05	jane.hermes.si		HP OpenVi...	OpC	opcctlm (Control Manager)	Number of 375034 messages in hist...
Critical		--X----	23:21:47 07/03/05	jane.hermes.si		HP OpenVi...	OpC	opcctlm (Control Manager)	Number of 375034 messages in hist...
Critical		--X----	01:21:50 07/04/05	jane.hermes.si		HP OpenVi...	OpC	opcctlm (Control Manager)	Number of 375034 messages in hist...
Critical		0-X--X-	03:21:53 07/04/05	jane.hermes.si		HP OpenVi...	OpC	opcctlm (Control Manager)	Number of 375034 messages in hist...
Critical		0-X--X-	11:22:03 07/04/05	jane.hermes.si	1e-3	HP OpenVi...	OpC	opcctlm (Control Manager)	Number of 375034 messages in hist...
Critical		0-X--X-	13:22:04 07/04/05	jane.hermes.si	0.01	HP OpenVi...	OpC	opcctlm (Control Manager)	Number of 375034 messages in hist...
Critical		0-X--X-	09:22:01 07/04/05	jane.hermes.si	0.1	HP OpenVi...	OpC	opcctlm (Control Manager)	Number of 375034 messages in hist...
Critical		0-X--X-	07:21:58 07/04/05	jane.hermes.si	1	HP OpenVi...	OpC	opcctlm (Control Manager)	Number of 375034 messages in hist...
Critical		0-X--X-	05:21:55 07/04/05	jane.hermes.si	11	HP OpenVi...	OpC	opcctlm (Control Manager)	Number of 375034 messages in hist...

Summary: 59 of 42 0 7 0 0 10 0 Lock

Types of Menu Bar Items

This section describes the menu items that are available in the menu bar:

- ❑ **File Menu**
See “About the File Menu” on page 358.
- ❑ **Edit Menu**
See “About the Edit Menu” on page 360.
- ❑ **View Menu**
See “About the View Menu” on page 361.
- ❑ **Actions Menu**
See “About the Actions Menu” on page 366.
- ❑ **Window Menu**
See “About the Window Menu” on page 375.
- ❑ **Help Menu**
See “About the Help Menu” on page 375.

For an overview of the menu bar itself, see “About the Menu Bar” on page 78.

NOTE

If Service Navigator is installed, additional menu bar options are available in the **Actions** menu.

About the File Menu

The File menu (**ALT+F**) in the menu bar has the following options:

Save Console Session Settings (**ALT+FS**)

Stores any customizations you made to the toolbar, position controls, shortcut bar, object pane, and browser pane, as well as any changes you made in the Preferences dialog box. For details, see “Customizing OVO” on page 253 and “About the Preferences Dialog Box” on page 450. The next time you start the Java GUI, the stored settings are read and restored.

Page Setup... (**ALT+FU**)

Enables you to set preferences for your printer.

Print... (**ALT+FP**)

Prints the active pane. From the Java Runtime print dialog box, you can select a printer, printing preferences, whether to print to file, number of pages to print, how many copies to print, whether to collate pages, and so on. For details, see “Printing OVO Messages and Application Output” on page 243.

Export... (**ALT+FE**)

Saves one or more selected messages to a file of any given format, for example to a text file. For details, see “Drag and Drop Operations Between Java GUI and Other Applications” on page 95.

Change Password (**ALT+FH**)

Opens the Change Operator Password dialog box. For descriptions of options in this dialog box, see “About the Change Operator Password Dialog Box” on page 421.

Send Message to Operators (**ALT+FT**)

Opens the Send Message to Operator(s) dialog box. For descriptions of options in this dialog box, see “About the Send Message to Operator(s) Dialog Box” on page 459.

Reload Assigned Defaults (**ALT+FD**)

Reloads the administrator-defined default preferences for the toolbar, position controls, shortcut bar, object pane, workspace pane, and browser pane, as well as any changes made in the Preferences dialog box made by the administrator.

CAUTION

This options overwrites your own preferences, which cannot be recovered.

To find out how to change these defaults, see “Customizing OVO” on page 253 and “About the Preferences Dialog Box” on page 450. If you change any of these preferences, you must save them with `File: Save Console Session Settings` in the menu bar. For details, see “About the File Menu” on page 358. The next time you start the Java GUI, the stored settings are read and restored.

Reload Configuration (**ALT+FA**)

Reloads configuration data, such as assigned nodes, message groups, and services (if Service Navigator is installed) defined by the OVO administrator for the Java GUI.

Log Off... (**ALT+FG**)

Logs you out of the Java GUI. Before you are logged out, an alert box asks if you want to save any console session changes for future sessions.

Exit (**ALT+FX**)

Shuts down the Java GUI. Before the Java GUI shuts down, an alert box asks if you want to save any console session changes for future sessions.

About the Edit Menu

The `Edit` menu (**ALT+E**) in the menu bar has the following options:

`Copy to Clipboard` (**ALT+EC**)

Copies selected text to the system clipboard.

`Find...` (**ALT+EF**)

Enables you to search for a specific item in the object tree by entering the name of the item. You can choose to search for whole words only, matching case, or both. When the search function finds a specific item, the item is highlighted in the object pane. If the item is not visible because the object tree is collapsed, the tree is expanded, and the item is scrolled into the visible area of object pane. The search begins at the top of the object tree, rather than from the selected item. For an overview of the search function, see “Searching the Object Pane” on page 104. For descriptions of options in the `Find` dialog box, see “About the Find Dialog Box” on page 434.

`Preferences...` (**ALT+EP**)

Opens the `Preferences` dialog box. For descriptions of options in the `Preferences` dialog box, see “About the Preferences Dialog Box” on page 450.

About the View Menu

The **View** menu (**ALT+V**) in the menu bar has the following options:

Shortcut Bar (**ALT+VS**)

Shows or hides the shortcut bar. If the menu item is checked, the shortcut bar is available. If the menu item is not checked, the shortcut bar is not available. For an overview of the shortcut bar, see “About the Shortcut Bar” on page 41.

Object Pane (**ALT+VO**)

Shows or hides the object pane. If the menu item is checked, the object pane is available. If the menu item is not checked, the object pane is not available. For an overview of the object controls, see “About the Object Pane” on page 43.

Browser Pane (**ALT+VB**)

Shows or hides the browser pane. If the menu item is checked, the browser pane is available. If the menu item is not checked, the browser pane is not available. For an overview of the browser pane, see “About the Browser Pane” on page 63.

Position Controls (**ALT+VP**)

Shows or hides the position controls. If the menu item is checked, the position controls are available in the Java GUI. If the menu item is not checked, the position controls are not available in the Java GUI. For an overview of the position controls, see “About the Position Controls” on page 81.

Navigation Panel (**ALT+VA**)

Shows or hides the Navigation Panel. If the menu item is checked, the Navigation Panel is available. If the menu item is not checked, the Navigation Panel is not available.

You can access Navigation Panel also from the toolbar. For more information about toolbar icons and drop-down lists, see “About Toolbar Icons and Drop-down Lists” on page 376.

Refer to *Service Navigator Concepts and Configuration Guide* to learn more about navigating through service graphs and maps.

Main Toolbar (**ALT+VT**)

Shows or hides any of toolbar components. For descriptions of icons that belong to these components, see “About Toolbar Icons and Drop-down Lists” on page 376.

Message Browser Toolbar (**ALT+VTB**)

If checked, all icons belonging to this toolbar component are visible on the toolbar.

Message Toolbar (**ALT+VTM**)

If checked, all icons belonging to this toolbar component are visible on the toolbar.

Service Toolbar (**ALT+VTS**)

If checked, all icons belonging to this toolbar component are visible on the toolbar.

Message Browser Toolbar (**ALT+VM**)

Switches message browser icons on and off in the following locations. For descriptions of the toolbar icons, see “About Toolbar Icons and Drop-down Lists” on page 376.

On Main Toolbar (**ALT+VMM**)

If checked, icons are on the toolbar.

On Workspace Message Browser (**ALT+VMW**)

If checked, icons are on each message browser in the workspace pane.

On Browser Pane Message Browser (**ALT+VMB**)

If checked, icons are on the message browser in the browser pane.

Number of Messages (**ALT+VN**)

Enables you to choose one of two method for displaying messages in the active message browser:

CAUTION

Displaying all messages could cause problems if a very large number of messages are assigned to you. Likewise, choosing to display only 50 messages could cause problems if there are critical messages that are not displayed in the active message browser. To prevent either problem, you can sort messages by severity (see “Changing the Layout of Browser Windows” on page 283). Also, you can create a message filters that meet your specific requirements (see “To Create a Filtered Message Browser” on page 275).

Latest Messages (**ALT+VNL**)

By default, displays the 50 most recent messages in the active message browser. To find out how to change this number, see “Changing the Number of Messages Displayed” on page 285.

All Messages (**ALT+VNA**)

Displays all messages currently assigned to you in the active message browser.

Customize Message Browser Columns... (**ALT+VU**)

Opens the Customize Browser Columns dialog box, where you can determine which message browser columns you want to display, and what text you want to see in the column labels. In this dialog box, you can also add custom message attributes. For descriptions of options in the Customize Browser Columns dialog box, see “About the Customize Message Browser Columns Dialog Box” on page 422. For an overview of custom message attributes, see “About Custom Message Attributes” on page 121.

Save Message Browser Layout (**ALT+VL**)

Saves the new browser layout as one of the following:

Save As Default For (**ALT+VLD**)

Saves the new browser layout (order, width, sorting order, and selection of columns) for a new default active (**ALT+VLDA**), history (**ALT+VLDH**), or pending (**ALT+VLDP**) message browser.

Save For Filter Name (**ALT+VLF**)

Saves the new browser layout (order, width, sorting order, and selection of columns) for the currently selected (topmost) filtered message browser.

Message Browser (**ALT+VG**)

Accesses the following browser pane popup menu items toolbar menu items. For descriptions of these options, see “About Browser Pane Popup Menu Items” on page 404 and “About Toolbar Icons and Drop-down Lists” on page 376.

Show Chart (**ALT+VGS**)

See “About Browser Pane Popup Menu Items” on page 404 and “About Toolbar Icons and Drop-down Lists” on page 376.

Browser Pane Tab Properties (**ALT+VGP**)

See Properties in “About the Browser Pane: Browser Tab Menu” on page 405.

Close Browser Pane Tab (**ALT+VGL**)

See Close in “About the Browser Pane: Browser Tab Menu” on page 405.

Current State Chart (**ALT+VGC**)

See Switch to Current State Chart in “About Toolbar Icons and Drop-down Lists” on page 376.

History Chart (**ALT+VGH**)

See Switch to History Chart in “About Toolbar Icons and Drop-down Lists” on page 376.

Put Message Browser to Browser Pane (**ALT+VGB**)

See “About Toolbar Icons and Drop-down Lists” on page 376.

Put Message Browser to Workspace Pane (**ALT+VGB**)

See “About Toolbar Icons and Drop-down Lists” on page 376.

Workspace Pane (**ALT+VT**)

Accesses the following workspace pane popup menu items. For descriptions of these options, see “About Workspace Pane Popup Menu Items” on page 396.

- Workspace Properties (**ALT+VTW**)
- Delete Workspace (**ALT+VTD**)
- New Workspace (**ALT+VTN**)
- Move Selected Window To (**ALT+VTM**)

Expand Object Pane (**ALT+VE**)

Expands all branches of the selected item in the object tree. Equivalent to clicking the plus sign (+) next to all branches of the object tree. For an overview of the object tree, see “About the Object Pane” on page 43.

Collapse Object Pane (**ALT+VC**)

Collapses all branches in the selected item of the object tree. Equivalent to clicking the minus sign (-) next to all branches of the object tree. For an overview of the object tree, see “About the Object Pane” on page 43.

Refresh (**ALT+VR**)

Refreshes the status of nodes, message groups, message charts, and services (if Service Navigator is installed).

About the Actions Menu

NOTE

If Service Navigator is installed, additional menu bar options are available in the Actions menu.

The Actions menu (**ALT+A**) in the menu bar has the following options:

Start (**ALT+AS**)

Enables you to start applications assigned to you by your OVO administrator.

Start Customized... (**ALT+AC**)

Opens the Start Customized Application wizard. For descriptions of options in this wizard, see “About the Start Customized Application Wizard” on page 468.

Filtering (**ALT+AF**)

Enables you to create and modify filtered message browsers to meet your specific requirements:

New Active Filtered Browser... (**ALT+AFA**)

Opens the Filter Messages dialog box, where you can create a new filtered active message browser. For descriptions of options in the Filter Messages dialog box, see “About the Filter Messages Dialog Box” on page 427. For an overview of the filtered active message browser, see “About the Filtered Active Message Browser” on page 69.

New History Filtered Browser... (**ALT+AFH**)

Opens the Filter Messages dialog box, where you can create a new filtered history message browser. For descriptions of options in the Filter Messages dialog box, see “About the Filter Messages Dialog Box” on page 427. For an overview of the filtered history message browser, see “About the Filtered History Message Browser” on page 71.

New Pending Filtered Browser... (**ALT+AFP**)

Opens the Filter Messages dialog box, where you can create a new filtered pending messages browser. For descriptions of options in the Filter Messages dialog box, see “About the Filter Messages Dialog Box” on page 427. For an overview of the filtered pending messages browser, see “About the Filtered Pending Messages Browser” on page 73.

All Active Messages (**ALT+AFL**)

By default, opens a message browser that displays the 50 most recent messages. To find out how to change this number, see “Changing the Number of Messages Displayed” on page 285.

Modify Filter... (**ALT+AFM**)

Opens the Filter Messages dialog box, where you can edit the definition of the selected filtered message browser. For descriptions of options in the Filter Messages dialog box, see “About the Filter Messages Dialog Box” on page 427.

Clone Selected Filtered Browser

Equivalent to pressing the Open a New Message Browser Window with the Same Filter icon in the toolbar. For details, see “About Toolbar Icons and Drop-down Lists” on page 376.

Remove Filter from Browser (**ALT+AFR**)

Deletes the selected filtered message browser definition.

Close Filtered Browser (**ALT+AFC**)

Closes the selected filtered message browser.

Save Settings... (**ALT+AFS**)

Saves settings you have configured for the filtered active, history, or pending messages browser windows. In this way, you can see the same or similar information at a later date without having to repeat the configuration process

Use Saved Settings... (**ALT+AFU**)

Enables you to reuse browser filters.

Messages (**ALT+AM**)

Enables you to stop or start actions, unacknowledge messages, unbuffer messages, change message properties, own or disown messages, or escalate messages, and so on.

Perform/Stop Action (**ALT+AMF**)

Starts or stops the action associated with the selected message in the message browser.

Choose one of the following:

- Perform Operator-initiated Action (**ALT+AMFP**)

- Rerun Automatic Action
(**ALT+AMFR**)
- Stop Operator-initiated
Action (**ALT+AMFO**)
- Stop Automatic Action
(**ALT+AMFA**)

Acknowledge (**ALT+AMA**)

Moves the selected message from the active message browser to the history database back. For details, see “To Acknowledge Selected Messages” on page 249.

Unacknowledge (**ALT+AMU**)

Moves the selected message from the history database back to the active message browser. For details, see “To Unacknowledge a Message” on page 251.

Unbuffer (**ALT+AMB**)

Moves the selected message from the pending messages browser to the active message browser. For details, see “To Unbuffer a Pending Message” on page 223.

Properties (**ALT+AMR**)

Opens the Message Properties dialog box. For descriptions of options in this dialog box, see “About the Message Properties Dialog Box” on page 438.

Own (**ALT+AMO**)

Owns the selected message. For details, see “To Own a Message” on page 221.

Disown (**ALT+AMD**)

Disowns the selected message. For details, see “To Disown a Message” on page 222.

Escalate (**ALT+AME**)

If message escalation is configured, escalates the selected message. For an overview of message escalation, see “Escalating Messages” on page 151.

Instructions (**ALT+AMI**)

Opens the Instructions tab of the Message Properties dialog box. For descriptions of options in this tab, see “About the Message Properties: Instructions Tab” on page 444.

Annotations (**ALT+AMN**)

Opens the Annotations tab of the Message Properties dialog box. For descriptions of options in this tab, see “About the Message Properties: Annotations Tab” on page 444.

Modify (**ALT+AMM**)

Opens the Modify Message Attributes dialog box. For descriptions of options in this dialog box, see “About the Modify Message Attributes Dialog Box” on page 446.

Create Active Filter on Message (**ALT+AML**)

Opens the Filter Messages dialog box. The fields related to the message are already selected (for example, the severity is preselected in the With Severity checkbox). You can use the Filter Messages dialog box to deselect the items you do not need.

For descriptions of options in this dialog box, see “About the Filter Messages Dialog Box” on page 427.

Print (**ALT+AMP**)

Enables you to print selected messages (**ALT+AMPS**), all messages in the message browser (**ALT+AMPA**), details of selected messages (**ALT+AMPD**), or details of all messages in the message browser (**ALT+AMPE**). From the print dialog box, you can select a printer, printing preferences, whether to print to file, number of pages to print, how many copies to print, whether to collate pages, and so on. For details, see “Printing OVO Messages and Application Output” on page 243.

Select Nodes in Object Pane (**ALT+AMS**)

Highlights the node that generated the selected message in the object pane. This option can be very helpful if you have many nodes and want to locate the node associated with a particular message quickly. For an overview of the object tree, see “About the Object Pane” on page 43.

Acknowledge All in Current View (**ALT+AMC**)

Acknowledges all messages in the selected message browser. For details, see “Acknowledging Messages” on page 248.

Acknowledge All Messages (**ALT+AMK**)

Acknowledges all messages in all browsers.

Update Current Workspace (**ALT+AMW**)

Updates the URL application associated with the selected message.

Works only if the workspace supports Microsoft Internet Explorer ActiveX controls or the embedded web browser.

Services (**ALT+AV**)

If you are using HP OpenView Service Navigator, the following additional options are available in the Services submenu of the OVO Actions menu. These options supplement those menu bar options that come with the standard OVO product.

Properties... (**ALT+AVR**)

Opens the Service Properties dialog box. For an overview of this dialog box, see “About the Service Properties Dialog Box” on page 460.

Show Graph (**ALT+AVG**)

Opens a service graph of the selected service. For details, see “About Service Graphs, Submaps, and Custom Service Maps” on page 309.

Show Submap (**ALT+AVB**)

Opens a submap of the subservices of the selected service. For details, see “About Service Graphs, Submaps, and Custom Service Maps” on page 309.

Show in Custom Map (**ALT+AVT**)

Opens a custom map of the selected service. For details, see “About Service Graphs, Submaps, and Custom Service Maps” on page 309.

Filter Active Browser (**ALTALT+AVA**)

Opens a message browser containing filtered active messages related to the selected service. For an overview of the filtered active message browser, see “About the Filtered Active Message Browser” on page 69.

Filter History Browser (**ALT+AVH**)

Opens a message browser containing filtered history messages related to the selected service. For an overview of the filtered history message browser, see “About the Filtered History Message Browser” on page 71.

Get Root Causes (**ALT+AVO**)

Opens a root causes graph for the selected service. To find out more about root causes, see “To Identify the Root Cause of a Problem” on page 329.

Get Impacted Services (**ALT+AVI**)

Opens an impacted services graph for the selected service. To find out more about impacted services, see “To Identify Impacted Services” on page 330.

Select Node in Object Pane (**ALT+AVN**)

Highlights the selected node in the object pane. For an overview of the object pane, see “About the Object Pane” on page 43

Select Service in Object Pane (**ALT+AVV**)

Highlights the selected service in the object pane. For an overview of the object pane, see “About the Object Pane” on page 43.

Find in Service Views... (**SHIFT+F10+VVF**)

Opens the Service Views dialog box. For an overview of this dialog box, see “About the Service Views Dialog Box” on page 463.

Collapse Service Graph Level (**ALT+AVL**)

Collapses one level of the service tree in the service graph. Equivalent to clicking the minus sign (-) next to all open branches of the tree.

Expand Service Graph Level (**ALT+AVE**)

Expands one level of the service tree in the service graph. Equivalent to clicking the plus sign (+) next to all closed branches of the tree.

Start (**ALT+AVS**)

Enables you to start applications assigned to you by your OVO administrator.

Start Customized... (**ALT+AVC**)

Opens the Start Customized Application wizard. For descriptions of options in this wizard, see “About the Start Customized Application Wizard” on page 468.

URL Shortcuts (**ALT+AU**)

Enables you to add, start, delete, and modify URL shortcuts. For details, see “About Shortcut Bar Popup Menu Items” on page 381.

About the Window Menu

The Window menu (**ALT+W**) in the menu bar has the following options:

Next (**ALT+WN**)

Moves the selection to the next window in the workspace pane.

Previous (**ALT+WP**)

Moves the selection to the previous window in the workspace pane.

Cascade (**ALT+WC**)

Cascades (fans like a deck of cards) workspace pane windows.

Tile Horizontally (**ALT+WH**)

Places windows next to each other horizontally.

Tile Vertically (**ALT+WV**)

Stacks windows on top of each other vertically.

About the Help Menu

The Help menu (**ALT+H**) in the menu bar has the following options:

Contents (**ALT+HC**)

Displays the contents of the OVO online documentation. When selected for the first time, it asks you to provide the path to the web browser you want to use.

Home Page (**ALT+HH**)

Link to HP OpenView Support:

<http://support.openview.hp.com/support.jsp?FromPROD=ito>

About (**ALT+HA**)

Displays information about the installed OVO version.

About Toolbar Icons and Drop-down Lists

The toolbar contains the following icons, listed by the components to which they belong:

❑ Message Browser Toolbar

The following toolbar icons belong to the Message Browser Toolbar component:



Put Message Browser to Browser Pane

Moves the message browser to the browser pane.



Put Message Browser to Workspace Pane

Moves the message browser to the workspace pane.



Update Current Workspace

Updates the current workspace. Works only if the workspace supports Microsoft Internet Explorer ActiveX controls or the embedded web browser.



Switch to Current State Chart

Switches the view to the current state chart.



Switch to History Chart

Switches the view to a history chart.



Open a New Message Browser Window with the Same Filter

Opens a new message browser window with the same filter.

❑ Message Toolbar

The following toolbar icons belong to the Message Toolbar component:



Print

Prints the current window.



Acknowledge Selected Objects

Acknowledges the selected message(s).



Unacknowledge Selected Objects

Unacknowledges the selected message(s).

**Show Properties**

Opens the Message Properties dialog box (see “About the Message Properties Dialog Box” on page 438).

**Refresh Message Browser**

Refreshes the Java GUI. Same as selecting View: Refresh from the menu bar (see “About the View Menu” on page 361).

**Own Selected Objects**

Owens the selected message(s).

**Disown Selected Objects**

Disowns the selected message(s).

**Escalate Selected Objects**

Escalates the selected message(s).

**Show Message Instructions**

Opens the Instructions tab of the Message Properties dialog box (see “About the Message Properties: Instructions Tab” on page 444).

**Perform Action**

Starts the operator-initiated action associated with the selected message.

**Show Message Annotations**

Opens the Annotations tab of the Message Properties dialog box (see “About the Message Properties: Annotations Tab” on page 444).

**Show All Messages**

Toggles from Show Latest Messages to show all messages in the message browser.

**Show Latest Messages**

Toggles from Show All Messages to show the latest 50 messages in the message browser.

❑ Service Toolbar component

The following toolbar icons belong to the Service Toolbar component:



Show Service Properties

Opens the Service Properties dialog box (see “About the Service Properties Dialog Box” on page 460).



Show Root Cause Services

Shows the services that caused the problem.



Show Impacted Services

Shows the services affected by the problem.



Collapse Service Tree Level

Collapses the Service level in the object tree and the service graph in the workspace pane.



Expand Service Tree Level

Expands the Service level in the object tree and the service graph the workspace pane.



Toggle Navigation Panel

Opens the Navigation Panel, a resizable window which helps you to easily navigate through the whole service graph or map area, and to get a better overview of the services. Refer to *Service Navigator Concepts and Configuration Guide* for more details on navigating using Navigation Panel.

The Service Toolbar component includes also the following drop-down lists:



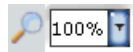
Go to Service drop-down list

Contains a list of all services currently present in the Java GUI cache. When you select a service, it is displayed in the center of a service graph or map surrounded by its neighboring services.

NOTE

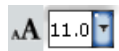
The Go to Service drop-down list is available only from the toolbar.

See “About Go to Service” on page 80 for more information.



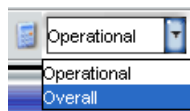
Zoom drop-down list

Offers a predefined set of proportional zoom ratios expressed in percentages, from 5% to 100%. Refer to the *Service Navigator Concepts and Configuration Guide* for more details on service graph and map zooming.



Font Size drop-down list

Offers a predefined set of font size values for service graphs and maps. Refer to *Service Navigator Concepts and Configuration Guide* for more details on changing the font size in service graphs and maps.



Status Calculation drop-down list

Offers two service status calculation views, Overall and Operational. You can set these views only for the currently active service graph or map. Refer to *Service Navigator Concepts and Configuration Guide* for more details on service status calculation.

NOTE

For an overview of the toolbar, see “About the Toolbar” on page 79.

Types of Popup Menu Items

This section describes popup menus for each of the four major areas of the Java GUI:

❑ **Shortcut Bar**

For descriptions of popup menu items in each area of the shortcut bar, see “About Shortcut Bar Popup Menu Items” on page 381.

❑ **Object Pane**

For descriptions of popup menu items in each area of the shortcut bar, see “About Object Pane Popup Menu Items” on page 388.

❑ **Workspace Pane**

For descriptions of popup menu items in each area of the shortcut bar, see “About Workspace Pane Popup Menu Items” on page 396.

❑ **Browser Pane**

For descriptions of popup menu items in each area of the shortcut bar, see “About Browser Pane Popup Menu Items” on page 404.

For an overview of popup menus, see “Types of Popup Menus” on page 82.

NOTE

If Service Navigator is installed, additional services popup menu options are available in the shortcut bar, object pane, and workspace pane.

About Shortcut Bar Popup Menu Items

The selection of popup menu items in the shortcut bar depends on the type of object you select. For example, the items available from a node are different from the options available from an URL shortcut.

This section describes the distinct popup menus in each area of the shortcut bar:

❑ **Shortcut Groups**

Popup menus on each shortcut group. For details, see “About the Shortcut Bar: Shortcut Group Menus” on page 382.

❑ **Nodes**

Popup menus in the Nodes area. For details, see “About the Shortcut Bar: Nodes Menu” on page 383.

❑ **Services**

If Service Navigator is installed, popup menus in the Services area. For details, see “About the Shortcut Bar: Services Menu” on page 384.

❑ **Filter Settings**

Popup menus in the Filter Settings area. For details, see “About the Shortcut Bar: Filter Settings Menu” on page 386.

❑ **URL Shortcuts**

Popup menus in the URL Shortcuts area. For details, see “About the Shortcut Bar: URL Shortcuts Menu” on page 387.

For an overview of the popup menu in the shortcut bar, see “About the Shortcut Bar Popup Menu” on page 83. For a description of the shortcut bar, see “About the Shortcut Bar” on page 41.

NOTE

If Service Navigator is installed, additional services popup menu options are available in the shortcut bar, object pane, and workspace pane.

About the Shortcut Bar: Shortcut Group Menus

The popup menu on each shortcut group (gray bar) in the shortcut bar has the following options:

Add New URL Shortcut... (right-click+U)

Opens the New URL Shortcut dialog box. For descriptions of options in the New URL Shortcut dialog box, see “About the Add New URL Shortcut Dialog Box” on page 418.

Modify Current Group (right-click+M)

Opens the Modify Group dialog box. For descriptions of options in the Modify Group dialog box, see “About the Modify Group Dialog Box” on page 446.

Remove Current Group (right-click+R)

Deletes the selected shortcut group.

Add New Group... (right-click+A)

Adds new shortcut group. A dialog box opens with the input text field for the shortcut group label.

The new group is placed immediately after the shortcut group you selected before opening the popup menu.

About the Shortcut Bar: Nodes Menu

The popup menu in the Nodes area of the shortcut bar has the following options:

Filter Active Messages (right-click+A)

Opens a filtered active message browser for the selected node. For an overview of the filtered active message browser, see “About the Filtered Active Message Browser” on page 69.

Filter History Messages (right-click+H)

Opens a filtered history message browser for the selected node. For an overview of the filtered history message browser, see “About the Filtered History Message Browser” on page 71.

Start (right-click+S)

Enables you to choose and start applications available for the selected node.

Start Customized... (right-click+C)

Starts the Start Customized Application wizard. For details, see “About the Start Customized Application Wizard” on page 468.

Modify Shortcut (right-click+M)

Opens the Modify Shortcut dialog box. For descriptions of options in the Modify Shortcut dialog box, see “About the Modify Shortcut Dialog Box” on page 448.

Remove Shortcut (right-click+R)

Deletes the selected shortcut from the shortcut bar but not from the object pane.

About the Shortcut Bar: Services Menu

If you are using HP OpenView Service Navigator, the following additional options are available in the *Services* popup menus in the shortcut bar. These options supplement those popup menu options that come with the standard OVO product.

Properties... (right-click+**R**)

Opens Service Properties dialog box. For an overview of this dialog box, see “About the Service Properties Dialog Box” on page 460.

Show Graph (right-click+**G**)

Opens a service graph of the selected service. For details, see “About Service Graphs, Submaps, and Custom Service Maps” on page 309.

Show Submap (right-click+**B**)

Opens a submap of the subservices of the selected service. For details, see “About Service Graphs, Submaps, and Custom Service Maps” on page 309.

Show in Custom Map (right-click+**M**)

Opens a custom map of the selected service. For details, see “About Service Graphs, Submaps, and Custom Service Maps” on page 309.

Filter Active Browser (right-click+**A** on service)

Opens a message browser containing filtered active messages related to the selected service. For an overview of the filtered active message browser, see “About the Filtered Active Message Browser” on page 69.

Filter History Browser (right-click+**H**)

Opens a message browser containing filtered history messages related to the selected service. For an overview of the filtered history message browser, see “About the Filtered History Message Browser” on page 71.

Get Root Causes (right-click+O)

Opens a root causes graph for the selected service. To find out more about root causes, see “To Identify the Root Cause of a Problem” on page 329.

Get Impacted Services (right-click+I)

Opens an impacted services graph for the selected service. To find out more about impacted services, see “To Identify Impacted Services” on page 330.

Select Node in Object Pane (right-click+N)

Highlights the selected node in the object pane. For an overview of the object tree, see “About the Object Pane” on page 43

Find in Service Views... (right-click+F)

Opens the Service Views dialog box. For an overview of this dialog box, see “About the Service Views Dialog Box” on page 463.

Start (right-click+S)

Enables you to choose and start applications available for the selected node.

Start Customized... (right-click+C)

Starts the Start Customized Application wizard. For details, see “About the Start Customized Application Wizard” on page 468.

Modify Shortcut (right-click+M)

Opens the Modify Shortcut dialog box. For details, see “About the Modify Shortcut Dialog Box” on page 448.

Remove Shortcut (right-click+R)

Deletes selected shortcut from the shortcut bar but not from the object pane.

About the Shortcut Bar: Filter Settings Menu

If Personal Filter Settings for OVO operators or Global Filter Settings for OVO administrators is selected, the popup menu in the Filter Settings area of the shortcut bar has the following options:

Add New Filter (right-click+F)

By default, the option is available only for Personal Filter Settings. Opens the Filter Messages dialog box, where you can create a new filter. For an overview of this dialog box, see “About the Filter Messages Dialog Box” on page 427.

Modify Shortcut (right-click+M)

Opens the Modify Shortcut dialog box. For details, see “About the Modify Shortcut Dialog Box” on page 448.

Remove Shortcut (right-click+R)

Deletes the selected shortcut from the shortcut bar but not from the object pane.

If a particular filter item is selected, the popup menu in the Filter Settings area of the shortcut bar has the following options:

Open (right-click+O)

Opens the saved filtered active (right-click+OA), history (right-click+OH), or pending (right-click+OP) message browser.

Modify Filter (right-click+F)

Opens the Filter Messages dialog box, where you can modify the selected filter. For details, see “About the Filter Messages Dialog Box” on page 427.

Delete (right-click+D)

Deletes the selected shortcut from the shortcut bar but not from the object pane.

Modify Shortcut (right-click+M)

Opens the Modify Shortcut dialog box. For details, see “About the Modify Shortcut Dialog Box” on page 448.

Remove Shortcut (right-click+**R**)

Deletes the selected shortcut from the shortcut bar but not from the object pane.

About the Shortcut Bar: URL Shortcuts Menu

If the URL Shortcuts group is selected, the popup menu contains shortcut group options. For details, see “About the Shortcut Bar: Shortcut Group Menus” on page 382.

If a particular URL shortcut is selected, the popup menu in the URL Shortcuts area of the shortcut bar has the following options:

Start URL (right-click+**S**)

Starts applications on the selected shortcut.

Delete URL Shortcut (right-click+**D**)

Deletes the selected shortcut from the shortcut bar and the object pane.

Modify URL Shortcut (right-click+**M**)

Opens the Modify URL Shortcut dialog box. For details, see “About the Modify URL Shortcut Dialog Box” on page 449.

Remove URL Shortcut (right-click+**R**)

Deletes selected shortcut from the shortcut bar but not from the object pane.

About Object Pane Popup Menu Items

This section describes the distinct popup menus in each area of the object bar:

❑ **Global Options**

Options that are available in every popup menu in the object pane. For details, see “About the Object Pane: Global Options” on page 389.

❑ **Nodes**

Popup menus in the Nodes area. For details, see “About the Object Pane: Nodes Menu” on page 390.

❑ **Message Groups**

Popup menus in the Message Groups area. For details, see “About the Object Pane: Message Groups Menu” on page 391.

❑ **Applications**

Popup menus in the Applications area. For details, see “About the Object Pane: Applications Menu” on page 391.

❑ **Services**

If Service Navigator is installed, popup menus in the Services area. For details, see “About the Object Pane: Services Menu” on page 392.

❑ **Filter Settings**

Popup menus in the Filter Settings area. For details, see “About the Object Pane: Filter Settings Menu” on page 394.

❑ **URL Shortcuts**

Popup menus in the URL Shortcuts area. For details, see “About the Object Pane: URL Shortcuts Menu” on page 395.

For an overview of the popup menu in the object pane, see “About the Object Pane Popup Menu” on page 84. For a description of the object pane, see “About the Object Pane” on page 43.

NOTE

If Service Navigator is installed, additional services popup menu options are available in the shortcut bar, object pane, and workspace pane.

About the Object Pane: Global Options

Every popup menu in the object pane has the following options:

Add to Shortcuts (**SHIFT+F10+U**)

Adds selected items to the shortcut bar.

Find (**SHIFT+F10+N**)

Enables you to search for a specific item in the object tree by entering the name of the item. You can choose to search for whole worlds only, matching case, or both. When the search function finds a specific item, the item is highlighted in the object pane. If the item is not visible because the object tree is collapsed, the tree is expanded, and the item is scrolled into the visible area of object pane. The search begins at the top of the object tree, rather than from the selected item. For an overview of the search function, see “Searching the Object Pane” on page 104. For descriptions of options in the Find dialog box, see “About the Find Dialog Box” on page 434.

Expand Object Pane (**SHIFT+F10+E**)

Expands all branches of the object tree. Equivalent to clicking the plus sign (+) next to all branches of the object tree. For an overview of the object tree, see “About the Object Pane” on page 43.

Collapse Object Pane (**SHIFT+F10+L**)

Collapses all branches of the object tree. Equivalent to clicking the minus sign (-) next to all branches of the object tree. For an overview of the object tree, see “About the Object Pane” on page 43.

About the Object Pane: Nodes Menu

The popup menu in the Nodes area of the object pane has the following options:

Filter Active Messages (**SHIFT+F10+A**)

Opens the filtered active message browser on the selected node. For an overview of the filtered active message browser, see “About the Filtered Active Message Browser” on page 69.

Filter History Messages (**SHIFT+F10+H**)

Opens the filtered history message browser on the selected node. For an overview of the filtered history message browser, see “About the Filtered History Message Browser” on page 71.

Start (**SHIFT+F10+S**)

Starts applications on the selected node.

Start Customized... (**SHIFT+F10+C**)

Starts the Start Customized Application wizard. For details, see “About the Start Customized Application Wizard” on page 468.

NOTE

For descriptions of global options that are available in all popup menus in the object pane, see “About the Object Pane: Global Options” on page 389.

About the Object Pane: Message Groups Menu

The popup menu in the Message Groups area of the object pane has the following options:

Filter Active Messages (**SHIFT+F10+A**)

Opens the filtered active message browser on the selected node. For an overview of the filtered active message browser, see “About the Filtered Active Message Browser” on page 69.

Filter History Messages (**SHIFT+F10+H**)

Opens the filtered history message browser on the selected node. For an overview of the filtered history message browser, see “About the Filtered History Message Browser” on page 71.

NOTE

For descriptions of global options that are available in all popup menus in the object pane, see “About the Object Pane: Global Options” on page 389.

About the Object Pane: Applications Menu

The popup menu in the Applications area of the object pane has the following options:

Start (**SHIFT+F10+S**)

If application is selected, starts the application.

Start Customized... (**SHIFT+F10+C**)

If an application is selected, starts the Start Customized Application wizard. For details, see “About the Start Customized Application Wizard” on page 468.

NOTE

For descriptions of global options that are available in all popup menus in the object pane, see “About the Object Pane: Global Options” on page 389.

About the Object Pane: Services Menu

If you are using HP OpenView Service Navigator, the following additional options are available in the *Services* popup menu in the object pane. These options supplement the OVO popup menu options.

Properties... (**SHIFT+F10+R**)

Opens Service Properties dialog box. For an overview of this dialog box, see “About the Service Properties Dialog Box” on page 460.

Show Graph (**SHIFT+F10+G**)

Opens a service graph of the selected service. For details, see “About Service Graphs, Submaps, and Custom Service Maps” on page 309.

Show Submap (**SHIFT+F10+B**)

Opens a submap of the subservices of the selected service. For details, see “About Service Graphs, Submaps, and Custom Service Maps” on page 309.

Show in Custom Map (**SHIFT+F10+T**)

Opens a custom map of the selected service. For details, see “About Service Graphs, Submaps, and Custom Service Maps” on page 309.

Filter Active Browser (**SHIFT+F10+A**)

Opens a message browser containing filtered active messages related to the selected service. For an overview of the filtered active message browser, see “About the Filtered Active Message Browser” on page 69.

Filter History Browser (**SHIFT+F10+H**)

Opens a message browser containing filtered history messages related to the selected service. For an overview of the filtered history message browser, see “About the Filtered History Message Browser” on page 71.

Get Root Causes (**SHIFT+F10+O**)

Opens a root causes graph for the selected service. To find out more about root causes, see “To Identify the Root Cause of a Problem” on page 329.

Get Impacted Services (**SHIFT+F10+I**)

Opens an impacted services graph for the selected service. To find out more about impacted services, see “To Identify Impacted Services” on page 330.

Select Node in Object Pane (**SHIFT+F10+D**)

Highlights the selected node in the object pane.

Find in Service Views... (**SHIFT+F10+VF**)

Opens the Service Views dialog box. For an overview of this dialog box, see “About the Service Views Dialog Box” on page 463.

Start (**SHIFT+F10+S**)

Enables you to select and start available applications.

Start Customized... (**SHIFT+F10+C**)

Starts the Start Customized Application wizard. For details, see “About the Start Customized Application Wizard” on page 468.

NOTE

For descriptions of global options that are available in all popup menus in the object pane, see “About the Object Pane: Global Options” on page 389.

About the Object Pane: Filter Settings Menu

If Personal Filter Settings for OVO operators or Global Filter Settings for OVO administrators is selected, the popup menu in the Filter Settings area of the object pane has the following options:

Add New Filter (**SHIFT+F10+F**)

By default, the option is available only for Personal Filter Settings. Opens the Filter Messages dialog box, where you can create a new filter. For an overview of this dialog box, see “About the Filter Messages Dialog Box” on page 427.

After you save global or personal filters, they are automatically available as subgroups of the Filter Settings group.

NOTE

For descriptions of global options that are available in all popup menus in the object pane, see “About the Object Pane: Global Options” on page 389.

If a particular filter item is selected, the popup menu in the Filter Settings area of the object pane has the following options

Open (**right-click+O**)

Opens the saved filtered active (**right-click+OA**), history (**right-click+OH**), or pending (**right-click+OP**) message browser.

Modify Filter (**right-click+F**)

Opens the Filter Messages dialog box, where you can modify the selected filter. For details, see “About the Filter Messages Dialog Box” on page 427.

Delete (**right-click+D**)

Deletes the selected shortcut from the shortcut bar but not from the object pane.

About the Object Pane: URL Shortcuts Menu

If the URL Shortcuts group is selected, the popup menu in the URL Shortcuts area of the object pane has the following options:

Add New URL Shortcut... (right click+U)

Opens the New URL Shortcut dialog box. For details, see “About the Add New URL Shortcut Dialog Box” on page 418.

NOTE

For descriptions of global options that are available in all popup menus in the object pane, see “About the Object Pane: Global Options” on page 389.

If a particular URL shortcut is selected, the popup menu in the URL Shortcuts area of the object pane has the following options:

Start URL (right-click+S)

Starts applications on the selected shortcut.

Delete URL Shortcut (right-click+D)

Deletes the selected shortcut from the shortcut bar and the object pane.

Modify URL Shortcut (right-click+M)

Opens the Modify URL Shortcut dialog box. For details, see “About the Modify URL Shortcut Dialog Box” on page 449.

About Workspace Pane Popup Menu Items

This section describes the distinct popup menus in each area of the workspace pane:

- ❑ **All Workspace Tabs**

Popup menus on each tab in the workspace pane. For details, see “About All Workspace Tab Menus” on page 397.

- ❑ **Charts**

Popup menus on current state charts and history charts in the workspace pane. For details, see “About the Workspace Pane: Charts Menu” on page 398.

- ❑ **Services**

If Service Navigator is installed, popup menus in the Services workspace. For details, see “About the Workspace Pane: Services Menu” on page 400.

- ❑ **URLs**

Popup menus on web pages in the embedded web browser in the workspace pane. For details, see “About the Workspace Pane: URL Menu” on page 403.

For an overview of the popup menu in the workspace pane, see “About the Workspace Pane Popup Menu” on page 85. For a description of the Workspace Pane, see “About the Workspace Pane” on page 53.

NOTE

If Service Navigator is installed, additional services popup menu options are available in the shortcut bar, object pane, and workspace pane.

About All Workspace Tab Menus

Each tab of the workspace pane has a popup menu with the following options:

Workspace Properties (**SHIFT+F10+R**)

Opens the Workspace Properties dialog box, where you can change the name and description of the current workspace. For details, see “About the Workspace Properties Dialog Box” on page 467.

New Workspace (**SHIFT+F10+N**)

Opens the Workspace Properties dialog box, which you use to create a new workspace immediately to the right of the current workspace. For details, see “About the Workspace Properties Dialog Box” on page 467.

Delete Workspace (**SHIFT+F10+D**)

Removes the current workspace. A popup dialog box asks you to confirm the deletion. This option is not available on the first workspace pane (by default, the Message Dashboard workspace).

Move Selected Window To (**SHIFT+F10+M**)

Enables you to move the selected frame (window) to the Message Dashboard, Services, or Corrective Actions workspace. This option is not available on the first workspace pane (by default, the Message Dashboard workspace).

About the Workspace Pane: Charts Menu

The popup menu on the *current state chart* in the workspace pane has the following options:

2D/3D

Enables you to view the selected chart in two- or three-dimensional format.

Type

Enables you to view the selected chart as a stacking area, pie, plot, or stacking bar chart.

The popup menu on the *history chart* in the workspace pane has the following options:

2D/3D

Enables you to view the selected chart in two- or three-dimensional format.

Type

Enables you to view the selected chart as a stacking area, pie, plot, or stacking bar chart.

Settings

Enables you to set the following parameters for the selected chart:

Data Storage Duration

Opens the Enter Data Storage Duration dialog box, where you can enter the data storage duration for the chart in days, hours, minutes, and seconds (ddd:hh:mm:ss). For details, see “About the Enter Data Storage Duration Dialog Box” on page 426.

Current History Chart

Opens the Enter Current View Interval dialog box, where you can enter the interval for the chart in days, hours, minutes, and seconds (dd:hh:mm:ss). For details, see “About the Enter Current View Interval Dialog Box” on page 425.

Zoom Interval

Opens the Enter Zoom Interval dialog box, where you enter date and time ranges for the chart. For details, see “About the Enter Zoom Interval Dialog Box” on page 426.

About the Workspace Pane: Services Menu

If you are using HP OpenView Service Navigator, and you right-click an empty area of the Services workspace, the workspace tab popup menu is displayed. For descriptions of options in this popup menu, see “About All Workspace Tab Menus” on page 397.

If you right-click an item in the Services workspace, the following additional options are available. These options supplement the OVO popup menu options.

Properties... (right-click+**R**)

Opens Service Properties dialog box. For an overview of this dialog box, see “About the Service Properties Dialog Box” on page 460.

Show Graph (right-click+**G**)

Opens a service graph of the selected service. For details, see “About Service Graphs, Submaps, and Custom Service Maps” on page 309.

Show Submap (right-click+**B**)

Opens a submap of the subservices of the selected service. For details, see “About Service Graphs, Submaps, and Custom Service Maps” on page 309.

Show in Custom Map (right-click+**T**)

Opens a custom map of the selected service. For details, see “About Service Graphs, Submaps, and Custom Service Maps” on page 309.

Filter Active Browser (right-click+**A**)

Opens a message browser containing filtered active messages related to the selected service. For an overview of the filtered active message browser, see “About the Filtered Active Message Browser” on page 69.

Filter History Browser (right-click+H)

Opens a message browser containing filtered history messages related to the selected service. For an overview of the filtered history message browser, see “About the Filtered History Message Browser” on page 71.

Get Root Causes (right-click+O)

Opens a root causes graph for the selected service. To find out more about root causes, see “To Identify the Root Cause of a Problem” on page 329.

Get Impacted Services (right-click+I)

Opens an impacted services graph for the selected service. To find out more about impacted services, see “To Identify Impacted Services” on page 330.

Select Node in Object Pane (right-click+N)

Highlights the node in the object pane that is defined in the service. This option can be very helpful if you have many nodes and want to locate the node associated with a particular service. For an overview of the object tree, see “About the Object Pane” on page 43.

Select Service in Object Pane (right-click+V)

Highlights the service in the object pane. This option can be very helpful if you have many services and want to locate the selected service.

Find in Service Views... (right-click+F)

Opens the Service Views dialog box. For an overview of this dialog box, see “About the Service Views Dialog Box” on page 463.

Expand Service Tree (right-click+E)

Expands one level of the service tree. Equivalent to clicking the plus sign (+) next to all closed branches of the tree.

Types of Popup Menu Items

Collapse Service Tree (right-click+L)

Collapses one level of the service tree. Equivalent to clicking the minus sign (-) next to all open branches of the tree

Start (right-click+S)

Starts applications on the selected shortcut.

Start Customized... (right-click+C)

Starts the Start Customized Application wizard. For details, see “About the Start Customized Application Wizard” on page 468.

About the Workspace Pane: URL Menu

The popup menu on web pages in the embedded web browser in the workspace pane has the following options:

Back

Moves to the previously viewed page, as in any web browser.

Forward

Moves to the next page, as in any web browser.

Save Target As...

Saves the current page to a local directory on your computer.

Refresh

Refreshes the current page, as in any web browser.

Properties

Opens the `Web Browser Properties` dialog box, where you can change the name and description of the current workspace. For details, see “About the Web Browser Properties Dialog Box” on page 466.

NOTE

The popup menu on web pages opened in Microsoft Internet Explorer in an ActiveX workspace has Internet Explorer options.

About Browser Pane Popup Menu Items

This section describes the distinct popup menus in each area of the browser pane:

❑ **Browser Tab**

Popup menus on each tab in the browser pane. For details, see “About the Browser Pane: Browser Tab Menu” on page 405. By default, the All Active Messages tab appears first in the browser pane.

❑ **Message Browser**

Popup menus in each message browser in the browser pane. For details, see “About the Browser Pane: Message Browser Menu” on page 406. These menus are also available in each message browser that is moved to the workspace pane. For descriptions of popup menu items in the workspace pane, see “About Workspace Pane Popup Menu Items” on page 396.

❑ **Message Browser Headline**

Popup menu on each column header in the message browser in the browser pane. For details, see “About the Browser Pane: Message Browser Headline Menu” on page 410. These menus are also available in each message browser that is moved to the workspace pane. For descriptions of popup menu items in the workspace pane, see “About Workspace Pane Popup Menu Items” on page 396.

❑ **Charts**

Popup menus on current state charts and history charts in the workspace pane. For details, see “About the Browser Pane: Charts Menu” on page 412.

NOTE

For an overview of the popup menu in the Browser Pane, see “About the Browser Pane Popup Menu” on page 87. For a description of the browser pane, see “About the Browser Pane” on page 63.

About the Browser Pane: Browser Tab Menu

Each tab of the browser pane has a popup menu with the following options:

Properties (**SHIFT+F10+R**)

Opens the Browser Pane Tab Properties dialog box, where you can change the name and description of the current browser tab. For details, see “About the Browser Pane Tab Properties Dialog Box” on page 419.

Close

Removes the selected tab in the browser pane.

CAUTION

You are not asked to confirm the deletion. The moment you select this option, the tab is deleted.

About the Browser Pane: Message Browser Menu

The popup menu in the browser pane has the following options:

Perform/Stop Action (**SHIFT+F10+C**)

Enables you to start or stop one of the following actions for the selected message:

- Perform Operator-initiated Action (**SHIFT+F10+CP**)
- Rerun Automatic Action (**SHIFT+F10+CR**)
- Stop Operator-initiated Action (**SHIFT+F10+CO**)
- Stop Automatic Action (**SHIFT+F10+CA**)

Acknowledge (**SHIFT+F10+A**)

Acknowledges the selected message. For details, see “Acknowledging Messages” on page 248.

Properties (**SHIFT+F10+R**)

Opens the Message Properties dialog box. For descriptions of options in this dialog box, see “About the Message Properties Dialog Box” on page 438.

Own (**SHIFT+F10+O**)

Owens the selected message. For details, see “To Own a Message” on page 221.

Disown (**SHIFT+F10+D**)

Disowns the selected message. For details, see “To Disown a Message” on page 222.

Escalate (**SHIFT+F10+E**)

If message escalation is configured, escalates the selected message. For details, see “Escalating Messages” on page 151.

Instructions (**SHIFT+F10+I**)

Opens the Instructions tab of the Message Properties dialog box. For descriptions of options in this tab, see “About the Message Properties: Instructions Tab” on page 444.

Annotations (**SHIFT+F10+N**)

Opens the Annotations tab of the Message Properties dialog box. For descriptions of options in this tab, see “About the Message Properties: Annotations Tab” on page 444.

Modify (**SHIFT+F10+M**)

Opens the Modify Annotations dialog box. For descriptions of options in this dialog box, see “About the Modify Group Dialog Box” on page 446.

Create Active Filter On Message (**SHIFT+F10+F**)

Opens the Filter Messages dialog box. For descriptions of options in this dialog box, see “About the Filter Messages Dialog Box” on page 427.

NOTE

This option is a good starting point for creating a message filter. It enables you to modify preset fields for a filter (for example, you can enter a filter pattern in the With Message Text Pattern field).

Print (**SHIFT+F10+P**)

Enables you to print selected messages, all messages in the message browser, details of selected messages, or details of all messages in the message browser. From the Java Runtime print dialog box, you can select a printer, printing preferences, whether to print to file, number of pages to print, how many copies to print, whether to collate pages, and so on. For details, see “Printing OVO Messages and Application Output” on page 243.

Select Node in Object Pane (**SHIFT+F10+L**)

Highlights the node that generated the selected message in the object tree. This option can be very helpful if you have many nodes and want to locate the node associated with a particular message quickly. For an overview of the object tree, see “About the Object Pane” on page 43.

Start (**SHIFT+F10+S**)

Starts application on selected message:

Start Customized... (**SHIFT+F10+C**)

Opens the Start Customized Application wizard. For descriptions of options in this wizard, see “About the Start Customized Application Wizard” on page 468

Service (**SHIFT+F10+V**)

If Service Navigator is installed, enables you to generate any one of the following reports:

Select Service(s) in Object Pane (**SHIFT+F10+VV**)

Highlights the related service or services in the object pane. For an overview of the object tree, see “About the Object Pane” on page 43.

Show Graph(s) (**SHIFT+F10+VG**)

Opens one or more service graphs of the selected service. For details, see “About Service Graphs, Submaps, and Custom Service Maps” on page 309.

Show Submap(s) (**SHIFT+F10+VB**)

Opens one or more submaps of the subservices of the selected service. For details, see “About Service Graphs, Submaps, and Custom Service Maps” on page 309.

Get Impacted Services (**SHIFT+F10+VF**)

Opens one or more impacted services graphs for the selected service(s). To find out more about impacted services, see “To Identify Impacted Services” on page 330.

Find in Service Views... (**SHIFT+F10+VF**)

Opens the Service Views dialog box. For an overview of this dialog box, see “About the Service Views Dialog Box” on page 463.

About the Browser Pane: Message Browser Headline Menu

The popup menu in the message browser headline has the following options:

Customize Message Browser Columns... (right-click+U)

Opens the Customize Browser Columns dialog box, where you can determine which message browser columns you want to display, and what text you want to see in the column labels. In this dialog box, you can also add custom message attributes. For descriptions of options in the Customize Browser Columns dialog box, see “About the Customize Message Browser Columns Dialog Box” on page 422. For an overview of custom message attributes, see “About Custom Message Attributes” on page 121.

Save Message Browser Layout (right-click+L)

Saves the new browser layout as one of the following:

Save As Default For (right-click+LD)

Saves the new browser layout (order, width, sorting order, and selection of columns) for a new default active (right-click+LDA), history (right-click+LDH), or pending (right-click+LDP) message browser.

Save For Filter Name (right-click+LF)

Saves the new browser layout (order, width, sorting order, and selection of columns) for the currently selected (topmost) filtered message browser.

Sort Ascending (right-click+A)

Sorts messages in ascending order for the selected message browser column.

Sort Descending (right-click+D)

Sorts messages in descending order for the selected message browser column.

Alignment (right-click+A)

Aligns the contents of the selected message browser column in one of the following ways:

Align Left (right-click+**AL**)

Left-aligns the contents of the selected message browser column.

Align Right (right-click+**AR**)

Right-aligns the contents of the selected message browser column.

Align Center (right-click+**AC**)

Centers the contents of the selected message browser column.

About the Browser Pane: Charts Menu

In the browser pane, you can move between three different views by selecting and deselecting buttons in the toolbar:

Message Browser

Make sure Switch to Current State Chart and Switch to History Chart in the toolbar are deselected.

Current State Chart

Select Switch to Current State Chart in the toolbar.

History Chart

Select Switch to History Chart in the toolbar.

For descriptions of toolbar icons, see “About Toolbar Icons and Drop-down Lists” on page 376.

The popup menu on the *current state chart* in the browser pane has the following options:

2D/3D

Enables you to view the selected chart in two- or three-dimensional format.

Type

Enables you to view the selected chart as a stacking area, pie, plot, or stacking bar chart.

The popup menu on the *history chart* in the browser pane has the following options:

Type

Enables you to view the selected chart as a stacking area, pie, plot, or stacking bar chart.

Settings

Enables you to set the following parameters for the selected chart:

Data Storage Duration

Opens the Enter Data Storage Duration dialog box, where you can enter the data storage duration for the chart in days, hours, minutes, and seconds (ddd:hh:mm:ss). For details, see “About the Enter Data Storage Duration Dialog Box” on page 426.

Current History Chart

Opens the Enter Current View Interval dialog box, where you can enter the interval for the chart in days, hours, minutes, and seconds (ddd:hh:mm:ss). For details, see “About the Enter Current View Interval Dialog Box” on page 425.

Zoom Interval

Opens the Enter Zoom Interval dialog box, where you enter date and time ranges for the chart. For details, see “About the Enter Zoom Interval Dialog Box” on page 426.

Types of Dialog Boxes

This section describes dialog boxes option throughout the Java GUI:

- ❑ **Add Annotations**
See “About the Add Annotation Dialog Box” on page 417.
- ❑ **Add New Group**
See “About the Add New Group Dialog Box” on page 417.
- ❑ **Add New URL Shortcut**
See “About the Add New URL Shortcut Dialog Box” on page 418.
- ❑ **Browser Pane Tab Properties Dialog Box**
See “About the Browser Pane Tab Properties Dialog Box” on page 419.
- ❑ **Browser Settings Dialog Box**
See “About the Browser Settings Dialog Box” on page 420.
- ❑ **Change Operator Password**
See “About the Change Operator Password Dialog Box” on page 421.
- ❑ **Customize Message Browser Columns**
See “About the Customize Message Browser Columns Dialog Box” on page 422.
- ❑ **Embedded Web Browser Settings**
See “About the Embedded Web Browser Settings Dialog Box” on page 424.
- ❑ **Enter Current View Interval**
See “About the Enter Current View Interval Dialog Box” on page 425.
- ❑ **Enter Data Storage Duration**
See “About the Enter Data Storage Duration Dialog Box” on page 426.

- ❑ **Enter Zoom Interval**
See “About the Enter Zoom Interval Dialog Box” on page 426.
- ❑ **Filter Messages**
See “About the Filter Messages Dialog Box” on page 427.
- ❑ **Find**
See “About the Find Dialog Box” on page 434.
- ❑ **Message Properties**
See “About the Message Properties Dialog Box” on page 438.
- ❑ **Modify Annotation**
See “About the Modify Annotation Dialog Box” on page 445.
- ❑ **Modify Group**
See “About the Modify Group Dialog Box” on page 446.
- ❑ **Modify Message Attributes**
See “About the Modify Message Attributes Dialog Box” on page 446.
- ❑ **Modify Shortcut**
See “About the Modify Shortcut Dialog Box” on page 448.
- ❑ **Modify URL Shortcut**
See “About the Modify URL Shortcut Dialog Box” on page 449.
- ❑ **Preferences**
See “About the Preferences Dialog Box” on page 450.
- ❑ **Rename Browser Settings**
See “About the Rename Browser Settings Dialog Box” on page 458.
- ❑ **Save Browser Filter Settings**
See “About the Save Browser Filter Settings Dialog Box” on page 458.
- ❑ **Send Message to Operators**
See “About the Send Message to Operator(s) Dialog Box” on page 459.

- ❑ **Service Properties**
See “About the Service Properties Dialog Box” on page 460.
- ❑ **Service Views**
See “About the Service Views Dialog Box” on page 463.
- ❑ **Watermark Advanced Settings**
See “About the Watermark Advanced Settings Dialog Box” on page 464.
- ❑ **Web Browser Properties**
See “About the Web Browser Properties Dialog Box” on page 466.
- ❑ **Workspace Properties**
See “About the Workspace Properties Dialog Box” on page 467.

NOTE

If Service Navigator is installed, the Service Properties dialog box is available in OVO. For details, see “About the Service Properties Dialog Box” on page 460.

About the Add Annotation Dialog Box

The Add Annotation dialog box opens when you click [Add New Annotation] in Annotations tab of the Message Properties dialog box. From the Add Annotation dialog box, you can enter text for a new annotation. For information about the Message Properties dialog box, see “About the Message Properties Dialog Box” on page 438.

The Add Annotation dialog box contains the following fields options:

[OK]

Saves the new annotation.

[Cancel]

Closes the dialog box without saving the new annotation.

About the Add New Group Dialog Box

The Add New Group dialog box opens when you right-click the shortcut bar, then select Add New Group from the popup menu. For details, see “To Add a Shortcut Group” on page 266.

The Add New Group dialog box contains the following options:

Enter Label for New Group

Label for the new shortcut group.

[OK]

Adds the new shortcut group and closes the dialog box.

[Cancel]

Closes the dialog box without adding the new shortcut group.

About the Add New URL Shortcut Dialog Box

The Add New URL Shortcut dialog box opens when you right-click a shortcut group in the shortcut bar, then select Add New URL Shortcut from the popup menu. For details, see “To Add a New Shortcut” on page 265.

The Add New URL Shortcut dialog box contains the following options:

ID

System-generated ID for the new shortcut.

URL

Enables you to add the location of the URL shortcut. You can use message-related variables in this field. For descriptions of message-related variables, see “About Message-related Variables” on page 486.

Label

Enables you to add a label for the new shortcut.

[OK]

Adds the new shortcut and closes the dialog box.

[Cancel]

Closes the dialog box without adding a new shortcut.

About the Browser Pane Tab Properties Dialog Box

The Browser Pane Tab Properties dialog box opens when you right-click a tab in the browser pane, then select Properties from the popup menu. For details, see “About the Browser Pane: Browser Tab Menu” on page 405.

The Browser Pane Tab Properties dialog box contains the following options:

Label

Label for the selected tab in the browser pane.

Description

Description of the selected tab in the browser pane.

[OK]

Saves changes and closes the dialog box.

[Cancel]

Closes the dialog box without saving changes.

About the Browser Settings Dialog Box

The Browser Settings dialog box opens when you click [Use Saved Settings...] from the Filter Messages dialog box, or when you select Actions: Filtering -> Saved Settings... from the main menu. For details, see “About the Filter Messages Dialog Box” on page 427.

The Browser Settings dialog box contains the following options:

Type

Indicates one of two types of filters:

Global

Filter defined by the administrator.

Personal

Filter defined by the current operator.

Name

Name of the existing filter.

[Rename]

Saves changes to a new filter. Opens the Rename Browser Settings dialog box, where you enter the name for the new filter. For details, see “About the Rename Browser Settings Dialog Box” on page 458.

[Delete]

Deletes the existing filter.

[OK]

Saves changes and closes the dialog box.

[Apply]

Saves changes but keeps the dialog box open. This button is always disabled if the Browser Settings dialog box is opened from the Filter Messages dialog box rather than the menu bar.

[Close]

Closes the dialog box without saving changes.

About the Change Operator Password Dialog Box

The Change Operator Password dialog box opens when you select the File: Change Password from the menu bar.

The Change Operator Password dialog box contains the following options:

User Name

Your current OVO operator password.

Old Password

Your current OVO operator password.

New Password

Password you want to use in the future.

Confirm New Password

New password (re-enter to confirm).

[OK]

Saves changes and closes the dialog box.

[Cancel]

Closes the dialog box without saving changes.

About the Customize Message Browser Columns Dialog Box

The Customize Message Browser Columns dialog box opens when you select `View: Customize Message Browser Columns...` from the menu bar, or when you select the browser to customize, and then select `Customize Message Browser Columns...` from the popup menu. The Customize Message Browser Columns dialog box enables you to show or hide message browser columns, and change their labels. The changes you make in this dialog box affect what you see in the message browser as well as in the Message Properties dialog box.

NOTE

For more information about message attributes in general, see “About Message Fields” on page 475.

For descriptions of options in the Message Properties dialog box, see “About the Message Properties Dialog Box” on page 438.

The Customize Message Browser Columns dialog box contains the following tabs:

General

For details, see “About the Customize Message Browser Columns: General Tab” on page 423.

Custom

For details, see “About the Customize Message Browser Columns: Custom Tab” on page 423.

About the Customize Message Browser Columns: Global Options

Every tab on the Customize Message Browser Columns dialog box contains the following buttons.

[OK]

Saves changes and closes the dialog box.

[Cancel]

Closes the dialog box without saving changes.

About the Customize Message Browser Columns: General Tab

The General tab of Customize Message Browser Columns dialog box enables you to control which fields are available in the message browser. If a column is checked, it is available in the message browser. If you want, you can change the column labels. For descriptions of options in this tab, see “About Message Fields” on page 475.

About the Customize Message Browser Columns: Custom Tab

The Custom tab of Customize Message Browser Columns dialog box has the following options:

Available Custom Message Attributes

Enables you to control which fields of available custom message attributes (defined in server-side templates) are available in the message browser. If you want, you can change the column labels.

Predicted Custom Message Attributes

Displays predicted custom attributes entered in New Predicted Custom Message Attributes.

New Predicted Custom Message Attributes

Adds new predicted custom message attribute.

ID

Text input field for attribute ID.

LABEL

Text input field for attribute label.

[Add]

Adds new predicted custom attribute to Predicted Custom Message Attributes.

About the Embedded Web Browser Settings Dialog Box

The Embedded Web Browser Settings dialog box opens when you click [Embedded Web Browser Settings...] from the Web Browser tab on the Preferences dialog box. For details, see “About the Preferences: Web Browser Tab” on page 453.

The Browser Settings dialog box contains the following options:

Use Proxy Server

If selected, a proxy server is used to access the Java GUI remotely.

Address

Input field for the domain name or IP address of the proxy server.

Port

Port number for the proxy server.

Use Advanced Proxy Settings

Proxy Address to Use Input fields for the domain name or IP address of three types of servers:

- HTTP
- Secure
- FTP

Port

Input fields for the port numbers of three types of servers:

- HTTP
- Secure
- FTP

Use Proxy Authentication

If selected, the proxy server requires authentication using the following user name and password:

User name

User name for the proxy authentication.

Password

Password for the proxy authentication.

[OK]

Saves changes and closes the dialog box.

[Cancel]

Closes the dialog box without saving changes.

About the Enter Current View Interval Dialog Box

The Enter Current View Interval dialog box opens when you select the **Settings: Current History Chart** from the popup menu on a history chart in the workspace pane. For details, see “About the Workspace Pane: Charts Menu” on page 398.

The Enter Current View Interval dialog box contains the following options:

Interval

Time interval you want to use for the current view of the chart. Enter days, hours, minutes, and seconds (ddd:hh:mm:ss).

[OK]

Saves changes and closes the dialog box.

[Cancel]

Closes the dialog box without saving changes.

About the Enter Data Storage Duration Dialog Box

The Enter Data Storage Duration dialog box opens when you select the Settings -> Data Storage Duration from the popup menu on a history chart in the workspace pane. For details, see “About the Workspace Pane: Charts Menu” on page 398.

The Enter Data Storage Duration dialog box contains the following options:

Duration

Data storage duration you want to use for the chart.
Enter days, hours, minutes, and seconds
(ddd:hh:mm:ss).

[OK]

Saves changes and closes the dialog box.

[Cancel]

Closes the dialog box without saving changes.

About the Enter Zoom Interval Dialog Box

The Enter Zoom Interval dialog box opens when you select the Settings -> Zoom Interval from the popup menu on a history chart in the workspace pane. For details, see “About the Workspace Pane: Charts Menu” on page 398.

The Enter Zoom Interval dialog box contains the following options:

From

Beginning time (hh:mm:ss) and date (mm/dd/yyyy) for the chart.

To

Ending time (hh:mm:ss) and date (mm/dd/yyyy) for the chart.

[OK]

Saves changes and closes the dialog box.

[Cancel]

Closes the dialog box without saving changes.

About the Filter Messages Dialog Box

The `Filter Messages` dialog box enables you to create, modify, and re-use filtered message browsers in the workspace and browser panes.

The `Filter Messages` dialog box contains the following tabs:

❑ **General**

For details, see “About the Filter Messages: General Tab” on page 429.

❑ **Symbols and Object**

For details, see “About the Filter Messages: Symbols and Objects Tab” on page 431.

❑ **Pending Details**

For details, see “About the Filter Messages: Pending Details Tab” on page 432.

❑ **Filter Summary**

For details, see “About the Filter Messages: Filter Summary Tab” on page 433.

NOTE

Every tab on the `Filter Messages` dialog box shares a number of options. For details, see “About the Filter Messages Dialog Box: Global Options” on page 428.

To find out how to access the `Filter Messages` dialog box, see the following procedures:

- ❑ “To View Active Messages” on page 206
- ❑ “To View History Messages” on page 207
- ❑ “To View Pending Messages” on page 208
- ❑ “To Save the Browser Filter Settings” on page 276

About the Filter Messages Dialog Box: Global Options

Every tab on the `Filter Messages` dialog box shares the following options:

`Filter Name`

Name you want to appear in the message browser window, on the browser pane tab, or in the `Filter Settings` area of the object pane and shortcut bar.

[OK]

Saves changes and closes the dialog box.

[Apply]

Saves changes but keeps the dialog box open.

[Reset]

Clears the contents of the dialog box.

[Close]

Closes the dialog box without saving changes.

[Save...]

Saves changes to a new filter. Opens the `Save Browser Filter Settings` dialog box, where you enter the name for the new filter. For details, see “About the `Save Browser Filter Settings` Dialog Box” on page 458.

[Use Saved Settings]

Accesses filter options from an existing filter. Opens the `Browser Settings` dialog box, where you can select an existing filter. For details, see “About the `Browser Settings` Dialog Box” on page 420.

NOTE

If you have already saved filters in the `Personal Filter Settings` area of the object pane, then open the `Filter Messages` dialog box from a popup menu in that area of the object pane, the [OK], [Apply], and [Use Saved Settings] buttons are grayed out.

About the Filter Messages: General Tab

The General tab on the Filter Messages dialog box has the following options:

With Time

Displays only messages received within a certain time frame. You can specify an absolute or a relative value.

Absolute Time

Beginning and ending time
(hh:mm:ss) and date (mm/dd/yy).

Relative Time

Defined with plus (+) or minus (-) characters in combination with *d* for days, *h* for hours, and *m* for minutes. For example, *-1d* means “yesterday,” *+15m* means “in 15 minutes,” and *0d* means “now.”

NOTE

If the OVO Java GUI is running on a system with a timezone setting different from the setting on the OVO management server, the timestamps in the messages displayed in the Java GUI are taken from the local system (the system where Java GUI is running on) and not from the OVO management server.

With Own States

Active message filters only. Displays messages owned by selected parties.

You can select any combination of these own states:

- Unowned
- Owned by me
- Owned by other

Selected Messages

Active message filters only. Displays only messages selected in the message browser. This checkbox is *not* available if you opened the dialog box through Actions: Filtering in the menu bar.

Unmatched Messages

Displays *only* messages that have the unmatched flag set. These messages *do not* conform to any of the configured message conditions.

With Severity

Displays messages with a selected severity level. You can select any combination of severity level:

- Unknown
- Normal
- Warning
- Minor
- Major
- Critical

With Message Text Pattern

Displays only messages that match a specified text pattern.

NOTE

If you use control characters, such as <, >, [, and] when specifying a filter pattern in the With Message Text Pattern field, the following error message is displayed:

```
"Syntax error in pattern definition  
"[message". (OpC20-235)"
```

To prevent this from happening, enter a backslash (\) into the message filter.

About the Filter Messages: Symbols and Objects Tab

The Symbols and Objects tab on the Filter Messages dialog box has the following options:

With Symbols and Objects

Displays symbols and objects chosen from the message browser or the object pane. Select this checkbox before adding any symbols or objects.

The first combination box includes the following options. The second combination box includes any custom message attributes that are available.

- Node
- Application
- Msg Group
- Object
- Service
- CMA

[Get Selected Symbols]

Displays the type, name, and label of symbols selected in the object pane.

[Delete]

Deletes the type, name, and label selected under Type, Name, and Label.

[Add]

Adds the type selected in the combination box and the name entered in the text field.

About the Filter Messages: Pending Details Tab

The Pending Details tab on the Filter Messages dialog box applies to pending message filters only. To find out how to access the Filter Messages dialog box, see “To View Pending Messages” on page 208.

The Pending Details tab has the following options:

Buffered Messages with Expired Unbuffer Time

Displays buffered messages with an expired buffer time.

With Unbuffer Time

Displays only messages received within a certain time frame. You can specify an absolute or a relative value.

Absolute Time

Beginning and ending time
(hh:mm:ss) and date (mm/dd/yy).

Relative Time

Defined with plus (+) or minus (-) characters in combination with d for days, h for hours, and m for minutes. For example, -1d means “yesterday,” +15m means “in 15 minutes,” and 0d means “now.”

About the Filter Messages: Filter Summary Tab

The `Filter Summary` tab provides you with a summary of all parameters you have selected in the following `Filter Messages` dialog box tabs:

❑ **General**

For details, see “About the Filter Messages: General Tab” on page 429.

❑ **Symbols and Objects**

For details, see “About the Filter Messages: Symbols and Objects Tab” on page 431.

❑ **Pending Details** (pending message filters only)

For details, see “About the Filter Messages: Pending Details Tab” on page 432.

About the Find Dialog Box

The Find dialog box opens when you select `Edit: Find...` from the menu bar. The Find dialog box enables you to find a specific item in the object pane.

The Find dialog box contains the following areas:

- ❑ **Search Buttons**

For details, see “About the Find: Search Buttons” on page 435.

- ❑ **Basic Search Options**

For details, see “About the Find: Basic Search Options” on page 436.

- ❑ **Advanced Search Options**

For details, see “About the Find: Advanced Search Options” on page 437.

For an overview of the search function, see “Searching the Object Pane” on page 104. To find out how to use the search function, see “To Search the Object Pane” on page 202.

About the Find: Search Buttons

The Find dialog box contains the following buttons:

[Find Next]

Searches for the keywords you entered or selected in the Find What field or selection list. In both the basic and the advanced search, the search begins at the top of the object tree, rather than from the selected item. For details, see “About the Find: Basic Search Options” on page 436 and “About the Find: Advanced Search Options” on page 437.

[Cancel]

Closes the dialog box without saving changes.

[Advanced>>]

Opens the advanced search area of the dialog box. For advanced search options, see “About the Find: Advanced Search Options” on page 437.

[Advanced<<]

Closes the advanced search area of the dialog box. For basic search options, see “About the Find: Basic Search Options” on page 436.

About the Find: Basic Search Options

NOTE

In the Find dialog box, the search begins at the top of the object tree, rather than from the selected item. If no matches are found, a warning dialog box with the following message appears: Search string not found. If matches are found, the search continues each time you click [Find Next]. When the search reaches the bottom of the object tree with no more matching items, a dialog box with the following message appears: Finished searching.

The basic search area of the Find dialog box has the following options:

Find What

Enables you to enter or select keywords for your search.

Match Whole Words Only

If checked, searches only for items that exactly match the keywords you enter. For example, a search for the whole word abc would ignore the application ab.

Match Case

If checked, searches only for items that are capitalized exactly as you have capitalized your keywords. For example, as search for the server abc.hp.com would ignore a node named Abc.

About the Find: Advanced Search Options

NOTE

In the Find dialog box, the search begins at the top of the object tree, rather than from the selected item. If no matches are found, a warning dialog box with the following message appears: Search string not found. If matches are found, the search continues each time you click [Find Next]. When the search reaches the bottom of the object tree with no more matching items, a dialog box with the following message appears: Finished searching.

The advanced search area of the Find dialog box has the following checkboxes:

Nodes

If checked, searches nodes in the object pane.

Message Groups

If checked, searches message groups in the object pane.

Applications

If checked, searches applications in the object pane.

Services

Available only if Service Navigator is installed. If checked, searches services in the object pane.

Filter Settings

If checked, searches filter settings in the object pane.

URL Shortcuts

If checked, searches URL shortcuts in the object pane.

You can select any combination of these options.

About the Message Properties Dialog Box

The Message Properties dialog box opens when you right-click and message and select Properties from the popup menu. This dialog box contains the full details of a message.

NOTE

URLs are displayed as hyperlinks in the message, instruction and annotation text items of the Message Properties dialog box.

All URL texts must start with "http://" to be displayed as hyperlinks.

The Message Properties dialog box contains the following tabs:

❑ **General**

For details, see “About the Message Properties: General Tab” on page 441.

❑ **Message Text**

For details, see “About the Message Properties: Message Text Tab” on page 441.

❑ **Original Message**

For details, see “About the Message Properties: Original Message Tab” on page 441.

❑ **Actions**

For details, see “About the Message Properties: Actions Tab” on page 442.

❑ **Escalations**

For details, see “About the Message Properties: Escalations Tab” on page 443.

❑ **Instructions**

For details, see “About the Message Properties: Instructions Tab” on page 444.

❑ **Annotations**

For details, see “About the Message Properties: Annotations Tab” on page 444.

❑ **Custom Attributes**

For details, see “About the Message Properties: Custom Attributes Tab” on page 445.

❑ **Mapped Services**

For details, see “About the Mapped Services Tab” on page 445.

NOTE

Every tab in the Message Properties dialog box shares a number of fields and buttons. For details, see “About the Message Properties: Global Options” on page 440.

For an overview of the Message Properties dialog box, see the following sections:

- ❑ “About Messages” on page 68
- ❑ “Examining Message Attributes” on page 118
- ❑ “Modifying Message Attributes” on page 119

About the Message Properties: Global Options

Every tab in the Message Properties dialog box has the following *fields*:

Severity

Indicates the severity of the message:

- Unknown
- Normal
- Warning
- Minor
- Major
- Critical

Message Text

First few words of the message.

Every tab in the Message Properties dialog box has the following *buttons*:

[Close]

Closes the dialog box without saving changes.

[Print]

Prints the contents of the selected message.

[Acknowledge]

Acknowledges the selected message.

About the Message Properties: General Tab

The General tab of the Message Properties dialog box contains fields displayed in the message browser. For descriptions of options in this tab, see “About Message Fields” on page 475.

About the Message Properties: Message Text Tab

The Message Text tab of the Message Properties dialog box contains the *current* text of the message. You can modify this text in the Modify Message Attributes dialog box, as needed. For details, see “About the Modify Message Attributes Dialog Box” on page 446.

About the Message Properties: Original Message Tab

The Original Message tab of the Message Properties dialog box contains the *original* text of the message, which is archived for reference purposes.

About the Message Properties: Actions Tab

The Actions tab of the Message Properties dialog box shows the automatic and operator-initiated actions configured for a message, and where the action starts. Automatic annotations and acknowledgments are indicated, as are external notification and trouble-ticket configurations.

The Actions tab includes the following fields and buttons:

Type

Type of action (for example, Automatic, No Action, or Trouble Ticket).

Status

Status of the action (for example, Successful or No).

Node

On which node the action is performed.

Command

Literal command used to perform the action.

Anno.

Whether the message associated with the action has an annotation (for example, Yes or No).

Ackn.

Whether the message associated with the action has been acknowledged (for example, Yes or No).

Operator-initiated Action

[Perform]

Starts operator-initiated action associated with selected message.

[Stop]

Stops operator-initiated action associated with selected message.

Automatic Action

[Rerun]

Restarts automatic action associated with selected message.

[Stop]

Stops automatic action associated with selected message.

Notification

Displays the names of notifications services used for this message (for example, modem, beeper, flashing light, and so on).

About the Message Properties: Escalations Tab

The Escalations tab of the Message Properties dialog box shows messages that have been sent to another OVO management server where expert knowledge is available. If a message owned or marked on one management server is escalated to a second server, it is not initially owned on the second server. It remains owned or marked on the first server, even if ownership is assumed on the second server. However, if the message is acknowledged on the second server, it is also acknowledged on the first server. In both cases it is moved to the history database.

The Escalations tab includes the following fields:

Escalated to

Whether the message was sent from another server to this server, or vice versa.

by

Which operator escalated the message.

at

At what time the message was escalated.

About the Message Properties: Instructions Tab

The Instructions tab of the Message Properties dialog box shows directions from the administrator to help you resolve the problem. Most messages that are generated by OVO and displayed in the message browser have instructions available on request.

About the Message Properties: Annotations Tab

The Annotations tab of the Message Properties dialog box enables you to annotate the message. From the tab, you can add a new annotation, modify an existing annotation, or delete the current annotation.

The Annotations tab includes the following fields and buttons:

Annotation

Number of the annotation (for example, 1 of 2). Clicking the up arrow moves you to the next annotation. Clicking the down arrow moves you to the previous annotation.

Author

Which operator wrote the current annotation.

Date/Time

When the current annotation was written.

[Add New Annotation]

Accesses the Add Annotation dialog box, where you can enter a new annotation. For details, see “About the Add Annotation Dialog Box” on page 417.

[Modify]

Accesses the Modify Annotation dialog box, where you can edit the current annotation. For details, see “About the Modify Group Dialog Box” on page 446.

[Delete]

Deletes the current annotation.

About the Message Properties: Custom Attributes Tab

The Custom Attributes tab of the Message Properties dialog box displays available custom message attributes (defined in server-side templates) for the selected message. For more information about custom message attributes, see “About Custom Message Attributes” on page 121.

About the Mapped Services Tab

The Mapped Services tab of the Message Properties dialog box displays a list of the services the selected message targets. Note that only the services that are affected directly are listed, not those that are affected indirectly through status propagation.

Service Label

Label of the service as displayed in the object pane.

Service Name

Name of the service as defined by the OVO administrator.

This tab is only available if the OVO administrator uses Service Configuration for Service Navigator to configure Service Navigator.

About the Modify Annotation Dialog Box

The Modify Annotation dialog box opens when you select [Modify] from the Annotation tab of the Message Properties dialog box. From the Modify Annotation dialog box, you can edit the current annotation. For information about the Message Properties dialog box, see “About the Message Properties Dialog Box” on page 438.

The Modify Annotation dialog box contains the following fields and buttons:

[OK]

Saves the edited annotation.

[Cancel]

Closes the dialog box without saving the edited annotation.

About the Modify Group Dialog Box

The `Modify Group` dialog box opens when you select `Modify Current Group` from a shortcut group popup menu. From the `Modify Group` dialog box, you can edit the current label for the shortcut group.

The `Modify Group` dialog box contains the following fields and buttons:

Enter Label

Name that appears on the shortcut group in the shortcut bar.

[OK]

Saves the edited name.

[Cancel]

Closes the dialog box without saving the edited name.

About the Modify Message Attributes Dialog Box

The `Modify Message Attributes` dialog box opens when you right-click a message, then select `Modify` from the popup menu. The `Modify Message Attributes` dialog box enables you to modify the severity and the text of a message. For details, see “`Modifying Message Attributes`” on page 119.

The `Modify Message Attributes` dialog box contains following options:

Node

Node associated with the message.

Application

Application associated with the message.

Message No.

Number associated with the message.

Time Received on Mgmt. Server

Time the message was received on the management server.

Severity

Enables you to choose one of the following severities for the message:

- Unchanged
- Unknown
- Normal
- Warning
- Minor
- Major
- Critical

Message Text

Enables you to edit the text of the message.

[OK]

Saves your changes to the message attributes.

[Cancel]

Closes the dialog box without changing the shortcut.

About the Modify Shortcut Dialog Box

The `Modify Shortcut` dialog box opens when you right-click a shortcut that is *not* in the `URL Shortcuts` group of the shortcut bar, then select `Modify Shortcut` from the popup menu. For details, see “To Modify a Shortcut” on page 265.

The `Modify Shortcut` dialog box contains the following options:

ID	System-generated ID for the new shortcut.
Label	Enables you to edit the label for the shortcut.
[OK]	Changes the shortcut and closes the dialog box.
[Cancel]	Closes the dialog box without changing the shortcut.

About the Modify URL Shortcut Dialog Box

The `Modify URL Shortcut` dialog box opens when you right-click a shortcut in the `URL Shortcuts` group of the shortcut bar, then select `Modify URL Shortcut` from the popup menu. For details, see “To Modify a Shortcut” on page 265.

The `Modify URL Shortcut` dialog box contains the following options:

ID	System-generated ID for the new shortcut.
URL	Enables you to edit the location of the URL shortcut.
Label	Enables you to edit the label for the shortcut.
[OK]	Changes the shortcut and closes the dialog box.
[Cancel]	Closes the dialog box without changing the shortcut.

About the Preferences Dialog Box

The Preferences dialog box opens when you select `Edit : Preferences . . .` from the menu bar. The Preferences dialog box enables you to customize your Java GUI.

The Preferences dialog box contains the following tabs:

❑ **General**

For details, see “About the Preferences: General Tab” on page 451.

For an image of the General tab, see Figure 1-74 on page 178.

❑ **Web Browser**

For details, see “About the Preferences: Web Browser Tab” on page 453.

For an image of the Web Browser tab, see Figure 1-25 on page 74

❑ **Events**

For details, see “About the Preferences: Events Tab” on page 454.

❑ **Services**

For details, see “About the Preferences: Services Tab” on page 455.

To find out how to use the Preferences dialog box, see the following procedures:

- ❑ “To Customize the Size of Shortcut Bar Icons” on page 267
- ❑ “To Change Your Integrated Web Browser” on page 270
- ❑ “Changing the Number of Messages Displayed” on page 285
- ❑ “To Customize the Refresh Interval” on page 258
- ❑ “To Customize the Look and Feel of the Java GUI” on page 260
- ❑ “To Customize the Color Preferences for the Message Browser” on page 287
- ❑ “To Configure Message Event Notification” on page 274
- ❑ “To Customize the General Font Size” on page 275

About the Preferences: General Tab

The General tab on the Preferences dialog box has the following options:

Refresh Interval

Determines how frequently (hh:mm:ss) the Java GUI refreshes automatically. Default is 00:00:30.

Display the Latest Messages

Determines how many active messages to display in the message browsers. Default is 50 messages.

Display the Latest History Messages

Determines how many history messages to display in the history message browsers. Default is 50 history messages.

Display

Hostname of the exported display where X applications will be launched.

Look and Feel

Enables you to choose between different interface styles:

- Metal
- Motif
- Windows (only on Windows)
- Hewlett Packard
- Aqua (only on Mac OS)

Colored Message Lines

Checkbox enables you to color the entire message row in the message browser with the severity color of that message.

Application Font Size

Allows you to specify the general font size (in points), which applies to all Java GUI components except for service graphs and maps. Default is 11.

Icon Size in Shortcut Bar

Enables you to control the size (in pixels) of icons.
Default is 32.

Help Page URL

Enables you to change the location of the OVO online documentation.

Tailored Set of Applications

Enables you to include only applications related to the selected message in the popup menus.

Filtered History Messages Time Period

Enables you to define time period in which the filtered history messages are loaded.

About the Preferences: Web Browser Tab

The Web Browser tab on the Preferences dialog box has the following options:

Always Use External Web Browser

On non-ActiveX tabs in the workspace pane, selects a web browser external to the Java GUI. On ActiveX tabs in the workspace pane, selects the Microsoft Internet Explorer Active control. Click [Browse] to locate the external web browser on your machine.

Automatic Selection of Internal Web Browser

Default. Selects the embedded web browser provided with the Java GUI

Custom Selection of Internal Web Browser

ActiveX Internet Explorer Control Selects a Microsoft Internet Explorer Active X control. You can only activate this control on an ActiveX tab in the workspace pane.

Embedded Web Browser Default. Selects the embedded web browser provided with the Java GUI.

[Embedded Web Browser Settings...]

Accesses the Embedded Web Browser Settings dialog box. For details, see “About the Embedded Web Browser Settings Dialog Box” on page 424.

About the Preferences: Events Tab

The Events tab on the Preferences dialog box has the following options:

Message Event Notification

Show Warning Dialog

Shows warning dialog box when a message event occurs.

Run Local Application

Starts a local application, which you can select by clicking [Browse...], then selecting the application installed on your computer.

When

Message Arrives

List box enables you to choose between the following:

- Unknown
- Normal
- Warning
- Minor
- Major
- Critical

Execute Only for First Message

Sends event notification only for the first message to arrive with a severity equal to or higher than that of the type selected.

Execute for Every New Message

Sends an event notification for every new message to arrive with a severity equal to or higher than that of the type selected.

About the Preferences: Services Tab

The Services tab on the Preferences dialog box has the following options:

Service Load on Demand

Use Service Load on Demand

Enables you to specify the number of levels in a service hierarchy that will be retrieved from the management server at Java GUI startup or upon every subsequent user's request. Specify the number of hierarchical levels to be retrieved in the text field provided. Because Service Navigator supports up to 256 hierarchical levels, this is the maximum number that you can specify. The default value is 1.

Automatic Service Reload

Enabled by default. Enables or disables an automatic reload of the service configuration when a change occurs on the management server.

Use Smart Cache Reload

Allows you to keep only currently used services in the Java GUI. Specify the time interval between two smart cache reload invocations in the text field provided. The default value is 30 minutes.

Show Notification Dialog on Configuration Change

Allows you to choose whether you want to be informed upon every configuration change by the notification dialog.

This is possible *only* if the Use Service Load on Demand is enabled. Otherwise, it is always enabled and *not* accessible (grayed out).

Graph Zoom Settings

Zoom

Allows you to specify the preferred zoom value for service graphs or maps from a predefined set of proportional zoom ratios expressed in percentages, from 5% to 100%.

Custom

Allows you to specify the horizontal and vertical zoom values for service graphs or maps from a predefined set of proportional zoom ratios expressed in percentages, from 5% to 100%.

Service Graph Font Size

Allows you to specify the font size (in points) in service graphs and maps. Default is 11.

Default Service Status Calculation

Use Administrator's Settings

Enables you to select the default service status calculation view specified by the OVO administrator. This calculation view is automatically applied for the object pane and for each service graph and map you open.

Use Custom Setting

Enables you to specify the default service status calculation view regardless of the value specified by the OVO administrator. This calculation view is automatically applied to the object pane and each service graph and map you open.

Show Watermark on Service Graphs and Maps

By selecting this checkbox you enable watermark(s) on service graphs and maps for the specified status calculation views.

This checkbox is automatically selected if you enable the watermark for at least one of the status calculation views in the Watermark Advanced Settings dialog; likewise, if you disable watermarks for both status calculation views in the Watermark Advanced Settings dialog, the Show Watermark on Service Graphs and Maps checkbox is automatically de-selected.

[Advanced]

Opens the Watermark Advanced Settings dialog box where you enable and customize watermarks on service graphs and maps for any of the status calculation views.

About the Rename Browser Settings Dialog Box

The Rename Browser Settings dialog box opens when you select [Rename] from the Browser Settings dialog box. For details, see “About the Browser Settings Dialog Box” on page 420.

The Rename Browser Settings dialog box contains the following attributes:

Name

New name for existing filter.

[OK]

Saves a copy of the existing filter under the new name entered in the Name field.

[Cancel]

Closes the dialog box without saving the new filter name.

About the Save Browser Filter Settings Dialog Box

The Save Browser Filter Settings dialog box opens when you click [Save . . .] from the Filter Messages dialog box. For details, see “About the Filter Messages Dialog Box” on page 427.

The Save Browser Filter Settings dialog box contains the following options:

Name

New name for existing filter.

[OK]

Saves a copy of the existing filter under the new name entered in the Name field.

[Cancel]

Closes the dialog box without saving the new filter name.

About the Send Message to Operator(s) Dialog Box

The Send Message to Operator(s) dialog box opens when you click File: Send Message to Operator(s)... from the menu bar.

The Send Message to Operator(s) dialog box contains the following options:

Message

A text box where you specify the text to be displayed to the users.

Send to All Operators

Selected by default. Sends the message to all currently logged on users.

Send to Selected Operators

Enables you to send the message to selected users only. Type the OVO user name of the operators to inform. If you want to inform more than one user, separate the user names with commas.

[OK]

Sends the message and closes the dialog box.

[Cancel]

Closes the dialog box without sending the message.

About the Service Properties Dialog Box

If HP OpenView Service Navigator is installed, you can open the Service Properties dialog box by selecting `Actions: Services -> Properties...` from the menu bar. Or you can right-click a service item in the shortcut bar or object pane, or a service graph in the workspace pane, then select `Properties` from the popup menu. For find out how to use this dialog box, see “To View Service Details” on page 324.

NOTE

The fields of the Service Properties dialog box may be empty if the OVO administrator has not defined any values in the service configuration file. For descriptions of standard OVO menu bar options, see “Types of Menu Bar Items” on page 357.

The Service Properties dialog box contains the following tabs:

❑ **General**

For details, see “About the Service Properties: General Tab” on page 461.

❑ **Actions**

For details, see “About the Service Properties: Actions Tab” on page 461.

❑ **Attributes**

For details, see “About the Service Properties: Attributes Tab” on page 461.

❑ **Status Info**

For details, see “About the Service Properties: Status Info Tab” on page 462.

❑ **Service Mappings**

For details, see “About the Service Properties: Service Mappings Tab” on page 462.

Every tab in the Service Properties dialog box has the following button:

[Close]

Closes the dialog box without saving changes.

About the Service Properties: General Tab

The **General** tab of **Services Properties** dialog box has the following options:

Severity

Current severity status of the service.

Name

Unique name of the service as defined in the administrator's service configuration file.

Label

Label of the service as displayed in the object pane.

Title

Title of the service's client window in the workspace pane.

Original ID

Identifier of the service assigned by HP OpenView Service Configuration for Service Navigator.

Description

Detailed description of the service.

Node Name

Node to which the service is attached. Service actions are then executed on the specified node.

About the Service Properties: Actions Tab

The **Actions** tab of **Services Properties** dialog box displays the actions assigned to the selected service or subservice.

About the Service Properties: Attributes Tab

The **Attributes** tab of **Services Properties** dialog box displays the attributes assigned for the service.

About the Service Properties: Status Info Tab

The Status Info tab of Services Properties dialog box has the following options:

Parameter

Parameter of service, for example number of subservices for the service.

Value

Current value of the parameter, for example 3.

Status Calculation Name

Currently enabled service status calculation view(s), for example, Overall.

Severity

Current service status for each enabled calculation view.

About the Service Properties: Service Mappings Tab

The Service Mappings tab of the Services Properties dialog box displays a list of service names in messages. If the “service name” attribute of a message matches one of the strings in this list or matches the service name on the General tab, the message targets this service. One message can target more than one service.

This tab is only available if the OVO administrator uses Service Configuration for Service Navigator to configure Service Navigator.

About the Service Views Dialog Box

If HP OpenView Service Navigator is installed, you can open the Service Views dialog box by selecting `Actions: Services -> Find in Service Views...` from the menu bar. Or you can right-click a service item in the shortcut bar or object pane, or a service graph in the workspace pane, then select `Find in Service Views...` from the popup menu. For find out how to use this dialog box, see “Finding a Service in Multiple Service Hierarchies” on page 326.

NOTE

The Service Views dialog box is only relevant for you if your administrator uses HP OpenView Service Configuration for Service Navigator to configure services.

The Service Views dialog box has the following columns:

Service

Lists services with the same original ID. (The original ID is displayed in the title bar of the dialog box.) Each service is listed with its label and its name.

Root Service

Lists the root service of each service view that contains the identified service. Each root service is listed with its label and its name.

About the Watermark Advanced Settings Dialog Box

The `Watermark Advanced Settings` dialog box opens when you perform one of the following:

- ❑ Click the `[Advanced]` button in the `Services` tab of the `Edit->Preferences` dialog.
- ❑ Select the `Watermark Settings` option from the `Service Status Calculation` popup menu. Right-click the area in the bottom right corner of the service graph or map to access the menu.

The `Watermark Advanced Settings` dialog box contains the following options:

Enable

By selecting this checkbox you enable watermarks on service graphs or maps for the specified status calculation view. Select the status calculation view(s) for which you want to set the watermark from the drop-down list above the checkbox.

Settings

Text

A text box where you specify the text to be displayed in the service graph's or map's background. If you leave this text box empty, the name of the status calculation view for which the watermark is set is displayed instead. When you change the status calculation view's name on the OVO management server, you consequently also change the watermark text.

Font Size

Enables you to set the size of the text you specified to be displayed as a watermark. Valid values range between 1 and 128.

Intensity	Enables you to set the intensity of the watermark expressed in percentages, from 0% to 100%. You can set the intensity by entering a value in the text box provided or by using a slider control.
Angle	Enables you to set the display angle for the watermark expressed in degrees, from -90 to +90. You can set the angle by entering a value in the text box provided or by using a slider control.

The Watermark Advanced Settings dialog box contains the following buttons:

[OK]

Applies the settings and closes the dialog box.

[Preview]

Enables you to preview the settings in the service graph or map without applying them.

[Cancel]

Closes the dialog box without changing the settings.

About the Web Browser Properties Dialog Box

The Web Browser Properties dialog box opens when you right-click a web page in an embedded web browser in the workspace pane, then select Properties from the popup menu. The Web Browser Properties dialog box looks different, depending on the type of web browser you have configured (for example, embedded, Microsoft Internet Explorer, or Netscape Communicator). If you use Internet Explorer, the Internet Explorer web browser properties dialog box is used.

If you are using an embedded web browser, the Web Browser Properties dialog box contains the following options:

PageTitle

Title of the current web page.

Protocol

Type of transfer protocol (for example, HTTP) used.

Type

Type of source document (for example, HTML or JavaScript).

URL Address

Address of the document.

[OK]

Closes the dialog box.

About the Workspace Properties Dialog Box

The `Workspace Properties` dialog box opens when you right-click the bottom of the workspace pane, then select `Workspace Properties` from the popup menu. For details, see “Customizing Workspace Pane Workspaces” on page 268.

The `Workspace Properties` dialog box contains the following options:

Label

Enables you to enter the name for the workspace pane that appears on the workspace tab.

Description

Enables you to enter a short description of the workspace pane.

Is ActiveX Container

Whether the workspace is an ActiveX control. For an overview of ActiveX controls in the workspace pane, see “About Integrated Web Browsers” on page 74.

NOTE

This option is available on Windows systems only

Is AWT (Heavy Weight) Container

Switches the workspace pane from Swing to AWT when running applets in the embedded web browser. Using AWT prevents applets from running outside the embedded web browser.

NOTE

Switching on AWT can cause some side effects, such as flashing when moving between workspace panes.

[OK]

Adds changes and closes the dialog box.

[Cancel]

Closes the dialog box without saving changes.

About the Start Customized Application Wizard

The Start Customized Application wizard enables you to change the preconfigured startup attributes of an application (for example, parameters, username, and password), and specify the nodes on which you want to start the application.

NOTE

To find out how to use the Start Customized Application wizard, see “To Customize the Startup Attributes of an Application” on page 237.

The Start Customized Application wizard has the following buttons.

[<Back]

Moves to the previous step.

[Next>]

Moves to the next step.

[Finish]

Closes the wizard and starts the application.

[Cancel]

Closes the wizard without starting the application.

The Start Customized Application wizard contains three steps, each with its own options:

1. Step 1 of 3: Select an Application

Contains an application menu tree from which you choose the application you want to execute.

2. Step 2 of 3: Select the Nodes Where You Want to Run the Application

Contains the following fields:

Additional Nodes

Enables you to enter the name of any additional node, including nodes that do not appear in the object pane.

[Add to Selected]

Adds the node you entered in the Additional Node field to the node list combination box.

Selected Nodes

Enables you to select nodes from the object pane.

[Get Selections]

Adds the node you have highlighted in the object pane or message browser to the node list combination box.

[Delete]

Deletes any node that is highlighted in the node list combination box.

[Get Default]

Restores the current node selection to the node selected when the wizard was started.

3. Step 3 of 3: Specify Additional Information Needed to Run the Application

Contains the following fields:

Command

Enter the command.

Additional Parameters

Enter any additional parameters for the command.

User Name

By default, the user name is the configured user.

Password

If needed, enter the password for the user under which the application will be executed.

Presentation

Read-only field indicates how the application output will be displayed:

- No window
- Output
- Input/Output

About the Message Browser Headline

To provide you with additional information to help you solve problems, messages are characterized by attributes summarized in the message headline in the message browser.

NOTE

For an overview of the message browser, see “About the Message Browser” on page 65.

To find out how to investigate problems with the message browser, see “Investigating Problems with the Message Browser” on page 211.

To find out how to customize message browser columns, see “Changing the Layout of Browser Windows” on page 283 and “About the Customize Message Browser Columns Dialog Box” on page 422.

By default, the message browser headline contains the following elements:

Severity

Messages are color-coded to indicate how serious the problem is (see “Types of Message Attributes” on page 473).

Dup.

Displays the number of duplicates of the message that have been suppressed.

SUIAONE

Indicates whether help instructions, automatic actions, and operator-initiated actions exist for the message. For details, see “Types of Message Attributes” on page 473.

Time Received

Date and time the problem occurred.

Node

On which node the problem occurred.

About the Message Browser Headline

Application	With which application the message is associated.
MsgGrp	Major area within the managed environment (for example, the operating system) where the event occurred.
Object	With which object the message is associated (for example, disk or memory).
Message Text	Short description of the event that generated the message.

Types of Message Attributes

This section describes message attributes and flags:

❑ **Message Colors**

Color coding that indicates the severity of the problem described by the message. For details, see “About Message Colors” on page 474.

❑ **Message Fields**

Attributes summarized in the message headline in the message browser. For details, see “About Message Fields” on page 475.

❑ **Message Flags**

Information about help instructions, automatic actions, and operator-initiated actions that may be associated with the message. For details, see “About Message Flags” on page 480.

About Message Colors

To provide you with additional information to help you solve problems, messages are color coded to indicate the severity of the problem they describe. For example, the color coding could indicate that Normal and Warning messages have been generated. Warning means that a potential or an impending fault that could affect service has occurred.

You can configure OVO to color the entire line in the Message Browser, as opposed to just the Severity column, according to the severity of each message. To change the color preferences, select Preferences from the Edit menu and toggle the Colored Message Lines checkbox, as needed.



Critical (red). Service-affecting condition that requires immediate corrective action.



Major (orange). Relatively severe problem likely to impede the normal use of the object.



Minor (yellow). Problem of relatively low severity that should not directly impede normal use of the object.



Warning (cyan). Potential or impending service-affecting fault that should be diagnosed and corrected.



Normal (green). Expected condition (for example, a process starting or ending) or status information.



Unknown (blue). Severity level cannot be determined.

About Message Fields

To provide you with additional information to help you solve problems, messages are characterized by attributes summarized in the message headline in the message browser. These fields are also available in the Message Properties dialog box associated with a selected message.

NOTE

For an overview of the message browser, see “About the Message Browser” on page 65. For a detailed description of message flags, see “About Message Flags” on page 480.

To customize message fields, use the Customize Browser Columns dialog box. For details, see “Changing the Layout of Browser Windows” on page 283 and “About the Customize Message Browser Columns Dialog Box” on page 422.

NOTE

When copying one or more messages using `Ctrl+C` and `Ctrl+V` commands, message fields are separated with tabs.

This makes possible organising messages into Excel spreadsheets, where the each field of each message is a separate column in the row.

OVO messages contain the following fields:

Acknowledged By

Name of the operator who acknowledged the message. If the message has been acknowledged by an automatic or operator-initiated action, `OpC` appears in this field.

Default column label: `Acknowledged by`

Application

Name of the application related to the selected message.

Default column label: `Application`

Dup.

See No. of Duplicates.

Escalated By

Operator who initiated the escalation.

Default column label: Escalated By

Escalated To

Receiving management server.

Default column label: Escalated To

Flags

Flags associated with the message. For more information about message flags, see “About Message Flags” on page 480.

Default column label: SUIAONE

Forward Manager

Manager that passes data to be forwarded to other management servers.

Default column label: Not Available

Message Group

Message group to which the selected message belongs.

Default column label: MsgGrp

Message Key

Message key that is associated with the selected message.

Default column label: Message Key

Message No.

Unique identification number for the selected message. This number is useful when you want programming access using the open OVO APIs.

Default column label: Message No.

Message Text

Complete text of the selected message.

Default column label: Message Text

Message Type

Attribute used by OVO to divide a set of messages into more manageable subgroups. The message type is defined by the OVO administrator.

Default column label: *Message Type*

MsgGrp

See Message Group.

No. of Duplicates

Number of duplicate messages that have been suppressed.

Default column label: *Dup.*

Node

Managed node from which the selected message was issued. This can be the original node or a different one if the message conditions have been reformatted by the OVO administrator.

Default column label: *Node*

Object

Object that caused, detected, or was affected by the event.

Default column label: *Object*

Owned By

Current owner of the selected message.

Default column label: *Owned By*

Service Name

Name of the service(s) associated with the message.

Default column label: *Service Name*

Source

Part of an application from which the selected message came. For example, the source of a message could be a logfile name, console, SNMP trap, or threshold monitor.

Default column label: Source

SUIAONE

See Flags.

Time Acknowledged

Date and time the message was acknowledged. Once it is acknowledged, the message is moved from the active message browser to the filtered history message browser.

Default column label: Time Acknowledged

Time Created

Date and time the selected message was created on the managed node.

Default column label: Time Created

Time Escalated

Date and time the selected message was escalated.

Default column label: Time Escalated

Time Last Received

Date and time when the last duplicate message was received on the management server.

Default column label: Time Last Received.

Time Owned

Date and time the owner of the message took ownership of the selected message.

Default column label: Time Owned

Time Received

Date and time the selected message was received on the management server.

Default column label: Time Received

Time Unbuffered

Date and time the message will be unbuffered (that is, moved from the filtered pending messages browser to the active messages browser). This time is set by default to the start of the next period of defined service hours for the service to which the message relates. However, you can unbuffer messages manually at any time with the appropriate unbuffer menu option.

Default column label: Time Unbuffered

NOTE

If OVO Java GUI is running on a system with timezone setting different from the setting on the OVO management server, the timestamps in the messages displayed in the Java GUI are taken from the local system (the system where Java GUI is running on) and not from the OVO management server.

About Message Flags

Message flags provide you with information about help instructions, automatic actions, and operator-initiated actions that may be associated with messages.

NOTE

For a detailed description of message attributes, see “About Message Fields” on page 475.

OVO messages contain the following flags:

S	Owned:	
	-	Not owned by anyone.
	O	Owned by the user of the message browser.
	X	Owned by someone other than the user of the message browser.
U	N	Message is a notification message.
	Unmatched:	
	-	Not unmatched.
I	X	Unmatched. Does not match any of the filters defined for the message source.
	Instructions:	
A	-	No instructions are available.
	X	Instructions are available.
	Automatic action:	
	-	No automatic action is configured.
	R	Automatic action is running.
F	Automatic action has failed.	
S	Automatic action was successful.	

S	Operator-initiated action
-	No operator-initiated action is configured.
R	Operator-initiated action is running.
F	Operator-initiated action has failed.
S	Operator-initiated action was successful.
N	Annotations:
-	No annotations are available.
X	Annotation is available.
E	Escalations:
-	Not escalated.
E	Escalated to you.
T	Escalated by you.

Types of OVO Variables

This section describes the following message variables:

❑ Standard Variables

Variables that can be used in most broadcast and application text entry fields. For details, see “About Standard Variables” on page 482.

❑ Message-related Variables

Variables beginning with `OPC_MSG`. For details, see “About Message-related Variables” on page 486.

About Standard Variables

The following variables can only be used in applications started from the Java-based operator GUI.

`$OPC_CUSTOM[name]`

Returns the value of the custom message attribute name. For example, the `$OPC_CUSTOM[device]` variable could return the value `Lan`.

`$OPC_ENV(env variable)`

Returns the value of the environment variable for the user who has started OVO.

Sample output:

`PATH, NLS_LANG, EDITOR, SHELL, HOME, TERM.`

`$OPC_EXACT_SELECTED_NODE_LABELS`

Returns the labels of all nodes and node groups that are selected at the time the application is executed. The names are separated by spaces.

`$OPC_EXT_NODES`

Returns the node pattern of all external nodes that are selected at the time the application is executed. The names are separated by spaces.

`$OPC_GUI_CLIENT`

Executes the application or action on the client where the Java-based GUI is currently running. This variable is resolved differently, depending on whether the GUI client is running on a UNIX-based system with DNS or on a PC using MS WINS (Windows Internet Name Service). If you are using WINS, `$OPC_GUI_CLIENT` returns the WINS hostname.

`$OPC_GUI_CLIENT_WEB`

Starts a web browser on the client where the Java-based GUI is currently running. This variable is resolved differently depending on whether the GUI client is running on a UNIX-based system with DNS or on a PC using MS WINS (Windows Internet Name Service). If you are using WINS, `$OPC_GUI_CLIENT_WEB` returns the WINS hostname.

`$OPC_MGMTSV`

Returns the name of the current OVO management server.

Sample output:

```
richie.c.com
```

`$OPC_MSG_IDS`

Returns the message IDs (UUIDs) of the messages currently selected in one or more open message browsers. If the same message is selected in more than one browser, the duplicate selections are ignored. Only message IDs of the messages currently selected in the topmost browser are returned.

Sample output:

```
85432efa-ab4a-71d0-14d4-0f887a7c0000  
a9c730b8-ab4b-71d0-1148-0f887a7c0000
```

`$OPC_MSG_GEN_NODES`

Returns the names of all nodes from which currently selected messages were sent by OVO agents. The names are separated by spaces. The nodes need not be in the node bank. If the same message is selected in more than one of these browsers, the duplicate selections are ignored. Only nodes of the messages currently selected in the topmost browser are returned.

Sample output:

```
kernighan.c.com richie.c.com
```

`$OPC_MSG_NODES`

Returns the names of all nodes on which the events that generated currently selected messages took place. The names are separated by spaces. The nodes need not be in the node bank. If the same message is selected in more than one of these browsers, the duplicate selections is ignored. Only nodes of the messages currently selected in the topmost browser are returned.

Sample output:

```
kernighan.c.com richie.c.com
```

`$OPC_MSGIDS_ACT`

Returns the message IDs (UUIDs) of the messages currently selected in the Active/All and any OpenView message browsers. If the same message is selected in more than one of these browsers, the duplicate selections are ignored. Only message IDs of the messages currently selected in the topmost browser are returned.

Sample output:

```
85432efa-ab4a-71d0-14d4-0f887a7c0000  
a9c730b8-ab4b-71d0-1148-0f887a7c0000
```

`$OPC_MSGIDS_HIST`

Returns the message IDs (UUID) of the messages currently selected in the history message browser. Only Message IDs of the messages currently selected in the topmost browser are returned.

Sample output:

```
edd93828-a6aa-71d0-0360-0f887a7c0000  
ee72729a-a6aa-71d0-0360-0f887a7c0000
```

`$OPC_MSGIDS_PEND`

Returns the message IDs (UUID) of the messages currently selected in the pending messages browser. Only Message IDs of the messages currently selected in the topmost browser are returned.

Sample output:

```
edd95828-ac2a-71d0-0360-0f887a7c0000  
ee96729a-ada9-71d0-0360-0f887a7c0000
```

`$OPC_NODES`

Returns the names of all regular nodes that are selected at the time the application is executed. The names are separated by spaces. The nodes need not be in the node bank. Nodes can be selected directly in a submap of the IP Map.

Sample output:

```
kernighan.c.com richie.c.com
```

`$OPC_NODE_LABELS`

Returns the labels of all nodes in the node tree that are selected at the time the application is executed. The names are separated by spaces.

`$OPC_USER`

Returns the name of the OVO user who is currently logged in on the management server.

Sample output:

```
opc_admin
```

About Message-related Variables

This section describes message-related variables:

- ❑ “Parameters for Message-related Variables” on page 486
- ❑ “Examples of Message-related Variables” on page 496

Parameters for Message-related Variables

There are a few variables that return `TRUE` or `FALSE`, depending on the existence of a specific message attribute. For example, if an automatic action is defined, `TRUE` is returned. Otherwise `FALSE` is returned.

If an attribute is empty, an empty string is returned. If you use an attribute that does not exist, it is treated like part of a normal string, which means no evaluation happens and the string remains unchanged.

The data returned from variables is exactly the same type as that shown in the `Message Properties` dialog box.

The indexing for word extraction from strings and for access to specific annotations starts with 1, not with 0.

`$OPC_MSG.ACTIONS.AUTOMATIC`

Indicates whether or not an automatic action is defined.

Sample output:

`TRUE`

`$OPC_MSG.ACTIONS.AUTOMATIC.ACKNOWLEDGE`

If an automatic action has been configured to provide an acknowledgement for the selected message, and the actions have been successfully completed, this variable returns `yes`. Otherwise `no` is returned.

Sample output:

`yes`

`$OPC_MSG.ACTIONS.AUTOMATIC.ANNOTATION`

If this variable returns `yes`, an automatic action provides annotations for the selected message. Note, if the action fails, an annotation will always be written.

Sample output:

`yes`

`$OPC_MSG.ACTIONS.AUTOMATIC.COMMAND`

Returns the script or program, including its parameters, performed as an automatic action for the selected message.

Sample output:

`dist_del.sh 30 warning`

`$OPC_MSG.ACTIONS.AUTOMATIC.NODE`

Returns the node on which an automatic action has been performed for the selected message.

Sample output:

`kernighan.c.com`

`$OPC_MSG.ACTIONS.AUTOMATIC.STATUS`

Returns the current status of the message's automatic action. The variable can return `running`, `failed`, or `successful`.

Sample output:

`successful`

`$OPC_MSG.ACTIONS.OPERATOR`

Indicates whether or not an operator-initiated action is defined.

Sample output:

`TRUE`

`$OPC_MSG.ACTIONS.OPERATOR.ACKNOWLEDGE`

If an operator-initiated action has been configured to provide an acknowledgement for the selected message, and the actions have been successfully completed, this variable returns `yes`. Otherwise `no` is returned.

Sample output:

`yes`

`$OPC_MSG.ACTIONS.OPERATOR.ANNOTATION`

If this variable returns `yes`, an operator-initiated action provides annotations for the selected message. Note, if the action fails, an annotation will always be written.

Sample output:

`yes`

`$OPC_MSG.ACTIONS.OPERATOR.COMMAND`

Returns the script or program, including its parameters, performed as an operator-initiated action for the selected message.

Sample output:

`ps -ef`

`$OPC_MSG.ACTIONS.OPERATOR.COMMAND[n]`

Returns the *n*th parameter of the script or program, performed as an operator-initiated action for the selected message.

Sample output:

`-ef`

`$OPC_MSG.ACTIONS.OPERATOR.NODE`

Returns the node on which an operator-initiated action has been performed for the selected message.

Sample output:

`kernighan.c.com`

`$OPC_MSG.ACTIONS.OPERATOR.STATUS`

Returns the current status of the message's operator-initiated action. The variable can return running, failed, or successful.

Sample output:

successful

`$OPC_MSG.ACTIONS.TROUBLE_TICKET.ACKNOWLEDGE`

This variable can return the following values:

yes-The message was automatically acknowledged after having been forwarded to a trouble ticket system.

no-The message was not acknowledged after having been forwarded to a trouble ticket system.

Sample output:

yes

`$OPC_MSG.ACTIONS.TROUBLE_TICKET.STATUS`

This variable can return the following values:

yes-The message was forwarded to a trouble ticket system.

no-The message was not forwarded to a trouble ticket system.

Sample output:

yes

`$OPC_MSG.ANNOTATIONS`

Indicates whether or not annotations exist for a message. Returns TRUE if at least one annotation exists for a message. Otherwise FALSE is returned.

Sample output:

TRUE

`$OPC_MSG.ANNOTATIONS[n]`

Returns the *n*th annotation.

Sample output:

Performed Message Correlation;

Message Key Relation:

Message 59d06840-ac4f-71d5-1f67-0f887e320000
with condition id
fe00fa34-9e34-71d5-143e-0f887e320000 ackn'ed
0 messages.

`$OPC_MSG.APPLICATION`

Returns the name of the application related to the selected message.

Sample output:

/usr/bin/su(1) Switch User

`$OPC_MSG.ATTRIBUTES`

This variable can return the following values:

unmatched-The message did not match any message conditions.

log only-The message was not originally displayed in the message browser.

Sample output:

unmatched

`$OPC_MSG.CREATED`

Returns the date and time the message was created on the managed node.

Sample output:

09/18/01 18:08:08

`$OPC_MSG.DUPLICATES`

Returns the number of duplicate messages that have been suppressed.

Sample output:

17

`$OPC_MSG.ESCALATION.TO`

Returns the name of the receiving management server.

Sample output:

kernighan.c.com

`$OPC_MSG.ESCALATION.BY`

Returns the operator who initiated the escalation.

Sample output:

opc_op

`$OPC_MSG.ESCALATION.TIME`

Returns the date/time at which the escalation was done.

Sample output:

09/17/01 22:07:13

`$OPC_MSG.GROUP`

Returns the message group to which the selected message belongs.

Sample output:

Security

`$OPC_MSG.INSTRUCTIONS`

Returns the text of the instruction.

Sample output:

Available space on the device holding the / (root) filesystem is less than the configured threshold. This may lead to ...

`$OPC_MSG.LAST_RECEIVED`

Returns the date and time when the last duplicate message was received on the management server.

Sample output:

09/16/01 03:17:23

`$OPC_MSG.MSG_KEY`

Returns the message key that is associated with a message.

Sample output:

my_appl_down:kernighan.c.com

`$OPC_MSG.MSG_ID`

Returns the unique identification number for the selected message.

Sample output:

217362f4-ac4f-71d5-13f3-0f887e320000

`$OPC_MSG.NO_OF_ANNOTATIONS`

Returns the number of annotations of a message.

Sample output:

3

`$OPC_MSG.NODE`

Returns the managed node from which the selected message was issued.

Sample output:

kernighan.c.com

`$OPC_MSG.NODES_INCL_DUPS`

Returns the managed node from which the selected message was issued, including the duplicate node names for multiple messages from the same node.

`$OPC_MSG.OBJECT`

Returns the object which was affected by, detected, or caused the event.

Sample output:

CPU

`$OPC_MSG.ORIG_TEXT`

Returns the original text of the selected message.

Sample output:

SU 09/18 18:07 + 6 root-spooladm

`$OPC_MSG.ORIG_TEXT[n]`

Returns the *n*th word in the original text of the message.

Sample output:

the

`$OPC_MSG.OWNER`

Returns the owner of the selected message.

Sample output:

opc_op

`$OPC_MSG.RECEIVED`

Returns the date and time the message was received on the management server.

Sample output:

09/18/01 18:08:10

`$OPC_MSG.SERVICE`

Returns the service name that is associated with the message.

Sample output:

VP_SM:Agent:ServicesProcesses@@kernighan.c.com

`$OPC_MSG.SERVICE.MAPPED_SVC_COUNT`

Returns the number of service names in messages that are mapped to this message.

Sample output:

3

`$OPC_MSG.SERVICE.MAPPED_SVC [n]`

Returns the name of the *n*th service name in this message.

Sample output:

SAP:applsv01

`$OPC_MSG.SERVICE.MAPPED_SVCS`

Returns all service names in messages mapped by this message. The names are separated by spaces.

Sample output:

SAP:applsv01 SAP:applsv02

`$OPC_MSG.SEVERITY`

Returns the severity of the message. This can be Unknown, Normal, Warning, Minor, Major, or Critical.

Sample output:

Normal

`$OPC_MSG.SOURCE`

Returns the name of the application or component that generated the message.

Sample output:

Message:opcmsg(1|3)

`$OPC_MSG.TEXT`

Returns the complete text of the selected message.

Sample output:

The following configuration information was
successfully distributed:

Templates (OpC30-814)

`$OPC_MSG.TEXT[n]`

Returns the *n*th word in the text of the message text.

Sample output:

following

`$OPC_MSG.TIME_OWNED`

Returns the date and time when the message was
acknowledged.

Sample output:

09/18/01 18:11:10

`$OPC_MSG.TYPE`

Returns the message type of the message.

Sample output:

ECS

Examples of Message-related Variables

This section contains examples of messages-related variables and parameters you can use to perform daily tasks.

❑ Accessing Message Attributes

You can access all message attributes with the following variable:

`$OPC_MSG.ATTRIBUTES`

All you would need to do is add an attribute name.

For example, to get text of a message, you would use the following:

`$OPC_MSG.TEXT`

Also when working with attributes that represent strings, you can access a specific word.

For example, to get the fourth word in the text of a message, you would use the following:

`$OPC_MSG.TEXT [4]`

Annotations are an exception to this rule. In annotations, an index specifies the annotation that are returned.

For example, you would access the seventh annotation of the current selected messages with the following:

`$OPC_MSG.ANNOTATIONS [7]`

❑ Finding Duplicate Messages

If you need information about the number of message duplicates for an application, you would use the following:

`$OPC_MSG.DUPLICATES`

❑ Extracting Creation Time and Severity

If want to do some statistical calculations, you would specify the message creation time and the severity, as follows:

`$OPC_MSG.CREATED`

`$OPC_MSG.SEVERITY`

❑ **Extracting Message Text**

If you have defined a template condition that creates a message text with some status as the third word, and you would like to extract this status easily and forward it to an application called `evaluate_status`, you would use the following:

```
evaluate_status $OPC_MSG.TEXT[3].
```

❑ **Evaluating Action Attributes**

If you want to use and evaluate action attributes, you could write shell scripts that check for automatic and operator-initiated actions, and get more information about their status and if they are annotated:

```
script_name $OPC_MSG.ACTIONS.AUTOMATIC
```

```
script_name $OPC_MSG.ACTIONS.AUTOMATIC.STATUS
```

```
script_name $OPC_MSG.ACTIONS.AUTOMATIC.ANNOTATION
```

The first parameter would be `TRUE` if an automatic action was defined for the message. This script would be useful only if there are more attributes used afterwards, but not to check for every attribute if it is an empty string.

❑ **Accessing Annotations**

To access the second annotation of a selected message in an application, you would use the following:

```
$OPC_MSG.ANNOTATIONS[2]
```

About the itoopbrw File

OVO administrators can use the `itoopbrw` file to customize the attributes of the current message browser.

This section explains the following:

- ❑ **Syntax**

Exact syntax used in the `itoopbrw` file. For details, see “Syntax for the itoopbrw File” on page 499.

- ❑ **Parameters**

Descriptions of parameter used in the `itoopbrw` file. For details, see “Parameters for the itoopbrw File” on page 500.

CAUTION

This method should be used by experienced OVO administrators only.

Syntax for the itoopbrw File

The itoopbrw file uses the following syntax:

VERSION "VERSION STRING"

[ACTIVE

"<COLUMN_NAME>" <WIDTH> ["COLUMN_LABEL"]}

[SORT "<COLUMN_NAME>" ASCEND | DESCEND]

[WIN_WIDTH <WINW>]

[WIN_HEIGHT <WINH>]

[HISTORY

{"<COLUMN_NAME>" <WIDTH> ["COLUMN_LABEL"]}

[SORT "<COLUMN_NAME>" ASCEND | DESCEND]

[WIN_WIDTH <WINW>]

[WIN_HEIGHT <WINH>]

[PENDING

"<COLUMN_NAME>" <WIDTH> ["COLUMN_LABEL"]}

[SORT "<COLUMN_NAME>" ASCEND | DESCEND]

[WIN_WIDTH <WINW>]

[WIN_HEIGHT <WINH>]

[{NAME: "<NAME>"

"<COLUMN_NAME>" <WIDTH> ["COLUMN_LABEL"]}

[SORT "<COLUMN_NAME>" ASCEND | DESCEND]

[WIN_WIDTH <WINW>]

[WIN_HEIGHT <WINH>]

Parameters for the itoopbrw File

The itoopbrw file uses the following parameters:

ACTIVE

Values for the Active filter.

ASCEND

Direction of sorting: from beginning to end (top to bottom).

<COLUMN_NAME>

Message attribute/column ID key. Use the exact custom message attribute ID should for custom message attribute columns.

NOTE

Some of the following message attributes have more than one possible matching ID. This ensures compatibility with itoopbrw file syntax used in earlier versions of OVO.

Reserved words for general message attributes are:

Acknowledged By

Name of the operator who acknowledges the message.

Application | APPLICATION_COL

Name of the application related to the message.

Escalated By

Operator who initiates the escalation.

Escalated To

Management server receiving the escalation.

Flags		FLAGS_COL	Message flags associated with the message (SUIAONE). For more information about message flags, see “About Message Flags” on page 480.
Message Group		MSG_GRP_COL	Message group to which the message belongs.
Message Key			Message key that is associated with the message.
Message No.			Unique identification number (message ID) for the message. This number is useful when you want programming access using the open OVO APIs.
Message Text		MSG_TEXT_COL	Complete text of the message.
Message Type			Attribute used by OVO to divide a set of messages into more manageable subgroups. The message type is defined by the OVO administrator.
No. of Duplicates		DUPLICATED_COL	Number of duplicated messages.
Node		ODE_COL	Managed node from which the message is issued.
Object		OBJECT_COL	Object that is caused, detected, or affected by an event.

Owned By	Current owner of the message.
Service Name	Name of service associated with the message.
Severity SEVERITY_COL	Severity of the message.
Source	Part of an application from which the message comes. For example, the source of a message could be a logfile name, console, SNMP trap, or threshold monitor.
Time Acknowledged	Date and time the message is acknowledged.
Time Created	Date and time the message is created on the managed node.
Time Escalated	Date and time the message is escalated.
Time Last Received	Date and time when the last duplicate message is received on the management server.
Time Owned	Date and time the owner of the message takes ownership of the selected message.

Time Received | TIME_COL | DATE_COL

Date and time the selected message is received on the management server.

Time Unbuffered

Date and time the message will be unbuffered (that is, moved from the filtered pending messages browser to the active messages browser). This time is set by default to the start of the next period of defined service hours for the service to which the message relates.

DESCEND

Direction of sorting: from end to beginning (bottom to top).

HISTORY

Values for the History filter.

NAME

Keyword.

<NAME>

Name of the filter. Use backslashes (\) to escape quotation marks (\") and backslashes (\\).

PENDING

Values for the Pending filter.

SORT

Keyword identifying the sorting information for the specified column.

About the `ito_op` Startup Options

This section describes the startup options evaluated by the Java GUI when it is started with the `ito_op` startup script.

You can start the Java GUI with the `ito_op` script by entering the following:

```
/opt/OV/www/htdocs/ito_op/ito_op &
```

When the Java GUI is started, options are read from the environment first, then the command line options passed with the startup script are evaluated, and finally the content of the `itooopc` file is read.

Table B-2 shows the options evaluated by the Java GUI in the startup scripts:

Table B-2 Startup Script Options Evaluated by the Java GUI

Option	Format	Default	Description
<code>apisid</code>	<code><string></code>	<code>OV_JGUI_API</code>	Sets a session ID for the particular Java GUI instance at its startup.
<code>bbc.http:proxy</code>	<code><string></code>	""	Configures a proxy server for HTTPS-based communication.
<code>colored_message_lines</code>	<code>yes no</code>	<code>no</code>	Decides whether whole messages or just the severity column are colored in the message browser.
<code>def_browser</code>	<code><filename></code>	""	Path to the web browser on a local host.
<code>def_look_and_feel</code>	<code><string></code>	Windows: <code>com.sun.java .swing.plaf. motif.Motif LookAndFeel</code>	Defines the appearance of the Java GUI.

Table B-2 Startup Script Options Evaluated by the Java GUI (Continued)

Option	Format	Default	Description
display	<code><host.domain>: 0</code>	<code><localhost>: 0</code>	Hostname to which the display of the X application is exported.
initial_node	<code><string></code>	<code><localhost></code>	Hostname of the OVO management server to which the Java GUI will connect.
locale	<code><lang_territory></code>		Presets the locale name.
max_limited_messages	<code><int></code>	50	Maximum number of messages displayed in a browser.
nosec	true false	false	Starts the SSL Secure Java GUI in standard mode without SSL functionality.
passwd	<code><string></code>	""	Password of the OVO operator used for login.
refresh_interval	<code><int></code> (seconds)	30	Sequence of time after which the message browser will be refreshed.
server	<code><string></code>	<code><localhost></code>	Hostname of the OVO management server to which the Java GUI will connect.
title_suffix	<code><string></code>	""	Displays the string next to the title in the main window.
trace	true false	false	Enables the appearance of tracing messages in the terminal.

Table B-2 Startup Script Options Evaluated by the Java GUI (Continued)

Option	Format	Default	Description
user	<code><string></code>	""	OVO operator name used for login.

About the `itooopc` Resource File

The Java GUI resource file `itooopc` is used to store operator preferences.

The `itooopc` file is created or updated automatically in the home directory of the user who activated the Java GUI after each click on the [OK] button in the Preferences dialog.

Operator preference options are listed in the `itooopc` file. Each defined option must be listed in a separate line and followed by its parameter.

NOTE

The `itooopc` file should be edited by experienced administrators or operators only.

Table B-3 on page 507 describes the options that can be added in the `itooopc` file with their parameters.

Table B-3 **`itooopc` Options and Parameters**

Option	Format	Description
<code>apisid</code>	<code><string></code>	Sets a session ID for the particular Java GUI instance at its startup.
<code>bbc.http:proxy</code>	<code><string></code>	Configures a proxy server for HTTPS-based communication.
<code>colored_message_lines</code>	<code>on off true false yes no</code>	Enables you to color the entire message row in the message browser with the severity color of that message.
<code>def_help_url</code>	<code><url></code>	Path to the help pages on the management server.
<code>def_look_and_feel</code>	<code><look_and_feel></code>	Defines the appearance of Java GUI: Metal, Motif, or Windows.

Table B-3 itooprc Options and Parameters (Continued)

Option	Format	Description
default_browser	<path_to_browser>	Path to the web browser on a local host.
display	<hostname>	Hostname of the exported display where X applications will be launched.
ice_proxy	on off true false yes no	Determines whether a proxy server is used for the embedded web browser.
ice_proxy_address	<hostname/ip>	Domain name or IP address of the proxy server (embedded web browser).
ice_proxy_advanced	on off true false yes no	Determines whether advanced proxy settings are used for the embedded web browser.
ice_proxy_ftp	<hostname/ip>	Domain name of IP address of the FTP server (embedded web browser).
ice_proxy_ftp_port	<number>	Port number of the FTP server (embedded web browser).
ice_proxy_gopher	<hostname/ip>	Domain name of the IP address of the Gopher server (embedded web browser).
ice_proxy_gopher_port	<number>	Port number of the Gopher server (embedded web browser).
ice_proxy_http	<hostname/ip>	Domain name of the IP address of the HTTP server (embedded web browser).

Table B-3 itooprc Options and Parameters (Continued)

Option	Format	Description
ice_proxy_http_port	<number>	Port number of the HTTP server (embedded web browser).
ice_proxy_port	<number>	Port number of the proxy server (embedded web browser).
ice_proxy_sec	<hostname/ip>	Domain name of the IP address of the Secure server (embedded web browser).
ice_proxy_sec_port	<number>	Port number of the Secure server (embedded web browser).
ice_proxy_sock	<hostname/ip>	Domain name of the IP address of the Socket server (embedded web browser).
ice_proxy_sock_port	<number>	Port number of the Socket server (embedded web browser).
initial_node	<hostname/ip>	Hostname of the OVO management server to which the Java GUI will connect.
install_dir	<path>	For HP internal use only.
locale	<locale_setting>	Presets the locale name.
max_limited_messages	<number>	Determines how many messages to display in the message browsers.
message_notification_dlg	on off true false yes no	Shows a warning dialog when a message event occurs.

Table B-3 itooprc Options and Parameters (Continued)

Option	Format	Description
message_notification_dlg_app	on off true false yes no	Starts a local application that will be executed when a message event occurs.
message_notification_dlg_app_path	<path>	Path to the local application that will be started when a message event occurs.
message_notification_show_all	on off true false yes no	Sends event notification either for the first message to arrive or for every new message.
nosec	on off true false yes no	Starts the SSL Secure Java GUI in standard mode without SSL functionality.
passwd	<password>	Password of the OVO operator used for login.
port	<number>	Port number the Java GUI uses to connect to the management server.
prompt_for_activate	on off true false yes no	For HP internal use only.
reconnect_interval	<number>	Time (in seconds) the Java GUI allocates for reconnecting to the management server.
reconnect_timeout	<number>	Time (in seconds) after which the Java GUI will stop reconnecting to an unreachable management server.
refresh_interval	<number>	Determines how frequently the Java GUI refreshes automatically. Default is 30 seconds.

Table B-3 itooprc Options and Parameters (Continued)

Option	Format	Description
secure_port	<number>	Port number the Secure Java GUI uses to connect to the management server.
severity_label	text both icon	Determines whether the message browsers display icons, text, or both in the severity column.
shortcut_tree_icon_width	<number>	Controls the size (in pixels) of icons. Default is 32 pixels.
show_at_severity	0 1 2 3 4 5	Defines the severity of the message for which event notification takes place: 0 = Unknown 1 = Normal 2 = Warning 3 = Minor 4 = Major 5 = Critical
subproduct	<subproduct_string>	For HP internal use only.
tailored_applications_start	on off true false yes no	Enables you to include only applications related to the selected message in the popup menus.
title_suffix	<title>	Displays the string next to the title in the main window.
trace	on off true false yes no	Enables appearance of tracing messages in the terminal.

Table B-3 itooprc Options and Parameters (Continued)

Option	Format	Description
user	<username>	OVO operator name used for login.
web_browser_type	external auto manual	<p>Type of web browser to use in the workspace pane:</p> <ul style="list-style-type: none"> • <i>External</i> On non-ActiveX tabs in the workspace pane, selects a web browser external to the Java GUI. On ActiveX tabs in the workspace pane, selects the Microsoft Internet Explorer ActiveX control. • <i>Auto</i> Selects the embedded web browser provided with the Java GUI. • <i>Manual</i> Custom selection of web browser. See the which_browser option.
which_browser	1 2	<p>Type of web browser to use:</p> <p>1 = ActiveX Internet Explorer</p> <p>2 = Embedded web browser</p>

References

About the itooprc Resource File

Glossary

A

acknowledgement *See* message acknowledgment.

action Response to a message that is assigned by a message source template or condition. This response can be automatic or operator-initiated. *See also* automatic action; operator-initiated action.

action agent Also known as “opcacta.” Starts and controls actions on managed nodes. Can be a script, a program, or an application. *See also* agent.

action identifier Element in an ARF. Typical elements of this type are install agents or start GUIs. Each of these elements has a separate symbol in the administrator Applications folder in the object tree. Symbols for these elements are normally arranged hierarchically under a group symbol. *See also* ARF.

action manager Also known as “opactm.” Manager that resides on the management server and controls action agents on managed nodes. The manager is called by the display manager to perform operator-initiated actions or execute applications. The manager is called by the message manager if an automatic action is to be performed on a system other than the managed node from which the message has come.

action-allowed manager Management server for a specific managed node that is allowed to execute actions on that node. By default, the only management server that is allowed to execute actions on a managed

node is the Installation Manager. You can configure several management servers to execute actions on shared managed nodes.

See also OVO Installation Manager.

active message browser *See* message browser.

agent Program that receives requests from a manager program, and can gather information, perform processing, and generate responses. *See also* action agent; control agent; message agent.

annotation *See* message annotation.

application 1. Simple script, process, or command. 2. Complex product that includes a number of programs and configuration files. *See also* operation view; OV application; OV service; OVO application; OVO internal application.

application defaults Defaults, such as color or font, that can be changed by accessing the X Windows application defaults file. *See also* man page *opc(1)*.

application desktop Operator window in the Motif GUI that contains symbols representing the scripts, programs, or complex applications operators are allowed to perform.

application registration file *See* ARF.

ARF application registration file. File explaining how an application integrates with NNM. For example, this file can contain information about which menu items are used or which user actions are recognized by the application. This file can also contain action identifiers. *See also* action identifier; NNM.

audit entry Entry written to the database that documents an operator activity (for example, performing an action, launching an application, or logging on or off) or an administrator activity (for example, configuration). You can print hard copies of these entries as reports.

authentication Security feature that verifies the identity of the parties involved in a connection. *See also* encryption.

automatic action Action triggered by an incoming event or message. No operator intervention is involved. *See also* message acknowledgment; operator-initiated action.

B

backup manager Management server that replaces another management server (for example, in case of failure). This replacement management server becomes the primary management server. It usually has same configuration as the server it replaces. *See also* primary manager.

broadcasting Simultaneously sending commands to one or more specified managed nodes. In the Motif GUI operators send these commands through the Broadcast Command window, and view results in the Broadcast Output window.

C

competence center Designated centers of expertise for specific areas of a management system, such as databases or operating systems. When these centers are organized into a hierarchy, managed nodes are configured to send messages relating to

specific subjects to defined management servers, where the knowledge exists to solve those problems. *See also* flexible management.

console interceptor *See* MPE/iX console interceptor

console messages *See* MPE/iX console message.

control agent Also known as “opcctla.” Agent on each managed node that is responsible for starting and stopping all other agents, and processing requests from the management server. During startup, or following a distribution request from the request sender, this agent starts the distribution agent, which gathers new configuration data from the management server. *See also* agent.

control manager Also known as “opcctlm.” Process on the management server that starts and stops all other manager processes, and checks that all manager processes are running.

control switch Switching the responsibility of a message from the source management server to target management servers. This responsibility switch gives the full set of actions and operations associated with the original message to the target management servers. The source management server retains a read-only copy of the message.

See also message forwarding; notification message.

controlled node Managed node to which all the management and monitoring capabilities of OVO, including remote login, can be applied. Actions can be performed and applications can be started on this node.

D

datastore service Any kind of storage mechanism used to store information in a distributed environment (for example, a database storing metadata, persistent object information, historical information, and topological information).

default objects *See object.*

default target nodes List of nodes on which applications are started or to which commands are broadcast. The administrator defines this list. In the Motif GUI, if the administrator grants operators customized startup rights, the operators can modify the list from the Application Desktop window. *See also* managed nodes; node.

disabled nodes Nodes that have been temporarily removed from the environment of a specified operator. No agent processes are started, and incoming messages from these nodes are ignored.

display manager In the Motif GUI, also known as “opcdispn.” Process that serves the Motif GUI through the display receiver (opcdispn). Many Motif GUIs may be active at the same time (and redirected to different display stations). But only one Motif GUI can be opened for any single given operator. *See also* opcuww.

display station Computer on which the OVO GUI front end is displayed (using the standard X feature for display redirection).

distribution manager Also known as “opcdistm.” Process running on the management server that delivers configuration information to the managed nodes in response to requests from the distribution agent (opcdista) operating on

that system. This process also distributes monitor programs, action programs, and commands to the managed nodes.

E

EC *See message attributes.*

encryption Security option that prevents eavesdropping on messages and tampering with messages. This option ensures that only legitimate, authenticated parties can read the message. *See also* authentication.

event Occurrence or incident within a computing environment that triggers a message. Typically, this occurrence is a change in status or a threshold violation. For example, the status of a printer changes when the paper tray empties.

event attribute *See message attributes.*

event correlation Correlation that allows real-time processing of event streams to identify relationships between events and, where possible, generate new and smaller streams with more useful and manageable information.

explodable symbol Symbol that displays a child submap when you double-click it. The child submap provides a contextual view of the parent object represented by the symbol. *See also* node hierarchy.

external node symbols Symbols used in the administrator Node Bank, the administrator Node Group Bank, and the operator Managed Nodes windows to indicate the presence of external nodes. Each symbol represent a node or batch of nodes that have been added at one time. *See also* external nodes.

external nodes Nodes located outside the OVO domain. These nodes, which include all kinds of nodes (that is, not just IP nodes), have only some of the functionality of normal OVO nodes. No OVO agent runs on these nodes. *See also* external node symbols; node group.

F

filtered message browser Browser that displays a selection of messages. This browser enables you to viewing only specified messages rather than the entire Message Browser. *See also* history message browser; message browser; pending messages browser.

filters Screening devices provided by message conditions that change, redirect, or suppress information on nodes or within the GUI. The administrator uses these screening devices to collect messages from various sources by defining message and suppress conditions. *See also* message conditions; suppress conditions.

flexible management Spreading responsibility for managed nodes over a number of management servers, enabling those managed nodes to report to the various management servers according to the time, location, or subject of the messages received. *See also* competence center; follow-the-sun.

follow-the-sun Distribution of responsibility across multiple management servers by time zone. Managed nodes send messages to the configured management servers according to time attributes defined by the administrator. *See also* flexible management.

G

graphical user interface *See* Java GUI.

GUI *See* Java GUI.

H

history message browser Browser that displays all acknowledged messages. By examining acknowledged messages, you can review techniques previously used to solve problems. *See also* message browser; pending messages browser; filtered message browser.

HTTPS-based Java GUI Solution for providing a secure communication between Java GUI and the OVO management server built on HTTPS protocol with Secure Socket Layer (SSL) encryption. *See also* Java GUI.

I

instruction text interface Interface that enables the administrator to define an external program used to present instructions to a chosen operator. Depending on the external program used, the administrator can then present different instructions for each message. *See also* help instruction texts.

integrity Security feature that reassures the recipient of a message that the message has not been altered since it was generated by a legitimate source.

IP submaps Also known as “topology submaps.” Maps maintained by the standard OpenView service netmon. On these

submaps, the network objects (for example, systems, routers, bridges, and so on) are organized according to their IP addresses.

See also map application.

itop One of three default OVO operators. The role of this operator is a combination of the `opc_op` and `netop` roles. All functionality in OVO is under the control of this operator. *See also* operators; `netop`; `opc_op`.

J

Java GUI Java graphical user interface.

See also object pane.

L

log-only message Message that is logged on the management server (or locally, if so configured) and sent to the history database. This message displays only in the history message browser. The `log-on-management-server-only` attribute can be set individually for each message condition. Other actions cannot be set when this option is selected for a condition.

logfile encapsulator Also known as “opcle.” Process residing on the managed nodes that uses the logfile template to scan one or more applications or system logfiles for messages matching a pattern specified by the administrator. If a match causes a message to be generated, the message is forwarded to the message agent.

logfile messages Messages that are generated from application or service logfiles. The administrator sets up logfile templates. These templates consist of monitoring options (for example, polling interval, processing tool, and character set),

as well as message and suppress conditions, to determine the way logfiles are read by the logfile encapsulator. The logfile encapsulator then forwards any generated messages to the message agent. *See also* message sources.

M

managed nodes Computer system or intelligent device (for example, a network printer or router) monitored or controlled by OVO. The OVO agent collects, filters, and processes information from each node, and sends it to the management server. *See also* default target nodes; message sources; node; node group; remote node.

management server Central computer system of the domain to which all managed nodes forward their OVO messages.

manager-of-manager *See flexible management.*

map application Application that creates or modifies the contents of maps. This application can dynamically update the open map to reflect the state of systems on the network, and provide information about objects in the map. *See also* IP submaps.

marking message *See message ownership.*

message Structured, readable piece of information about the status of a managed object, an event related to a managed object, or a problem with a managed object. Depending on the status of the object, this information is displayed in the active message browser, filtered active message browser, filtered history message browser, or filtered pending messages browser. *See also* message attributes.

message acknowledgment Moving a message from the message browser to the history database, where it may be viewed using the filtered history message browser. Typically, a message is moved to the history database after the problem or event that triggered it has been resolved by an action.

See also automatic action; message unacknowledgement.

message agent Also known as “opcmsga.” Agent on a managed node that receives messages from the message sources, then processes and forwards the messages to the management server. *See also* agent.

message-allowed nodes Nodes that do not run agent software. Messages sent by these nodes are accepted by OVO.

message annotation Text added manually or automatically to a message by an operator or administrator. This text describes actions taken to solve a problem. The text can consist of multiple lines or pages. Operators and administrators can add more than one annotation to a message.

message attributes 1. Characteristics the administrator uses to classify a message received by the management server. 2. Numerical fields of OPCDATA_MSG. These fields are referenced in string form (for example, in the the event-type field of an EC node). *See also* message; message key.

message browser Part of the user interface that enables users to view messages received by the management server. From this browser, users can detect problems, review and acknowledge messages, and direct problem-management activities. *See also* history message browser; pending messages browser; filtered message browser.

message conditions Filters that configure OVO to accept messages from various sources. These filters result in the generation of a message, which is usually displayed in the message browser. A message source template is composed of a series of message and suppress conditions. *See also* filters; message regroup conditions; suppress conditions.

message escalation Transferring a message to another management server. Operators transfer messages that cannot be handled on the current management server.

message forwarding Copying messages from one management server to other management servers. After copying a message to other servers, the administrator can notify the other servers of an event, or even switch the control of a message to the other servers. *See also* control switch; notification message.

message groups Groups of messages that belong to the same task or have some logical connection (for example, messages from backup and output tasks, or messages having a common policy). *See also* operation view.

message interceptor Also known as “opcmsgi.” Process that receives incoming messages. You can use the opcmsg(1) command and the opcmsg(3) API to forward messages to OVO. You can also set conditions to integrate or suppress chosen message types.

message key Message attribute (that is, a string) used to identify messages that are triggered from particular events. This string summarizes the important characteristics of the event. The string can be used to allow

messages to acknowledge other messages. The string also enables you to identify duplicate messages. *See also* message attributes.

message manager Also known as “opcmgrm.” Process running on the management server. This process prioritizes and groups messages, adds annotations, and performs actions.

message marking Indicating that an operator or administrator has taken note of a message. This concept is used in informational mode only. It is similar to message ownership in enforced mode. *See also* message ownership.

message ownership When an operator or administrator takes charge of a message to carry out actions associated with that message. This concept is similar to message marking in informational mode. *See also* message marking; message ownership mode.

message ownership mode One of three modes used by an operator or administrator when interacting with an action. These modes include optional, enforced (default), and informational. *See also* message ownership.

message regroup conditions Conditions in the message management policy defined for an operating environment. You can use the conditions to regroup messages on the management server. For example, you can combine message groups for MPE/iX and HP-UX to form a new group for operating system messages. *See also* message conditions; suppress conditions.

message stream interface Interface that enables external applications to tap into the internal message flow of OVO. External

read-write, read-only, and write-only applications can access the interface, and provide additional message processing. The interface is available on the management server and the agents. A set of APIs is provided with the interface, so you can access its functionality.

message severity *See severity.*

message source template Template that controls the introduction of messages into OVO. *See also* template.

message sources Sources for messages managed by OVO. OVO manages messages from various sources, including logfiles, MPE/iX console messages, SNMP traps, threshold monitors, OVO message command interface and API (`opcmgrm(1|3)`), OVO monitor command interface and API (`opcmgrm(1|3)`), and event correlation services. To handle messages from each of these sources, the OVO administrator sets up templates consisting of message defaults, message conditions, and suppress conditions. *See also* logfile messages; managed nodes.

message target rules Conditions for the managed node that indicate to which management server specific messages have to be sent. These conditions also determine when messages are suppressed or buffered during scheduled outages or service hours, based on message attributes or time. The conditions are defined in the configuration file `mgrconf` on the managed node.

message type Message attribute used to sort messages into subgroups. This attribute permits a fine differentiation of messages that can be referenced in correlation rules.

The attribute is particularly useful when you have an event correlation engine connected to OVO.

message unacknowledgement Moving a message from the history database to the active message browser, where it was located before it was acknowledged. The message is no longer displayed in the filtered history message browser, but may be viewed in the filtered active message browser. Only messages in the history message browser can be unacknowledged. *See also* message acknowledgment.

MoM manager-of manager. *See also* flexible management.

monitor agent Also known as “opcmna.” Process that observes system parameters (for example, CPU load, disk utilization, kernel parameters, and SNMP MIB). The process checks actual values against predefined thresholds. If a threshold has been exceeded, a message is generated and forwarded to the message agent. The polling interval of the monitored object can be configured by the OVO administrator. *See also* threshold monitoring.

monitored object Objects such as system parameters, database status, and spooling information that are periodically read by OVO.

monitored-only nodes Nodes on which all agent processes are started, but on which no actions are executed. You can use these nodes to configure systems with high security requirements and restricted remote logins and actions.

MPE/iX console interceptor Also known as “opconsi.” Process that collects and processes MPE/iX console messages on

managed nodes. This program communicates with the message interface to send the MPE/iX console messages to OVO.

MPE/iX console message Standard system or application message that reports the occurrence of an event. The OVO administrator can set up message templates, consisting of message and pattern-matching defaults, as well as message and suppress conditions. The console interceptor collects and forwards messages to the message agent. *See also* message sources.

MPE/iX request message Console request generated by MPE/iX systems. The purpose of this message is to ask an operator for information. The MPE/iX operator responds to the request with a console reply. If the system is so configured, the operator can reply to the message with an operator-initiated action.

N

netop network operator. One of three predefined OVO users. The operator manages network management capabilities only. *See also* itop; opc_op; operators.

NNM Network Node Manager. Comprehensive network management solution. *See also* ARF; OVO application.

node Computer system or intelligent device (for example, a bridge or router) in a network. *See also* default target nodes; managed nodes; operation view.

node group Logical group of internal and external nodes managed by operators. The administrator applies a consistent set of policies to this logical group. A single node can belong to many groups. *See also* external nodes; managed nodes.

node hierarchy Visual representation of the hierarchical organization of nodes and node layout groups. Each hierarchy contains all managed nodes that are configured in the OVO environment. These hierarchies differ only in how their nodes are organized. The hierarchies are assigned to OVO users, and represent the managed nodes for which these users are responsible. The default hierarchy in OVO is the OVO Node Bank.

See also explodable symbol.

node layout group *See explodable symbol.*

notification message Read-only message forwarded to a target management server by OVO. Although this message is for informational purposes, there is a limited set of operations associated with it. *See also* control switch; message forwarding.

notification service Service that alerts operators when an event occurs. Within OVO, this service includes colors and severity levels configured for messages displayed in the message browser. OVO can also forward messages to external services (for example, beepers, paging services, and so on).

O

object Resource and associated functionality managed by OVO (for example, a node, application, or operator).

object pane Second pane at the top of the Java GUI that helps you navigate to different elements within your managed environment. *See also* Java GUI.

opc_admin OPC administrator. One of three predefined OVO users. This is the default administrator in OVO. *See also* opc_op; OVO administrator; user name.

OPC_NODES In the Motif GUI, reserved variable that enables you to retrieve a list of nodes selected in an operator Managed Node window or in an administrator Node Bank or Node Group Bank window. The hostnames of the nodes are passed to the OVO application.

opc_op OPC operator. One of three predefined OVO users. The operator controls system management functions only. The operator does not manage network activities (for example, IP Map functions, NNM Tools-related functionality). The operator can access some UNIX tools (for example, Processes, Disk Space, Print Status, and Motif SAM). *See also* itop; netop; opc_admoperators; user name.

opcacta *See action agent.*

opcactm *See action manager.*

opcconsi *See MPE/iX console interceptor.*

opcctla *See control agent.*

opcctlm *See control manager.*

opcdispm *See display manager.*

opcdistm *See distribution manager.*

opcle *See logfile encapsulator.*

opcmona *See monitor agent.*

opcmsga *See message agent.*

opcmsgi *See message interceptor.*

opcmsgm *See message manager.*

opcmon (1 | 3) Command and API used by applications and scripts to pass monitoring values to the OVO monitor agent (opcmona).

opcmsg (1 | 3) Command and API used by applications and scripts to pass OVO message texts and attributes to the OVO message interceptor (opcmsgi).

opcuiwww Process that serves Java-based operator GUIs by forwarding all communication requests between to and from the display manager. For each Java-based GUI, at least one such process is started. *See also* display manager.

operation view The operation view displays a hierarchical tree diagram of the nodes and applications within the managed environment, as well as the message groups assigned to the operator. *See also* application; message groups; node.

operator-initiated action Action used to take corrective or preventive actions in response to a given message. Unlike automatic actions, these actions are triggered only when operators click a button. Because operator browsers are available to the administrator, the administrator can also trigger these actions as well. *See also* action; automatic action.

operators OVO users responsible for monitoring and responding to messages from the set of nodes and message groups assigned to them by the OVO administrator. These users perform tasks from the message browser and the object pane (Java GUI) or the Message Browser window (Motif GUI). The three preconfigured operators are `itop`, `netop`, and `opc_op`. *See also* `itop`; `netop`; `opc_op`; user profile.

OV application Application that has been integrated into the NNM platform. *See also* application; OV service; OVO application; OVO internal application.

OV service Script, process, or command that has been integrated into OVO from OpenView using the Add OV Service window. Unlike applications, services cannot be invoked from symbols. Services are either invoked automatically by OpenView or manually from the menu bar. Services can be represented by symbols in the administrator Application Bank, or as part of a hierarchy under a group symbol. *See also* application; OV application; OVO application; OVO internal application.

ovoareqsdr *See request sender.*

own state *See message ownership; ownership display mode.*

ownership *See message ownership.*

ownership display mode Mode that enables you to decide whether to include or ignore owned or marked messages. The mode is used to generate message status. Available modes are Status Propagate and No Status Propagate. *See also* status propagation.

P

password Unique identifier for an OVO administrator or operator. This identifier is not related to the password used to access the operating system. *See also* user name.

pattern-matching Conditions used to categorize messages. These conditions can include text patterns with which an event

can be compared. Success or failure in these comparisons determines how a message is processed by OVO. *See also* unmatched message.

pending message Message that arrives on the OVO management server outside defined service hours or during a scheduled outage. This messages resides in the filtered pending messages browser until a defined unbuffer time has been reached. The message may be unbuffered manually or automatically. If the message is unbuffered, it moves to the message browser. If the message is acknowledged, it moves to the filtered history message browser. *See also* object pane; service hours; unbuffering message.

pending messages browser Browser that shows messages that have been buffered because they arrived outside a defined period of service hours. *See also* history message browser; message browser; pending message; service hours; filtered message browser.

physical console *See physical terminal.*

physical terminal Terminal that is physically attached to a managed node. This terminal is usually connected through a serial interface. The terminal enables operators to reboot a node or perform tasks when the network connection for the node is not available. OVO provides only a generic interface to the terminal. *See also* remote login; virtual terminal.

primary collection station Collection station that has primary responsibility for monitoring an object. *See also* secondary collection station.

primary manager Management server that is currently responsible for OVO agents. Only this server is allowed to start or stop the agents, install new software, or distribute configurations to the agents. Information about the server is stored in the file `primmgr`. If this file does not exist, the OVO Installation Manager acts as the server responsible for OVO agents, and OVO extracts the file name from the `opcinfo` file (for DCE-based managed nodes) or using the configuration tool `ovconfchg` (for HTTPS-based managed nodes). *See also* backup manager; OVO Installation Manager.

process Execution of a program file. In OVO, these program file executions include integrated applications and scripts, management server processes, agent processes, and trouble-ticket services.

property sheet Popup dialog box that organizes task steps into options you access by clicking on tabs. These steps may be completed in the order you choose.

R

remote collection station Remote node that acts as a collection point for network status and threshold information. This remote node must be running NNM software and OVO agent software.

remote login Accessing a managed node from a location other than the managed node itself. You can access one of your managed nodes by opening a virtual terminal or a physical terminal with a preconfigured or customized user name and password. *See also* physical terminal; virtual terminal.

remote node System that uses a communication link. *See also* managed nodes.

reports Summaries about configuration information. The OVO administrator can print OVO summaries or integrate summaries that are not included with OVO.

request sender Also known as “ovoareqsdr.” Process that sends requests from the management server to the managed node (for example, starting, and stopping the agents, setting heartbeat polling, and so on).

right-click Placing the cursor over an item and clicking the right-hand button of the mouse.

S

scheduled outage Planned periods of time during which services and systems in a computing environment are unavailable. Within these time periods, messages from the unavailable services and systems are suppressed or moved directly into the history database. *See also* pending message; service hours; unbuffering message.

secondary collection station Collection station that monitors an object, but is not specified as the primary collection station for that object. *See also* primary collection station.

secondary manager Secondary management server. You can transfer management responsibility from the primary management server to a secondary management server. When you transfer responsibilities to the secondary

management server, you transform the secondary management server into the primary management server. *See also* man page for the command *opcragt(1M)*.

service *See* OV service.

service hours 1. Defined period of time during which the help desk is staffed. This period of time is defined by the customer’s Service Level Agreement. 2. Defined period of time during which messages from OVO nodes are passed to OVO operators. Messages generated outside this period of time are buffered until the next defined period of time, during which they are then forwarded. 3. Defined period of time during which a service provider provides support for a service (for example, email, printing, SAP R/3, or outsourcing). *See also* pending message; pending messages browser; object pane; unbuffering message.

service reports Reports that provide an overview of the status of services in the OVO environment at any moment in time or over a specified period of time. These reports are generated with the HP OpenView Service Reporter.

session Time during which you are logged onto OVO. You start (or stop) an OVO session when you log onto (or out of) the OVO GUI. If you start a Motif GUI session as an operator, the Managed Nodes, Message Groups, Message Browser, and Application Desktop windows open. If you start a Java GUI session as an operator, the Operation View window opens when you use the Java GUI. If you start the OVO GUI as the OVO administrator, the Node Bank window and the IP Map (root submap) open automatically.

severity Level assigned by the OVO administrator to a message, based on its importance in a given operator's environment. Symbols representing nodes, node groups, or message groups have the highest severity status level. *See also* status propagation.

Simple Network Management Protocol

See SNMP.

SNMP Simple Network Management Protocol. Protocol running above TCP/IP used to exchange network management information. SNMPv2C has extended functionality over the original protocol.

SNMP traps One source of messages for OVO. The OVO event interceptor collects and filters traps retrieved from nodes in the network. The filtered messages are forwarded to the message agent. The administrator can set up templates for the traps. The templates consist of message and pattern-matching defaults, message conditions, and suppress conditions.

startup attributes Target nodes, application calls, and the user who executes the application call for a given application. These attributes are preconfigured for an application by the OVO administrator. The attributes can be customized in the Customized Application Call window before the application is started.

status propagation Status (determined by severity level) of a given managed node or message group. This severity-level status reflects the status of the highest severity message originating from that managed node or message group. *See also* ownership display mode; severity.

suppress conditions Conditions set up by the OVO administrator to filter out specific messages from specific sources. By setting these conditions, the administrator prevents the messages from being sent to the message browser. Suppressed messages can be logged locally on the managed node. *See also* filters; message conditions; message regroup conditions.

system resource files Files for `opc_op` user configuration (for example, `/etc/passwd` and `/etc/group`), as well as files executed during system startup and shutdown. These configuration files can be modified manually or automatically.

T

template Set of rules that contains message conditions and attributes for a single message source (for example, the severity of a message and the group in which the message is placed). This set of rules can also be used to apply new message attributes to a message. Rules can be defined for logfiles, MPE/iX console messages, `opcsmsg(1)` and `opcsmsg(3)`, monitored objects, and SNMP traps. *See also* message source template; template groups; time template.

template administrator OVO users with limited administrative responsibility. These users are allowed only to add, modify, or delete templates or template groups. They use the Message Source Templates window and associated windows to configure templates and manage template group hierarchies. *See also* OVO administrator; operators.

template groups Logical group of templates sharing common characteristics. Template administrators create groups and

hierarchies to simplify the management of templates, and to simplify the assignment of templates to managed nodes or node groups. *See also* template.

threshold monitoring Monitoring the thresholds of an object to detect problems in the early stages of development. If an object exceeds a threshold for a specified period of time, a message can be sent to the operator. This message enables the operator to resolve the problem before it affects the functionality of the system and the work of end users. *See also* monitor agent.

time template Set of rules or conditions governing time. These rules or conditions are part of message-target conditions. OVO uses the rules to determine which messages should be sent, at what time, and to which management server. The system administrator creates the time conditions and saves them in a template. *See also* template.

topology submaps *See IP submaps.*

U

unacknowledgement *See message unacknowledgement.*

unbuffering message Moving a message from the filtered pending messages browser to the filtered active messages window, where it may be modified. *See also* pending message; object pane; service hours.

unmatched message Message that does not match message or suppress conditions. These messages can be logged locally, or forwarded to the management server. *See also* pattern-matching.

user name Identifier that is unique to the OVO application and has no relation to the operating system. A valid OVO user name and password is required to enter the OVO GUI. OVO assigns the unique identifiers `opc_adm` and `opc_op` to the OVO administrator and operator. These names cannot be changed. Other identifiers can be up to eight characters long. All operating system restrictions apply. *See also* `opc_adm`; `opc_op`; password.

user profile Profile that defines the configuration of a virtual OVO user. The configuration of real OVO users can be derived from one or more predefined profiles. *See also* operators; OVO administrator.

V

view Display that you configure for a particular database or system. For example, you may use filters to define a display of messages in the message browser. The messages that meet your conditions are displayed in the filtered active message browser.

virtual console *See virtual terminal.*

virtual terminal Terminal window opened on a remote machine across a network, rather than through a direct physical connection. OVO lets you connect to a such a remote terminal with a preconfigured or customized user name and password. *See also* remote login; physical terminal.

OVO administrator Administrator responsible for installing and configuring OVO software, setting and maintaining operating policies, maintaining non-OVO software, and configuring operator workspaces and scripts. The administrator

can access all functions of the OVO operator interface. The administrator can create a fully customizable working environment for each operator, according to the individual management tasks and responsibilities of that operator. *See also* `opc_admin`; operators; template administrator; user profile.

OVO application Application that has been integrated into OVO. *See also* application; NNM; OV application; OV service; OVO internal application.

OVO internal application Application of the type `Broadcast` or `Virtual Terminal`.

See also application; OV application; OV service; OVO application.

OVO Installation Manager Management server from which the OVO agent software has been installed on the managed node. By default, this management server monitors the heartbeat of the agent and counts the licensing. *See also* action-allowed manager; primary manager.

OVO operators *See operators.*

OVO password *See password.*

W

workspace Tabs in the workspace pane defined by operators for specific tasks. Normal workspaces can contain message browsers, charts, history lava lamps, application outputs, service graphs and non-ActiveX web browsers. ActiveX workspaces can contain only ActiveX web browsers. *See also* workspace pane.

workspace pane Third pane at the top of the Java GUI that includes operator-defined workspaces. Each workspace can contain

message browsers, application output windows, graphs and charts, or web browsers. *See also* Java GUI; workspace.

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