

HP Operations Manager

Java GUI Operator's Guide

Software Version: 9.02

for the UNIX and Linux operating systems



Manufacturing Part Number: None

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Glossary

Printing History

The printing date and part number of the manual indicate the edition of the manual. The printing date will change when a new edition is printed. Minor changes may be made at reprint without changing the printing date. The part number of the manual will change when extensive changes are made.

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.

First Edition: September 2009

Second Edition: November 2009

Conventions

The following typographical conventions are used in this manual:

Table 1 **Typographical Conventions**

Font	Meaning	Example
<i>Italic</i>	Book titles and manpage names	For more information, see the <i>HPOM Administrator's Reference</i> and the <i>opc(1M)</i> manpage.
	Emphasis	You <i>must</i> follow these steps.
	Variable that you must supply when entering a command (in angle brackets)	At the prompt, enter rlogin <username> .
	Parameters to a function	The <i>oper_name</i> parameter returns an integer response.
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	Edit the <code>itopr</code> file... <code>/opt/OV/bin/OpC/</code>
	Process names	Check to see if <code>opcmona</code> is running.
Computer Bold	Text that you enter	At the prompt, enter ls -l

Table 1 Typographical Conventions (Continued)

Font	Meaning	Example
Keycap	Keyboard keys	Press Return .
	Menu name followed by a colon (:) means that you select the menu, and then the item. When the item is followed by an arrow (->), a cascading menu follows.	From the menu bar, select Actions: Filtering -> All Active Messages .
	Buttons in the user interface	Click OK .

HPOM Documentation Map

HP Operations Manager (HPOM) 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 HPOM product CD-ROM.

With the exception of the *HPOM Software Release Notes*, all the manuals are also available in the following HPOM 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.

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

```
http://support.openview.hp.com/selfsolve/manuals
```

Watch this website regularly for the latest edition of the *HPOM Software Release Notes*, which is updated every two to three months with the latest news (for example, additionally supported operating system versions, the latest patches and so on).

HPOM Manuals

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

Table 2 **HPOM Manuals**

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

Table 2 **HPOM Manuals (Continued)**

Manual	Description	Media
<i>Service Navigator Concepts and Configuration Guide</i>	Provides information for administrators who are responsible for installing, configuring, maintaining, and troubleshooting the HP Operations Service Navigator. This manual also contains a high-level overview of the concepts behind service management.	PDF only
<i>HPOM 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>HPOM Firewall Concepts and Configuration Guide</i>	Designed for administrators. This manual describes the HPOM firewall concepts and provides instructions for configuring the secure environment.	PDF only
<i>HPOM Web Services Integration Guide</i>	Designed for administrators and operators. This manual describes the HPOM Web Services integration.	PDF only
<i>HPOM Security Advisory</i>	Designed for administrators. This manual describes the the HPOM security concepts and provides instructions for configuring the secure environment.	PDF only
<i>HPOM Server Configuration Variables</i>	Designed for administrators. This manual contains a list of the HPOM server configuration variables.	PDF only

Additional HPOM-Related Products

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

Table 3 **Additional HPOM-Related Manuals**

Manual	Description	Media
HP Operations Manager Developer's Toolkit If you purchase the HP Operations Manager Developer's Toolkit for UNIX or for Linux operating systems, you receive the full HPOM documentation set, as well as the following manuals:		
<i>HPOM Application Integration Guide</i>	Suggests several ways in which external applications can be integrated into HPOM.	PDF
<i>HPOM Developer's Reference</i>	Provides an overview of all the available application programming interfaces (APIs).	PDF

HPOM Online Information

The following information is available online.

Table 4 **HPOM Online Information**

Online Information	Description
HPOM Java GUI Online Information	HTML-based help system for the HPOM Java-based operator GUI and Service Navigator. This help system contains detailed information about general HPOM and Service Navigator concepts and tasks for HPOM operators, as well as reference and troubleshooting information.
HPOM Manpages	<p>Manpages available online for HPOM. These manpages 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 manpages for the HP Operations HTTPS agents are installed on each managed node.</p>

HPOM Online Help

This preface describes online documentation for the HP Operations Manager (HPOM) Java operator graphical user interface (GUI).

Online Help for the Java GUI and Service Navigator

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

Types of Online Help

The online help for the HPOM 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 HPOM to use your preferred browser.

Preface

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

❑ **HP Operations Manager**

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

❑ **Service Navigator**

Add-on to HPOM 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:

❑ **Java Runtime Environment Support**

The latest version of the Java Runtime Environment 1.6 is supported. For the most up-to-date list of the supported Java Runtime Environment and for the list of obsolete versions, refer to the *HPOM Software Release Notes*.

❑ **Online Java GUI Synchronization**

HPOM provides a synchronization mechanism between the server and Java GUI during the configuration update. Most configuration changes are automatically reflected in the Java GUI and there is no need for configuration reload. You can see the relevant configuration changes in the Java GUI immediately.

❑ **Cockpit View**

The HPOM cockpit view is a web-based interface that displays the state of the environment monitored by HPOM. Cockpit view helps users to quickly assess the health and readiness of the environment to support the business.

The cockpit view consists of the indicator panel and the message browser. Indicator panel displays multiple message filter groups, while the message browser displays messages for each filter.

❑ **Service Map Table View**

Besides the views available from the previous releases (Graph, Map, and Tree), the Service Map Table view is introduced. This view is similar to the message browser - services and their properties are listed in a table. Service Map Table View is available for service submaps and custom maps, not for service graphs.

❑ **Message Filter Browser Enhancements**

The following enhancements are introduced with the current release:

- When performing exporting, dragging or printing of messages from a message filter browser, the messages are sorted in the same way as they were in the message filter browser.
- When using relative time filtering with enabled relative time recalculation, message browser is refreshed with new messages and drops the messages that become too old to satisfy the filter

criteria. This behavior can be enabled by the administrator using the `OPCUIWWW_FILTER_RELATIVE_TIME_RECALC` server parameter.

❑ **Support for Web Browsers**

Only ActiveX and external browser are available, since the embedded web browser is removed from the Java GUI. A new value `activex` is added for `web_browser_type` in `itoopec`. Thus, the valid values are `external` and `activex`.

On Windows, ActiveX is the default browser. On other operating systems, only external browser is available. The valid values for the XPL variable `OPC_JGUI_INTERNBRW_DISABLED` are `ACTIVEX` and `NONE`.

❑ **Stay On Top Option**

A new option `Stay On Top` in the Preferences dialog was introduced. This option enables the Java UI windows (main and detached) to stay on top of other windows. A parameter `stay_on_top` is introduced in `itoopec`. Its default value is `no`.

❑ **Launching Java GUI via WebStart**

HPOM Java UI can be launched via WebStart. A link for the WebStart launch of Java UI was added to the HPOM home page: `http://<management_server>:3443/ITO_OP/`

❑ **Hyperlinks Support in Messages**

The Java UI functionality was extended to support `https` and `ftp` hyperlinks in messages.

❑ **Enhanced listguis Tool**

For Java UI clients connected in `HTTPS` mode, the `listguis` tool shows the following information: hostname (long name), IP address, connection type (`https` vs. `socket`), connection port (for example, 2531 for `socket comm`).

❑ **CMA Pattern Matching**

Java GUI filtering now supports CMAs with HPOM style pattern matching.

□ **Alignment with HPOM for Windows**

Some of the Java GUI terminology was aligned with the HPOM for Windows. Thus, the name `Tools` is used instead of the name `Applications`.

Organization

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

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

1 **Daily Tasks**

In this Chapter

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

Who Should Read this Chapter

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

What this Chapter Does

This chapter is organized as follows:

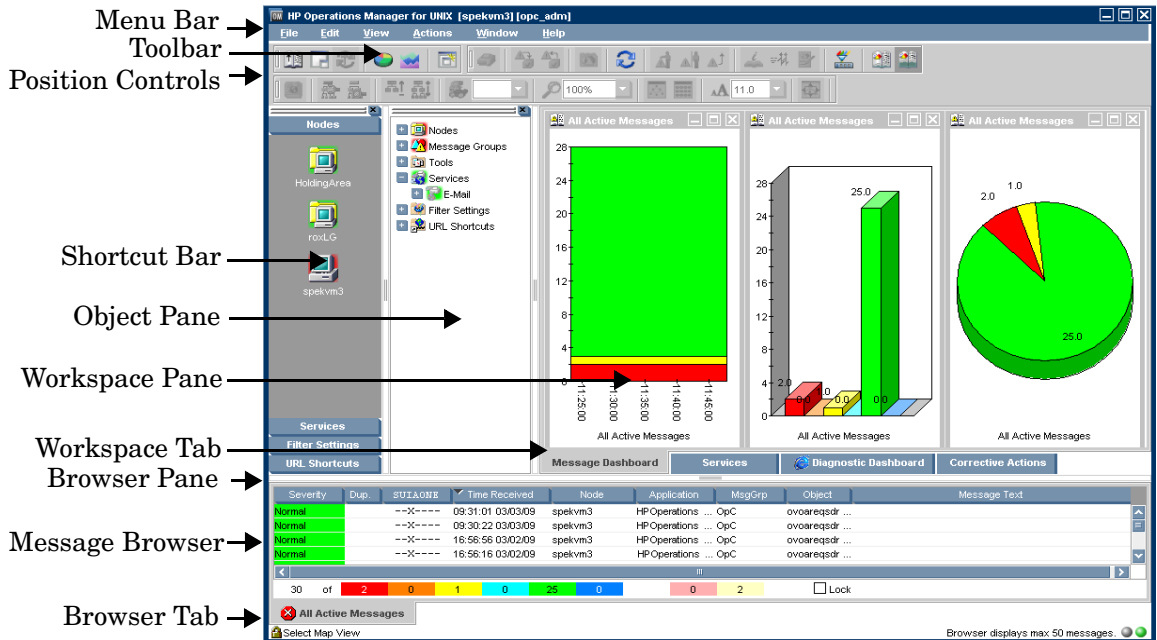
- ❑ **Tour of the HPOM Java GUI**
 - Shortcut Bar
 - Object Pane
 - Workspace Pane
 - Browser Pane
 - Integrated Web Browsers
 - Menu Bar
 - Toolbar
 - Position Controls
 - Pop-up Menus
 - Detached Windows
 - Cockpit View
- ❑ **Problem Solving Process**
 - Detecting Problems in Your Environment
 - Investigating Problems in Your Environment

- Solving Problems in Your Environment
- Documenting Solutions in Your Environment
- **Customizing Your Environment**

Tour of the HPOM Java GUI

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

Figure 1-1 Main Window of the HPOM 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 “Shortcut Bar” on page 40.

❑ **Object Pane**

Top-middle pane displays the structure of your managed environment. For details, see “Object Pane” on page 42.

❑ **Workspace Pane**

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

❑ **Browser Pane**

Bottom pane provides you with quick access to the latest messages. For details, see “Browser Pane” on page 62.

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

❑ **Menu Bar**

Top row of pull-down menus. For an overview, see “Menu Bar” on page 77.

❑ **Toolbar**

Row of icons just below the menu bar. For an overview, see “Toolbar” on page 78.

❑ **Position Controls**

Narrow band of horizontal bars just below the toolbar. For an overview, see “Position Controls” on page 79.

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 172.

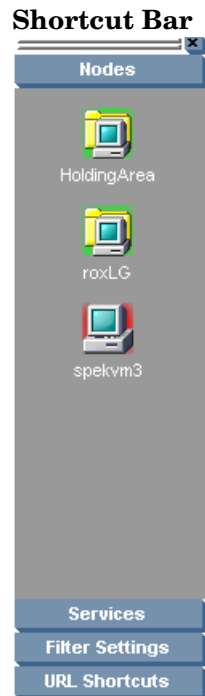
NOTE

For details about pop-up menus in each of the four main areas of the Java GUI, see “Pop-up Menus” on page 80.

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 pop-up menus to perform all operations that are available from the object pane (for example, start tools, 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 pop-up menus in the shortcut bar, see “Shortcut Bar Pop-up Menu” on page 81. To find out how to customize the shortcut bar, see “Moving Panes and Areas” on page 173, “Showing and Hiding Panes and Areas” on page 174, and “Customizing the Shortcut Bar” on page 177.

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 “Nodes” on page 44.

❑ **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 “Filter Settings” on page 49.

❑ **URL Shortcuts**

Enables you to update and start URL tools. For details, see “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 “Message Groups” on page 46.

❑ **Tools**

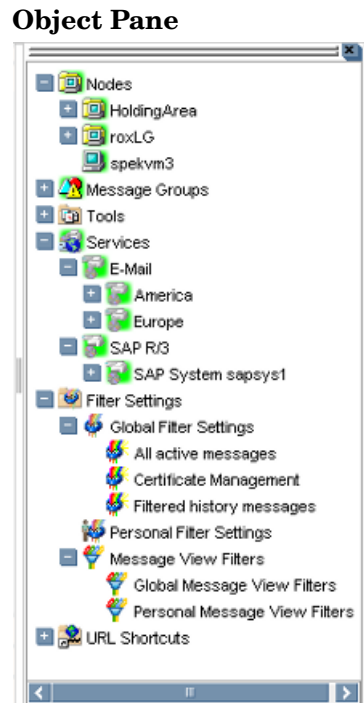
Scripts or programs that have been integrated into HPOM. For details, see “Tools” on page 48.

All shortcuts are saved in a console settings file. For details, see “Saving Console Settings” on page 168.

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



The object tree contains the following branches:

❑ **Nodes**

Systems, printers, or any other element in the network environment. For details, see “Nodes” on page 44.

❑ **Message Groups**

Message groups for which a particular operator is responsible. For details, see “Message Groups” on page 46.

❑ **Tools**

Scripts or programs that have been integrated into HPOM. For details, see “Tools” on page 48.

❑ **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 “Filter Settings” on page 49.

❑ **URL Shortcuts**

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

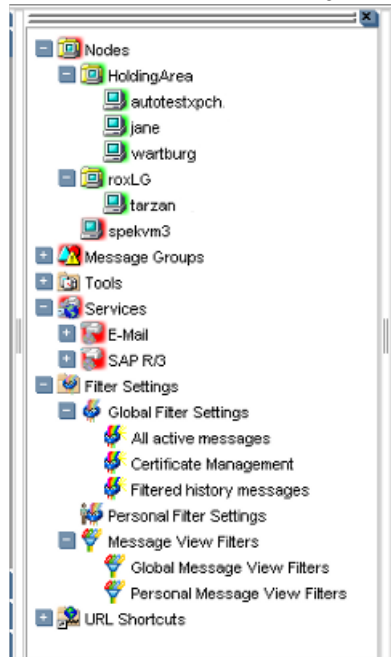
NOTE

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 112.

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 HPOM.

Figure 1-4 Nodes Folder in the Object Tree



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 the plus sign (+) next to the folder opens the folder and displays the individual nodes of the layout group.

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 tools (for example, the IP Map) is not included.

Depending on how HPOM 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.

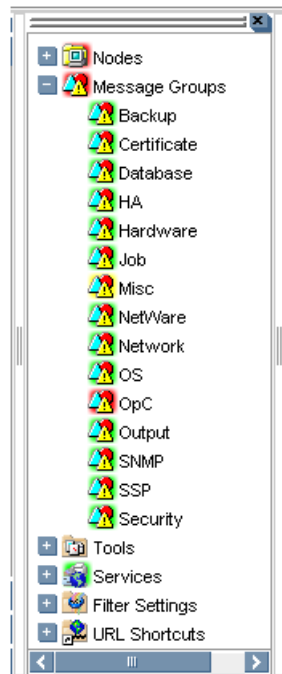
For information about message colors, see the following:

- ❑ “Message Group Colors” on page 47
- ❑ “Message Colors” on page 65
- ❑ “Message Severity Coloring” on page 119
- ❑ “Message Fields” on page 525

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. HPOM 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



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:

- ❑ “Message Colors” on page 65
- ❑ “Message Severity Coloring” on page 119
- ❑ “Message Fields” on page 525

Organizing Message Groups

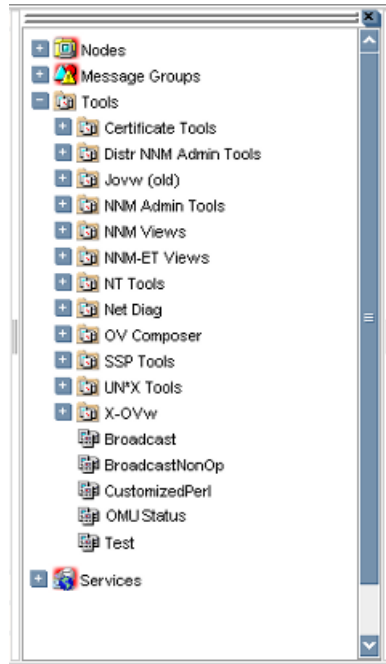
Messages are organized into groups to simplify message management, and to let you do your work in a task-oriented way. For example, one operator can be responsible for backups and output, and another operator can be responsible for network, operating system, and security aspects of message management.

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.

Tools

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

Figure 1-6 Tools Folder in the Object Tree



The HPOM administrator first examines your environment, then determines which tools you need to maintain it. Each tool has predefined start-up attributes, including a list of the managed nodes for individual operators.

Tools 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 HPOM monitor agent, and send controlling commands, such as `df` or `bdf`.

Filter Settings

The `Filter Settings` folder in the object tree contains icons for the following types of filters, as shown in Figure 1-7:

❑ Message browser filters

Global and personal message browser filters are stored in the `Global Filter Settings` and the `Personal Filter Settings` folders.

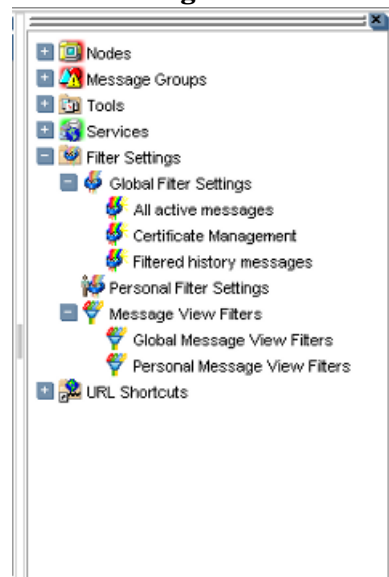
❑ Message view filters

Global and personal message view filters are stored in the `Global Message View Filters` and `Personal Message View Filters` folders.

For more information about the different types of message filters, see “Filtering Message Browsers” on page 67

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 message browser, and apply your filter settings to it.

NOTE

Only HPOM administrators are allowed to create global filters. As an operator, you can add filters to the personal filters folder only.

To access a saved filter, you select the `Filter Settings` group from one of two locations:

❑ **Shortcut Bar**

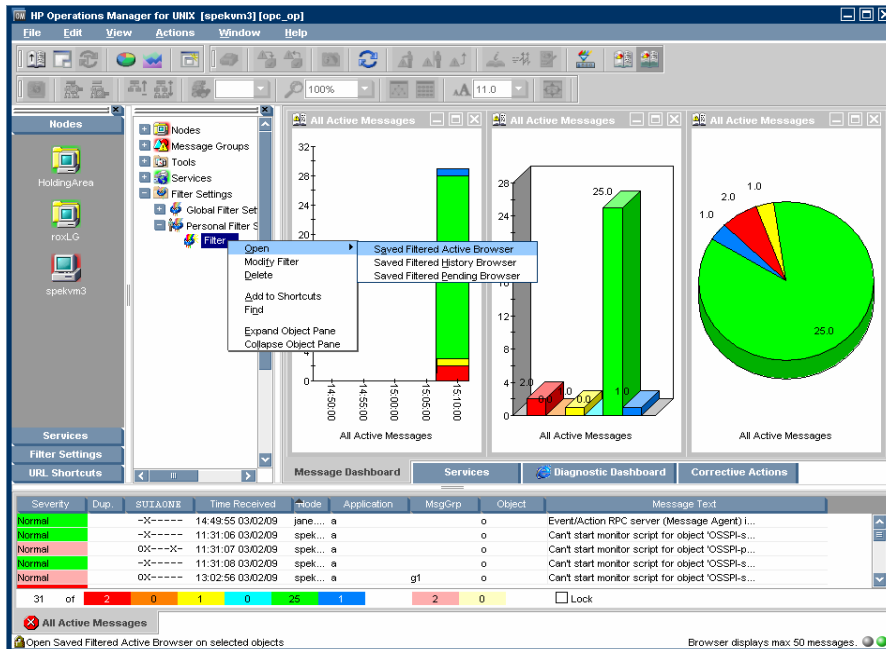
For details, see “Shortcut Bar” on page 40.

❑ **Object Pane**

For details, see “Object Pane” on page 42.

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

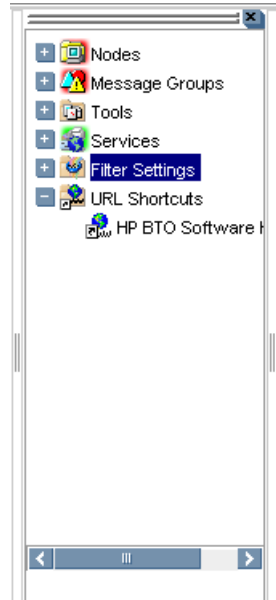
Figure 1-8 Personal Message Browser Filters in the Filter Settings Area of the Object Pane



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



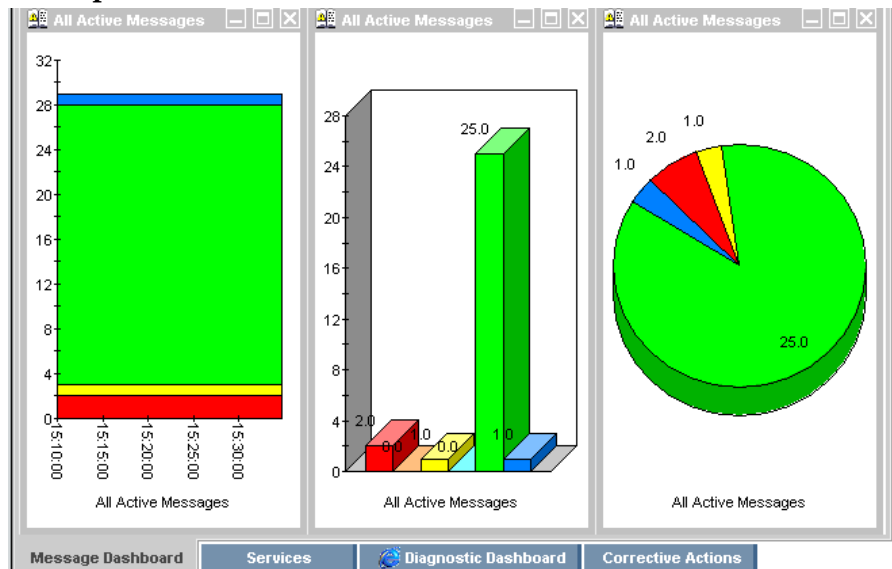
You may have a variety of URLs provided by your HPOM administrator. The URL Shortcuts folder enables you to define new shortcuts to URLs that you use frequently. These shortcuts are saved in your personal console sessions files.

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 pop-up menus in the workspace pane, see “Workspace Pane Pop-up Menu” on page 83.

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 129.

Services

Displays only if Service Navigator is installed and configured. For details, see “Services Workspace” on page 55.

Diagnostic Dashboard

For details, see “Diagnostic Dashboard Workspace” on page 56.

Corrective Actions

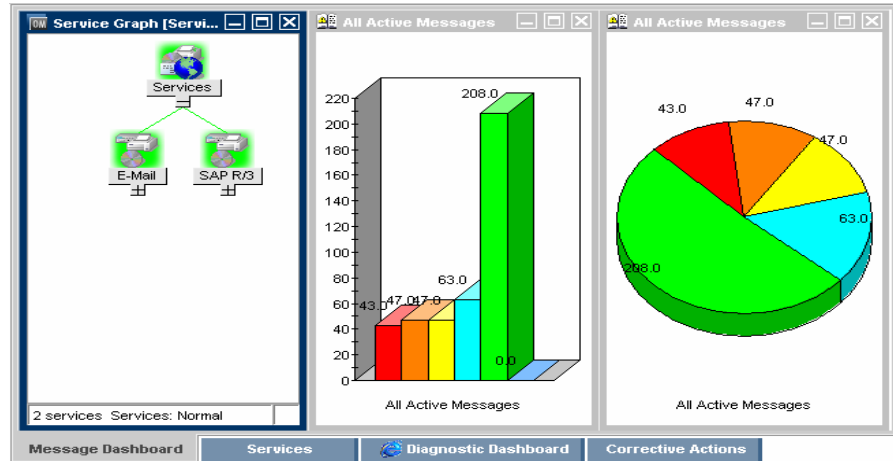
For details, see “Corrective Actions Workspace” on page 57.

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.

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 129.

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.

Diagnostic Dashboard Workspace

The Diagnostic Dashboard tab is reserved for other tools that integrate with HPOM.

For example, the following tools provide integration points for HPOM:

❑ Performance

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

❑ 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 tools and protocols in use, and supports duplicate IP and firewall environments.

❑ Internet Services

HP 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 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.

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

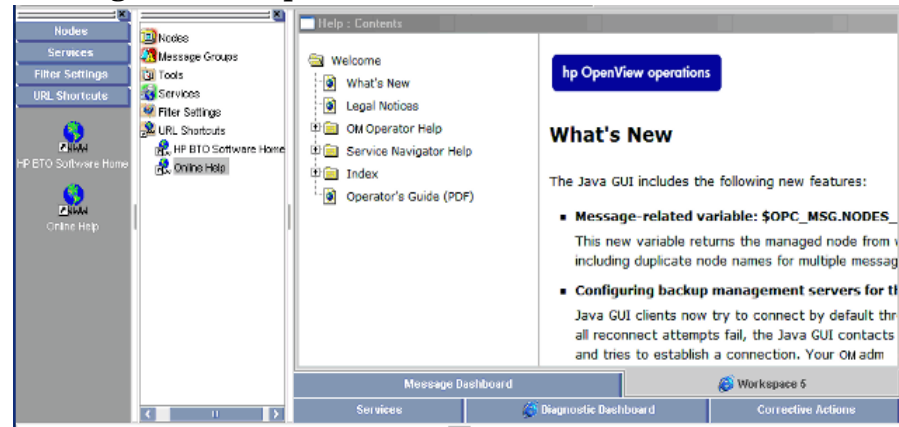
For more information about reviewing action status in the Corrective Actions workspace, see “Evaluating Action Results in the Corrective Actions Workspace” on page 141.

Online Help Workspace

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

Figure 1-12

Starting Online Help from the Shortcut Bar



NOTE

The Online Help workspace is not an operator default assigned by the system. It can be defined by the HPOM administrator on the HP Operations management server. For more information, see “Operator Defaults Assigned by the HPOM Administrator” on page 165.

Updating the Current Workspace

Updating the current workspace only applies to tools 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 tool. When you choose a different message and update the URL tool, 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.

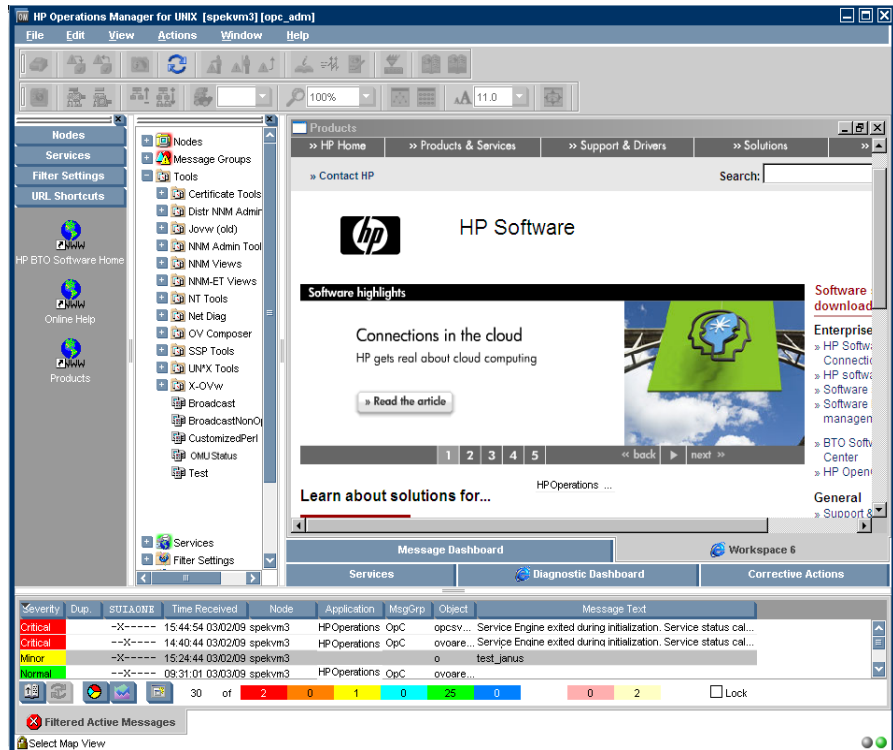
For example, you could set up a tool with the following URL:

`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.

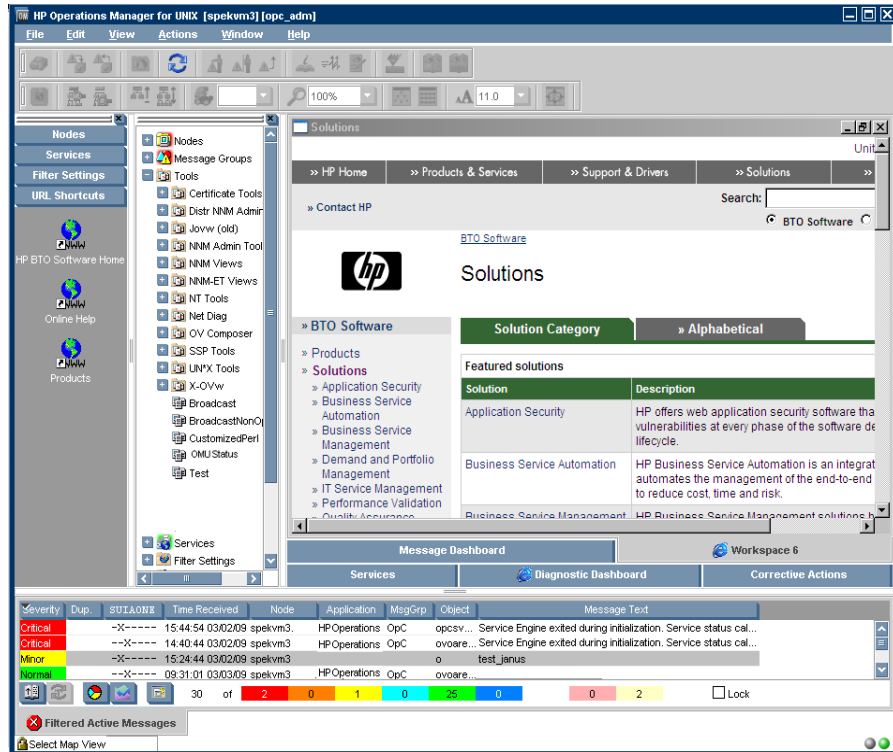
In Figure 1-13, the first message, products, is selected, and the URL tool is started.

Figure 1-13 Updating a URL Tool for “products”



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

Figure 1-14 Updating a URL Tool for “solutions”



As a result, the following page is loaded:

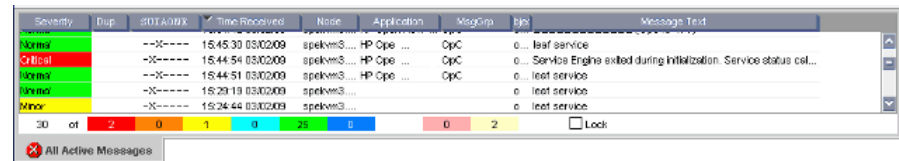
<http://www.openview.hp.com/solutions>

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 “Message Fields” on page 525. For details about pop-up menus in the browser pane, see “Browser Pane Pop-up Menu” on page 85.

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 clearing 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

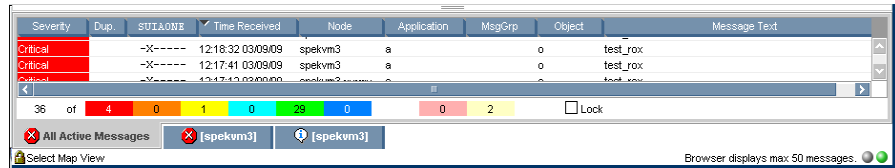
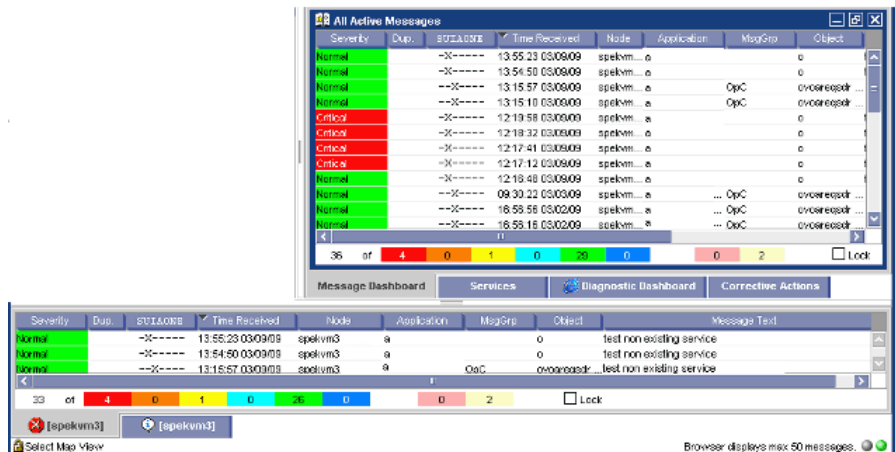


Figure 1-17 shows one message browser moved from the browser pane to the workspace pane.

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



Message Browser

HPOM 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 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). HPOM collects messages from the managed nodes of the message groups assigned to you, and delivers them to your GUI client.

NOTE

The message browser can also display GIF and JPEG images, and URLs as hyperlinks. 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.

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

Figure 1-18

Active Messages Browser

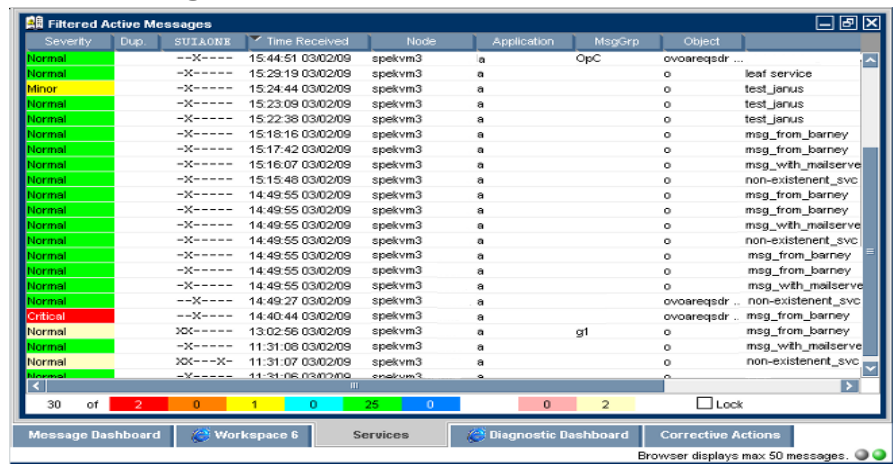


Figure 1-19 shows the message headline portion of the message browser.

Figure 1-19

Message Browser Headline

Severity	Dup.	SUIAONE	Time Received	Node	Application	MsgGrp	Object	Message Text
----------	------	---------	---------------	------	-------------	--------	--------	--------------

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

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).

HPOM 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 323.

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

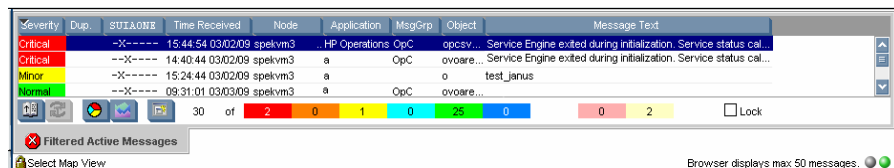
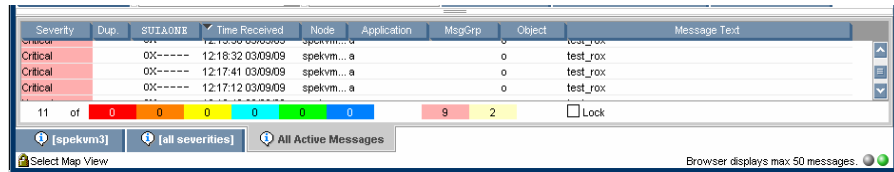


Figure 1-21 shows coloring that is changed after all critical and major messages were unacknowledged in the filtered history message browser.

Figure 1-21

Color Change After Messages Unacknowledged



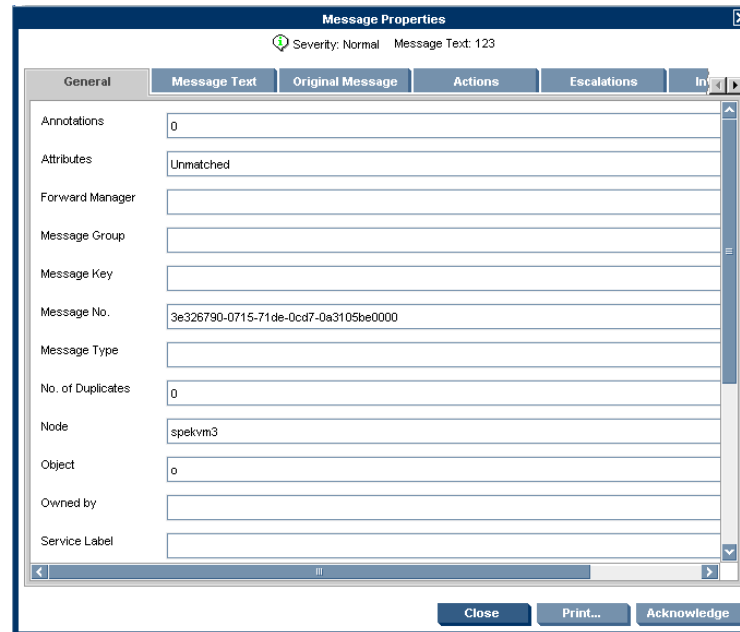
Messages

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 HPOM 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 HPOM 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 window, as shown in Figure 1-22.

Figure 1-22

Message Properties Window



This window 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 window 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 window is opened from the filtered pending messages browser.

Filtering Message Browsers

By default, an active message browser displays the latest 50 messages for which you are responsible. You can change the set of visible messages by increasing or decreasing the default limit so that more or fewer messages are displayed, and you can apply a message filter so that only messages that match the filter are displayed.

HPOM distinguishes between the following types of message filters:


❑ **Message browser filters**

Message browser filters consist of criteria that define which messages are loaded into the message browser from the database. Message browser filters create a filtered active, history, or pending messages browser. The word `Filtered` in the browser's title bar indicates that a filter is applied to the message browser. The word in brackets (for example, `[Oracle]` in Figure 1-23 on page 70) represents the filter name.

Message browser filters are evaluated on the management server. This evaluation reduces the network traffic between the Java GUI client and the management server because fewer messages are transferred. However, the filter evaluation may increase the workload of the management server where the filtering takes place.

❑ **Message view filters**

Message view filters temporarily hide messages from view. They consist of criteria and rules that define which of the already loaded messages are displayed in an already existing message browser. The loaded messages may already have gone through a first level of filtering applied through message browser filters. In this case, message view filters apply a second level of filtering.

The message view filter icon  on the message browser itself and on the message browser headline indicates that a message view filter is applied to the message browser. Figure 1-23 on page 70 shows an example of a filtered active messages browser with a message view filter applied to the `Application` and `Object` message browser columns.

Message view filters are evaluated on the Java GUI client. As a result, they produce quicker results than message browser filters because no additional messages need to be transferred from the management server.

NOTE

Using message view filters as first-level filters on a history message browser showing all history messages may increase the memory usage on the management server because all history messages must first be retrieved from the database before a message view filter can be applied. For more information about history message browsers, see “Filtered History Message Browser” on page 71. This does not apply to active or pending messages.

You can save filters, and then reuse them later on. Administrators can create global filters that are available to all operators. Any user can create personal filters that are available for their personal use only.

Filtered Active Message Browser

A filtered active message browser is the result of applying message browser filters to the messages you are responsible for.

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 window in the General tab. See the “Preferences Dialog Box” on page 498 for more information.

Figure 1-23 shows active messages in a sample filtered active message browser that also has message view filters applied.

Figure 1-23 Active Messages in a Filtered Active Message Browser

Severity	Dup.	SUIAONE	Time Received	Node	Application	MsgGrp	Object
Normal		---S-X-	22:25:14 02/23/07	ligety.deu.hp.com	alarmgen	Performance	Disk
Minor		---S-X-	22:20:10 02/23/07	ligety.deu.hp.com	alarmgen	Performance	Disk
Minor		---S-X-	22:10:18 02/23/07	ligety.deu.hp.com	alarmgen	Performance	Disk
Normal		---S-X-	22:00:10 02/23/07	ligety.deu.hp.com	alarmgen	Performance	Disk
Minor		---S-X-	21:50:15 02/23/07	ligety.deu.hp.com	alarmgen	Performance	Disk
Normal		---S-X-	21:40:07 02/23/07	ligety.deu.hp.com	alarmgen	Performance	Network
Minor		---S-X-	21:40:05 02/23/07	ligety.deu.hp.com	alarmgen	Performance	Disk
Minor		---S-X-	21:35:16 02/23/07	ligety.deu.hp.com	alarmgen	Performance	Network
Normal		---S-X-	21:30:11 02/23/07	ligety.deu.hp.com	alarmgen	Performance	Disk
Minor		---S-X-	21:20:02 02/23/07	ligety.deu.hp.com	alarmgen	Performance	Disk
Normal		---S-X-	21:15:13 02/23/07	ligety.deu.hp.com	alarmgen	Performance	Disk
Minor		---S-X-	21:10:07 02/23/07	ligety.deu.hp.com	alarmgen	Performance	Disk
Normal		---S-X-	20:50:06 02/23/07	ligety.deu.hp.com	alarmgen	Performance	Disk
Minor		---S-X-	20:45:01 02/23/07	ligety.deu.hp.com	alarmgen	Performance	Disk

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 Browser Filters

You can define a message browser filter to load only a subset of the messages you are responsible for.

Define Message View Filters

You can define a message view filter to display only a subset of the already loaded 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 tools 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 203.

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.

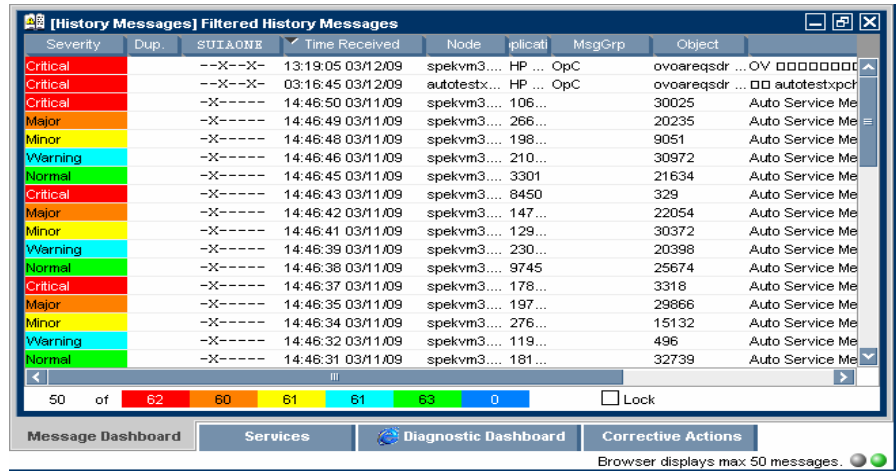
You can use the filtered history message browser to view these messages and unacknowledge them. Examining acknowledged messages can be very helpful when you want to find out more about techniques you used previously to solve problems.

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 criteria of your message browser filter 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



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:

- ❑ Performing a right-click on the selected message (pop-up menu).
- ❑ Selecting Actions: Messages from the menu bar.

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

NOTE

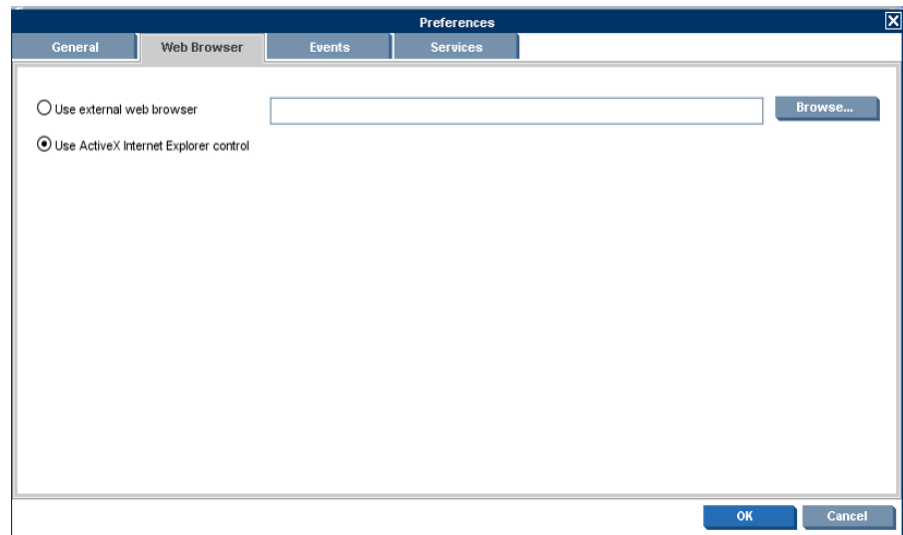
The severity level of messages in the filtered pending messages browser does not affect status propagation in the `Nodes` and `Message Groups` folders, and so on.

Integrated Web Browsers

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

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

Figure 1-25 Web Browser Tab in Preferences Window



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

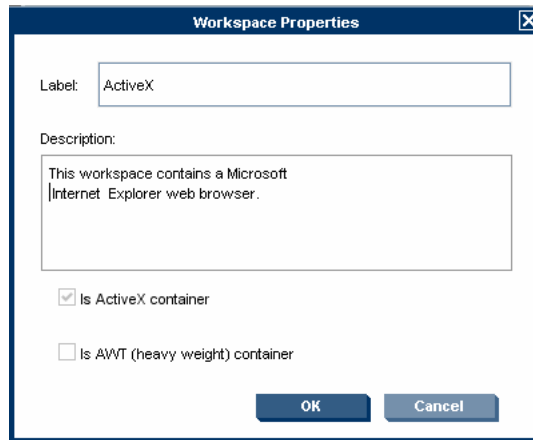
❑ **External Web Browser**

You can access an external web browser, such as Microsoft Internet Explorer or Mozilla Firefox.

❑ **ActiveX Control**

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

Figure 1-26 Defining ActiveX Workspace in Workspace Properties Window



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:

- ❑ 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.
- ❑ Maximum number of messages that the message browser is configured to display, displayed in the right corner of the status bar.
- ❑ 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.

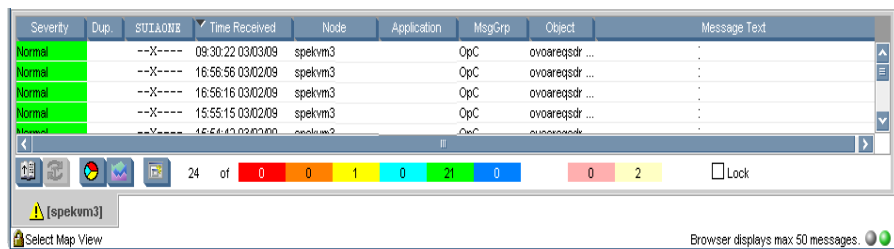
The green indication light changes to red to indicate that the communication between the Java GUI and the management server is in progress.

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

Figure 1-27 shows the Java GUI status bar with indicators.

Figure 1-27

Status Bar



Menu Bar

The menu bar is the strip of pull-down menus at the very top of the Java GUI, as shown in Figure 1-28. You can use these menus to perform operations throughout the Java GUI.

Figure 1-28

Menu Bar



Toolbar

The toolbar is the row of icons just below the menu bar, as shown in Figure 1-29. The toolbar provides menu choices that apply to the objects in the object pane, workspace pane, and browser pane.

Figure 1-29

Toolbar



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 289.

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

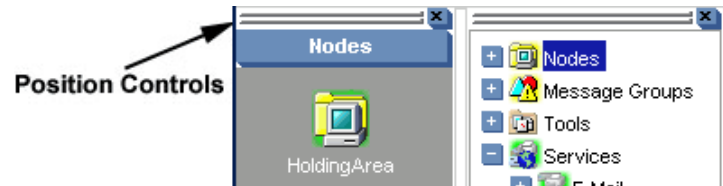
The Go to Service drop-down list is available only from the toolbar.

Position Controls

The position controls are the narrow band of horizontal bars just below the toolbar, as shown in Figure 1-30. These bars enable you to move the shortcut bar and object pane horizontally.

Figure 1-30

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 clearing `View: Position Controls` in the menu bar.

Pop-up Menus

HPOM provides pop-up menus for each major area of the Java GUI:

❑ **Shortcut Bar**

For an overview of pop-up menus in the shortcut bar, see “Shortcut Bar Pop-up Menu” on page 81.

For an overview of the shortcut bar itself, see “Shortcut Bar” on page 40.

❑ **Object Pane**

For an overview of pop-up menus in the object pane, see “Object Pane Pop-up Menu” on page 82.

For an overview of the object pane itself, see “Object Pane” on page 42.

❑ **Workspace Pane**

For an overview of pop-up menus in the workspace pane, see “Workspace Pane Pop-up Menu” on page 83.

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

❑ **Browser Pane**

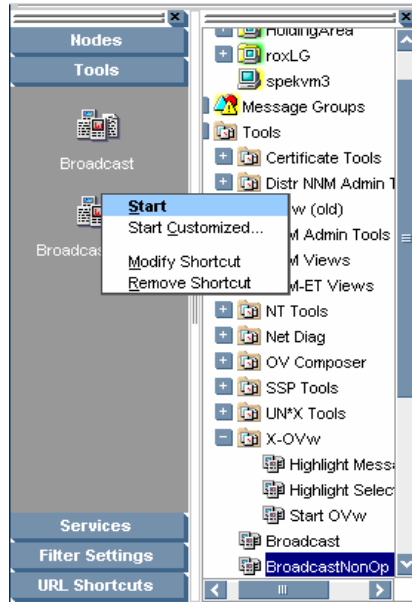
For an overview of pop-up menus in the browser pane, see “Browser Pane Pop-up Menu” on page 85.

For an overview of the browser pane itself, see “Browser Pane” on page 62.

Shortcut Bar Pop-up Menu

Figure 1-31 shows a pop-up menu for a selected tool in the shortcut bar. To access this menu, right-click any shortcut bar item.

Figure 1-31 Pop-up Menu for a Selected Tool in the Shortcut Bar



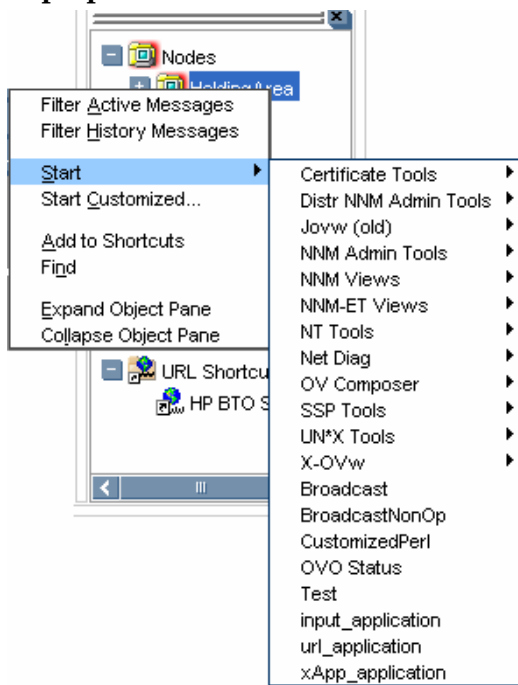
NOTE For a description of the shortcut bar, see “Shortcut Bar” on page 40.

Object Pane Pop-up Menu

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

Figure 1-32 shows how to generate a predefined report from the pop-up menu in the object pane. To access this menu, right-click any object pane item.

Figure 1-32 Pop-up Menu for a Particular Node in the Object Pane



NOTE

For a description of the object pane, see “Object Pane” on page 42.

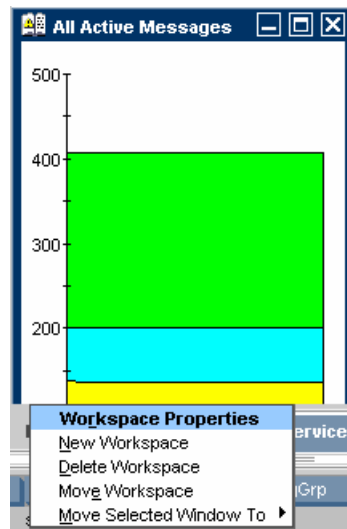
Workspace Pane Pop-up Menu

The workspace pane contains two kinds of pop-up menus:

❑ Tab Menu

To access this menu, right-click a tab at the bottom of the workspace pane, as shown in Figure 1-33.

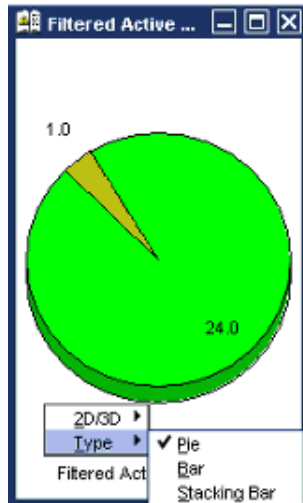
Figure 1-33 Pop-up Menu on a Tab in the Workspace Pane



❑ **Workspace Menu**

To access this menu, right-click a workspace in the workspace pane, as shown in Figure 1-34 on page 84.

Figure 1-34 Pop-up Menu on a Workspace Pane

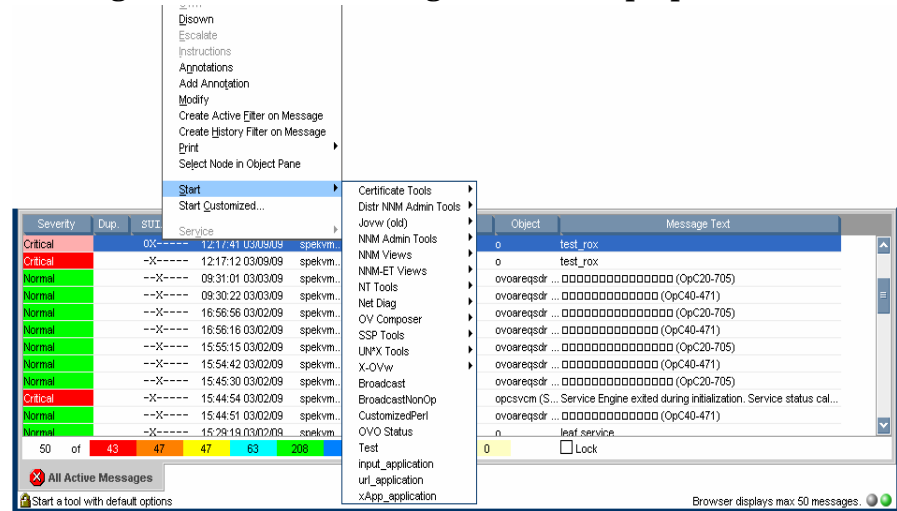


Browser Pane Pop-up Menu

Figure 1-35 shows the context sensitive pop-up menu for tool launch in the browser pane. To access this menu, right-click a message in the browser pane.

Figure 1-35

Starting an Tool from a Message Browser Pop-up Menu



NOTE

For a description of the browser pane, see “Browser Pane” on page 62.

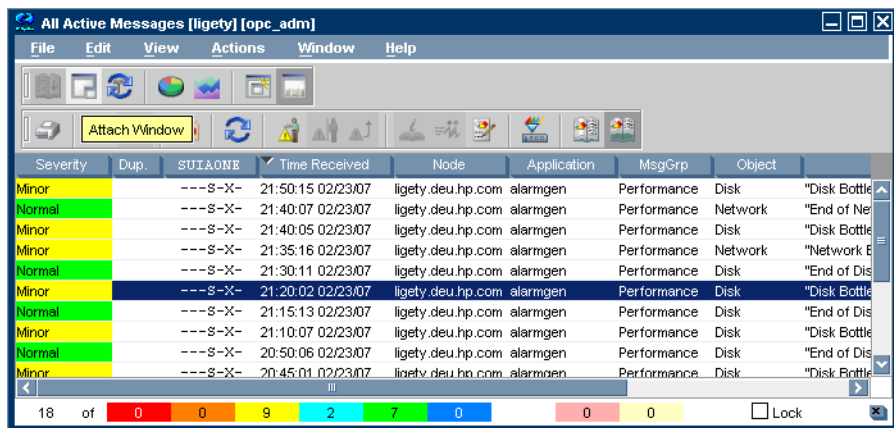
Detached Windows

Detached windows are windows that are separated from the main Java GUI window so that they can be moved independently. Detaching a window is helpful, for example, if you want to extend a window to another monitor to increase the amount of available space on your screen, or if you want to monitor the content of a window regardless of other activities on your computer.

You can detach message browsers, service graphs, service submaps, and service custom maps by selecting the window to detach and then clicking the **Detach Window** icon in the main toolbar. HPOM places the detached window at the center of your screen and adds a menu and toolbar to the detached window.

Figure 1-36 shows a detached message browser. To re-attach a detached window, select the window and click the **Attach Window** icon in the toolbar of the detached window.

Figure 1-36 Detached Message Browser



Detached windows are saved along with their settings and positions as part of the console session settings so that they are restored the next time you start a Java GUI session.

To further increase the amount of available space in detached windows, you can temporarily hide any of the following window components:

- ❑ Menu bar and toolbars
- ❑ Status summary area in message browsers
- ❑ Horizontal scroll bar in message browsers

TIP

To perform an operation on messages or services displayed in the main window and a detached window, use the **CTRL** key to select multiple objects in both windows.

Creating the HPOM GUI Start-up Message

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

You can create the HPOM GUI start-up 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 HPOM GUI start-up message only as the `root` user.

The HPOM GUI start-up message displays, if it is enabled, after the log-on window. If the agreement defined in this message is accepted, HPOM starts. Otherwise, the log-on sequence is stopped immediately.

If the HPOM GUI start-up message is disabled, HPOM starts right after the log-on window.

For more information on HPOM GUI start-up message creation, and the prerequisites that must be taken into account, see the *HPOM Administrator's Reference*.

Performing Drag and Drop Operations

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

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

NOTE

Drag operations in the 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 to which 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. For the description of these actions, see “Sources and Standard Drag Operation” on page 90 and “Targets and Drop Associated Actions” on page 91.

Table 1-1 Supported Drag and Drop Operations

Targets Sources	Shortcut bar	Workspace pane	Workspace tab	Object pane	Filter window
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 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. For more information about the actions performed as a result of drag and drop operations, see “Targets and Drop Associated Actions” on page 91.

When you start dragging an object, the cursor changes to reflect the current status of the operation. The cursor 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 97.

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 pop-up 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 to 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 the mouse over a shortcut group button opens the shortcut group. This helps you to choose a suitable shortcut group onto which to drop the object.

- *Scroll buttons*

Hovering 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

By 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	
	Tools	Starts a tool 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 the mouse 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 pop-up menu by 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	Message browser	Creates a new personal filter from message browser and adds it to the object pane.

❑ **Filter window**

Table 1-7 Filter Window 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 window.	
Service graph		Adds a service name into the list in the Symbols and Objects tab.

Drag and Drop Operations Between the 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 1-37 presents a message browser text in Microsoft Excel.

Figure 1-37 Message Browser Text in Microsoft Excel

The screenshot shows a Microsoft Excel window titled 'Microsoft Excel - Book2'. The spreadsheet contains a table with 23 rows of data. The columns are labeled A through L. The data is as follows:

	A	B	C	D	E	F	G	H	I	J	K	L
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_disl	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. For more information, see “Sources and Standard Drag Operation” on page 90.

❑ 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 97.

To invoke the special drag mode, follow these steps:

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

When this mode is on, the 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 you do one of the following:

- Perform the drop operation.
- Move the mouse outside the client window where you performed dragging in the special mode.

You can also turn to the 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 is any kind of window that can be opened in the workspace (except an ActiveX web browser).

Client windows can be any of the following types:

- ❑ Application Output Panel
- ❑ Message Browser Charts
- ❑ 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 by 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.

Dragging an object 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 by 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.

NOTE

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

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

- *Dragging selected services*

If one or more services are selected, dragging one of them moves 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.

Cockpit View

The HPOM cockpit view is a web-based interface that displays the state of the environment monitored by HPOM. Cockpit view helps users to quickly assess the health and readiness of the environment to support the business.

A cockpit view consists of two main parts:

- **Indicator panel**

The colored bars and gauges at the top of a cockpit view indicate the status of message filters and groups of message filters, based on the status of the messages that match the filter criteria.

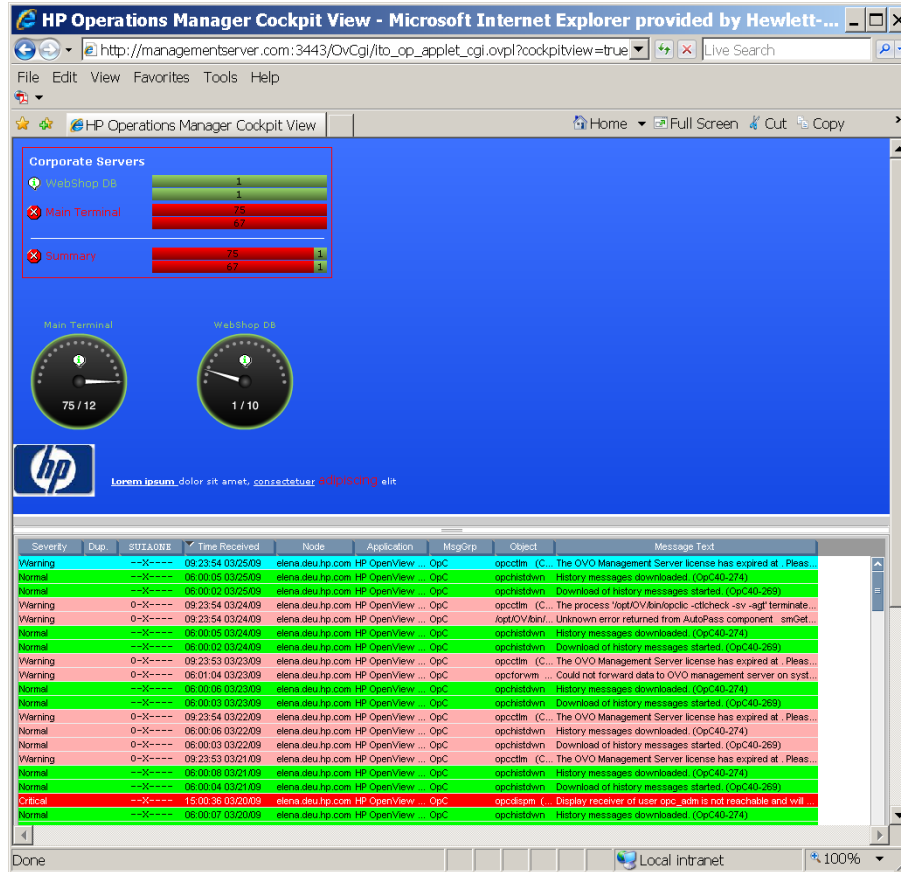
- **Message Browser**

The Java GUI message browser displays at the bottom of a cockpit view. The menu bars and tool bars can be displayed, if required.

Figure 1-38 on page 100 shows an example cockpit view.

Figure 1-38

Cockpit View



Message Filters

To display the status of message filters, cockpit view provides the following elements:

- **Icon**

The icon indicates the current status of the message filter.

- **Name, label, or background**

The filter name, label, or background of the text area of a message filter can be color-coded to indicate the current status of the message filter.

- **Message bars**

The upper message bar shows the total number of all messages by severity. The lower message bar shows the number of all unowned messages by severity.

A hyphen (-) indicates that the Java GUI is still loading messages and that the filter criteria are still being evaluated. The hyphen is also displayed in case the filter with the specified file name does not exist. If a bar displays zero (0) messages, no messages currently match the criteria of the filter.

If the specified width of the message bars is too small, the message bars are truncated and shaded to indicate that some information is hidden. You can view the complete information by accessing the tool tip of a truncated message bar.

TIP

You can configure each element to be shown or hidden from view.

The status of a message filter is equal to the most severe, unowned message.

Figure 1-39 on page 101 shows that the message filter Main Terminal has a critical status because there are 75 critical messages.

Figure 1-39

Message Filter

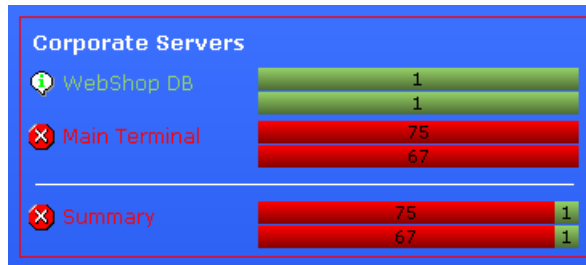


To view the messages that match the criteria of the filter, you can click the message filter. A new message browser tab opens and displays the messages.

Message Filter Groups

You can collect multiple message filters into message filter groups. As with message filters, you can show message filter groups with an icon, a name or label, a background color, and message bars representing the number of messages by severity, as shown in Figure 1-40 on page 102.

Figure 1-40 Message Filter Group



For each message filter group, you can choose to display filters for active messages, for pending messages, or for history messages.

Optionally, for each message filter group, you can show a summary status line that indicates the current status of the group. A message filter group aggregates the messages of all contained message filters, and calculates their status, based on the total number of messages that match the criteria of the filters.

When you click the group summary, a new message browser tab opens and displays all messages that match the criteria of the message filters that are members of the message filter group.

Requirements for Message Filters

Before you configure a message filter in the Java GUI for use in a cockpit view, make sure the filter meets the following cockpit view requirements:

- **Global message filters**

The Java GUI enables you to define global and personal message filters. If you want to use a message filter in a cockpit view, the filter must be of the type global. Global filters must be configured by an administrator.

- **Named message filters**

To insert a message filter in a cockpit view, the filter must have a name that is unique across the HPOM environment.

TIP

Use labels to show message filters under different names in a cockpit view.

For more information about setting up message filters, see “Filter Settings” on page 49.

Health Gauges

A health gauge is an alternative method of displaying a message filter. A health gauge can display an icon, a name or label, a background color, and an indicator showing the number of messages in relation to a maximum value, as shown in Figure 1-41 on page 103.

Figure 1-41

Health Gauges



For each health gauge, you can choose to display a filter for active messages, pending messages, or history messages.

A health gauge shows you at a glance how many messages match the criteria of the filter. It compares the number of messages with a set of thresholds. It then calculates its current status accordingly.

When you configure a health gauge, you define the orientation, maximum value, and thresholds of the scale. A health gauge can have a positive or negative orientation. A positive orientation means that a lower value is more critical than a higher value. The reference value is the maximum, or best, value. If you choose a negative orientation, higher values are considered to be more critical than lower values.

The thresholds define the segments of the scale. The status of a health gauge changes as thresholds are exceeded.

When you click a health gauge, a new message browser tab opens and displays the messages for that message filter.

Free-Text Areas

Free-text areas are sections in a cockpit view that display single lines of text that you write, as shown in Figure 1-42 on page 104. You can choose the content, position, and format of lines of text.

Figure 1-42

Free-Text Areas



Lorem ipsum dolor sit amet, consectetur adipiscing elit

NOTE

Free-text areas are static. They do not display status information. In a free-text area, you can select the text, but you cannot click it.

Images

You can place images anywhere in a cockpit view, as shown in Figure 1-43 on page 104. You can choose the image itself, the size, and the position of the image.

Figure 1-43

Images



Starting a Cockpit View

For instructions on configuring the cockpit view, see *HPOM Administrator's Reference*.

To start a cockpit view, follow these steps:

1. In a supported web browser, type the following URL:

```
http://<management_server>:3443/OvCgi/ito_op_applet_cgi.  
ovpl?cockpitview=true&view=<layout>
```

Replace *<management_server>* with the hostname of your management server. Replace *<layout>* with the name of the layout configuration file. (Omit the *.xml* file type extension.)

TIP

The following URL starts the sample cockpit view provided by HP:

```
http://<management_server>:3443/OvCgi/ito_op_applet_cgi.  
ovpl?cockpitview=true
```

-
2. *Optional.* Customize the startup options of a cockpit view.

For instructions, see “Customizing Cockpit View Startup Options” on page 105.

NOTE

When you start a cockpit view, a Java GUI client automatically starts and runs as an applet within the cockpit view. Depending on the authentication settings of the Java GUI, you may need to enter your user name and password. For details, see “Security and Authentication” on page 107.

Customizing Cockpit View Startup Options

The startup options enable you to customize the initial configuration of a cockpit view.

For example, you can customize the following:

- Refresh interval
- Number of the displayed active and history messages
- Display of the main menu bar and of the tool bars

To customize the initial startup of a cockpit view, you can add the options listed in Table 1-8 to the query part of the startup URL.

Table 1-8 Startup Options for a Cockpit View

Option	Description	Default
<code>gui.show.activemessages</code>	Maximum number of active messages the Java GUI displays in a message browser. Possible values are <code>all</code> or an integer.	<code>all</code>
<code>gui.show.historymessages</code>	Maximum number of history messages the Java GUI displays in a message browser. Possible values are <code>all</code> or an integer.	<code>all</code>
<code>gui.coloredmessagelines</code>	Whether the entire message line or just the severity column are colored in the message browser. Possible values are <code>true</code> or <code>false</code> .	<code>true</code>
<code>gui.refresh</code>	Interval in seconds after which the message browser refreshes.	<code>15</code>
<code>gui.mainmenu</code>	Whether the menu bar displays. Possible values are <code>true</code> or <code>false</code> .	<code>false</code>
<code>gui.toolbar.msgbrw</code>	Whether the message browser tool bar displays. Possible values are <code>true</code> or <code>false</code> .	<code>false</code>
<code>gui.toolbar.msg</code>	Whether the message tool bar is displayed. Possible values are <code>true</code> or <code>false</code> .	<code>false</code>
<code>gui.toolbar.svc</code>	Whether the service tool bar is displayed. Possible values are <code>true</code> or <code>false</code> .	<code>false</code>

The options are passed as name value pairs, separated by ampersands (&):

```
http://<management_server>:3443/OvCgi/ito_op_applet.cgi.ovpl  
?cockpitview=true&view=<layout>  
&<option>=<value>&<option>=<value>...
```

Example:

```
http://managementserver.hp.com:3443/OvCgi/ito_op_applet CGI.  
ovpl?cockpitview=true&view=MyLayout  
&gui.refresh=15&gui.showActiveMessage=all  
&gui.showHistoryMessage=all&gui.ColoredMessageLines=true  
&gui.mainmenu=false&gui.toolbar.msgbrw=false  
&gui.toolbar.msg=false&gui.toolbar.svc=false
```

Security and Authentication

Cockpit view uses the security and authentication processes of the Java GUI.

Depending on the security setup of the Java GUI, before you can access a cockpit view, you may need to do one of the following:

- Accept an HPOM server certificate.
- Enter information in the Login dialog box.

Firewall Environments

If a firewall exists between a cockpit view client and the management server, you can do one of the following:

- Configure the firewall to allow the Java GUI direct access to the management server.
- Configure the Java GUI to use a proxy server for all communication with the management server.

For more information about configuring security settings for the Java GUI, see the “Secure HTTPS Communication” on page 208.

Problem Solving Process

The HPOM problem solving process includes the following steps:

1. Detecting Problems

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

For details, see “Detecting Problems in Your Environment” on page 110.

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 122.

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 HPOM administrator:

- Tools
- Automatic actions
- Broadcast commands
- Operator-initiated actions
- Operator instructions
- Terminal access

For details, see “Solving Problems in Your Environment” on page 137.

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 155.

Detecting Problems in Your Environment

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

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

- ❑ **Monitoring Your Environment**

Explains how HPOM 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.

- ❑ **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.

- ❑ **Message Severity Coloring**

Explains how HPOM uses colors to indicate severity levels.

Monitoring Your Environment

To monitor your HPOM 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 217.

- ❑ **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 218.

- ❑ **Search the Object Pane**

You can search for a specific item in the object tree by using the basic search function or the advanced search function. For details, see “Searching the Object Pane” on page 112.

- ❑ **View Message Event Notifications**

You can automatically access and view a message associated with a problem you have already detected. For details, see “Message Event Notification” on page 113.

Searching the Object Pane

You can search for a specific item in the object tree by using the basic search function or the advanced search function in the Find window.

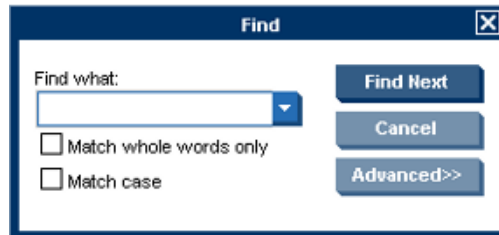
NOTE

To find out how to use the search function, see “To Search the Object Pane” on page 218.

The basic search enables you to search the entire object tree, as shown in Figure 1-44.

Figure 1-44

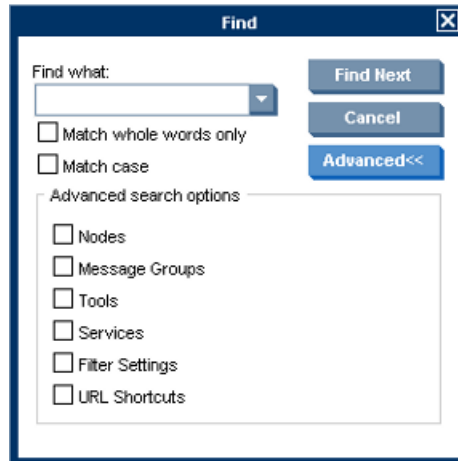
Basic Search of the Object Tree



The advanced search enables you to search selected sections of the object tree, as shown in Figure 1-45.

Figure 1-45

Advanced Search of the Object Tree



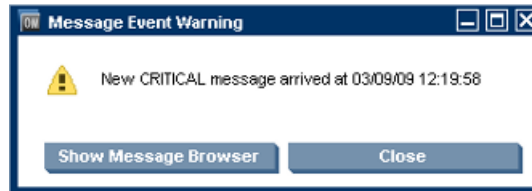
In both cases, the search begins at the top of the object tree, rather than from the selected item.

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 1-46 shows a message event warning.

Figure 1-46

Message Event Warning



To find out what to do when a message event notification window opens, see “To View Message Event Notifications” on page 219. To find out how to customize message event notification, see “Customizing Message Event Notification” on page 181.

Viewing Messages in the Message Browser

When you start the HPOM GUI, a message browser opens in the browser pane, and automatically displays the latest 50 of all active messages from the nodes assigned to you. You can change the number of messages displayed so that all 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 message browser filters. In addition, you can define message view filters to quickly isolate specific messages.

By locking the message browser, you can make sure that older messages you currently work on remain visible in the message browser while new messages arrive in the message browser.

To find out how to view all, selected, filtered, or old messages in the message browser, see “Viewing Messages” on page 220.

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**

By 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 HPOM 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 by 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).

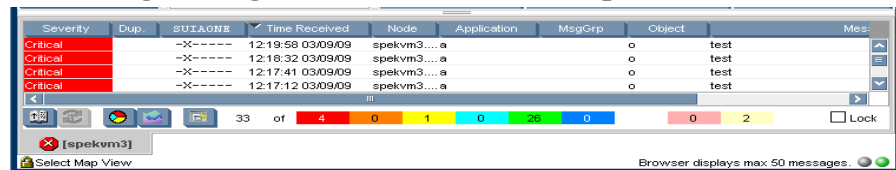
Another approach is to read each message as it is displayed in the message browsers. If you decide to follow this approach, you should be aware that your environment could require you to apply different policies to your message scanning.

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 1-47.

Figure 1-47

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 “Message Ownership” on page 139.

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 “Message Colors” on page 65.

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 HPOM 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.

There are two different read-only message types, setting the S flag to:

- N for NOTIFICATION messages (these messages can be (un)acknowledged and annotations can be added)
- R when message is operator level READ-ONLY (no operations are allowed on these messages)

Customizing Browser Columns to be Displayed

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

The Customize Message Browser Columns window has two tabs:

General

Enables you to select from default message attributes, as shown in Figure 1-48 on page 117.

❑ **Custom**

Enables you to select custom message attributes previously set by the HPOM administrator, as shown in Figure 1-49 on page 118. For an overview of custom message attributes, see “Custom Message Attributes” on page 127.

Figure 1-48 shows the General tab of the Customize Message Browser Columns window.

Figure 1-48

General Tab in the Customize Message Browser Columns Window

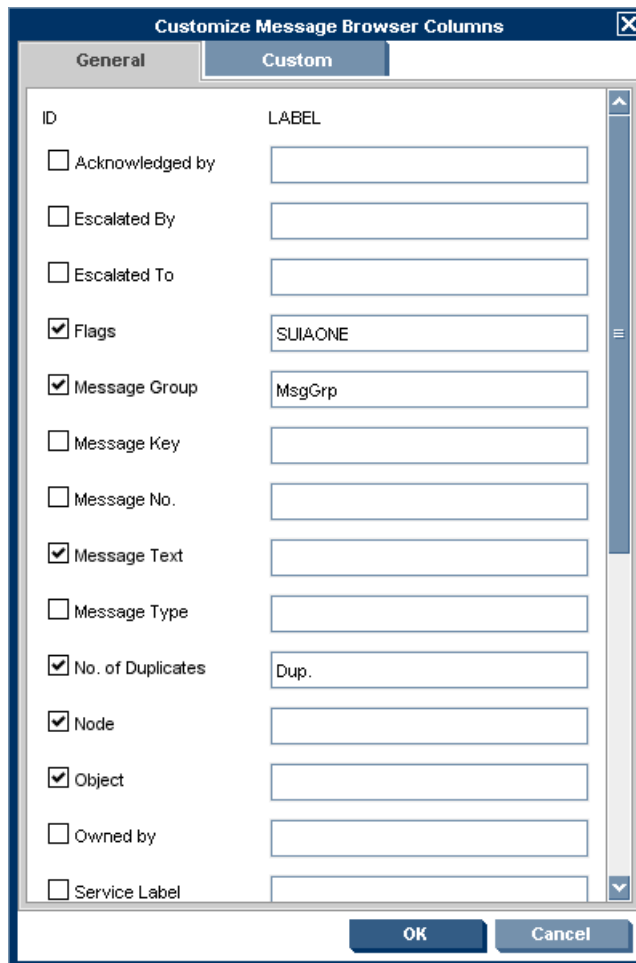
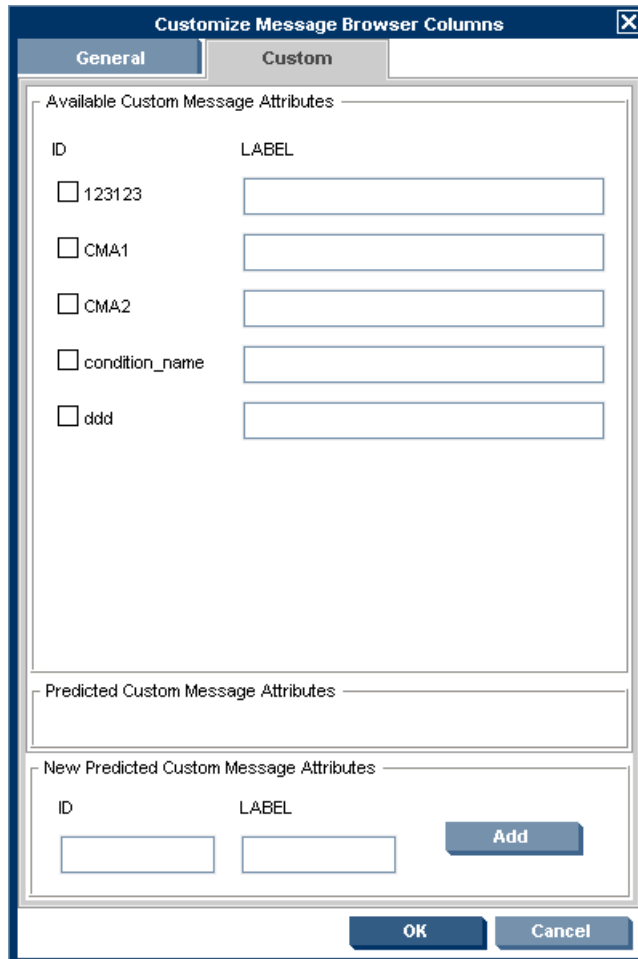


Figure 1-49 shows the Custom tab of the Customize Message Browser Columns window.

Figure 1-49 Custom Tab in the Customize Message Browser Columns Window



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 119.

For an overview of the shortcut bar itself, see “Shortcut Bar” on page 40.

❑ **Object Pane**

For details about coloring in the object pane, see “Coloring in the Shortcut Bar and Object Pane” on page 119.

For an overview of the object pane itself, see “Object Pane” on page 42.

❑ **Browser Pane**

For details about coloring in the browser pane, see “Coloring in the Browser Pane” on page 121.

For an overview of the browser pane itself, see “Browser Pane” on page 62.

Coloring in the Shortcut Bar and Object Pane

In the shortcut bar (see Figure 1-50 on page 120) and object pane (see Figure 1-51 on page 121), 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 colored green. For example, if a node in the shortcut bar and object pane contains nothing but messages with a severity of `Normal`, the node is colored green. 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 1-50

Coloring of Nodes in the Shortcut Bar

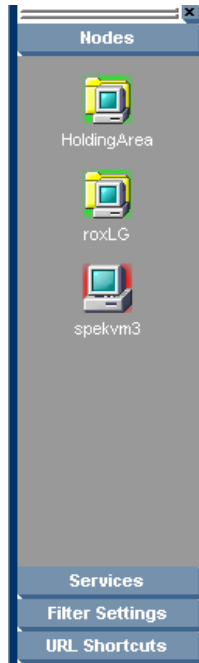
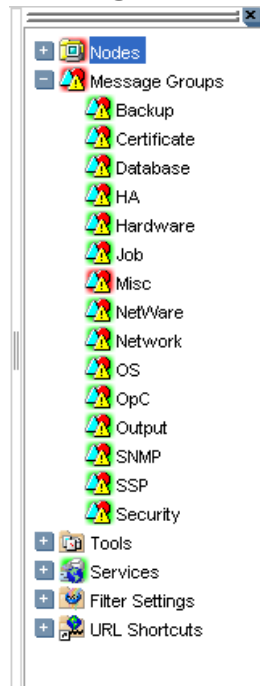


Figure 1-51 **Coloring in the Object Pane**



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 “Message Colors” on page 65.

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 logon merely notifies you of the fact that a user has logged on to a system.

This section includes the following information to help you understand how HPOM 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 window.
- ❑ **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 HPOM Variables**

Explains message attributes, including custom message attributes, that can be used in applications (tools).
- ❑ **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 HP Software 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 227.

You can modify and even forward the message to another operator or to the HPOM administrator. For details, see “To Send an HPOM Message to Another Operator” on page 227.

❑ **Detailed Information**

You view detailed information about a message by reviewing the Message Properties window. 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 228.

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 window. The Message Properties window contains the full details of a message, including all message attributes, as shown in see Figure 1-22 on page 67.

From this window, 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 window.

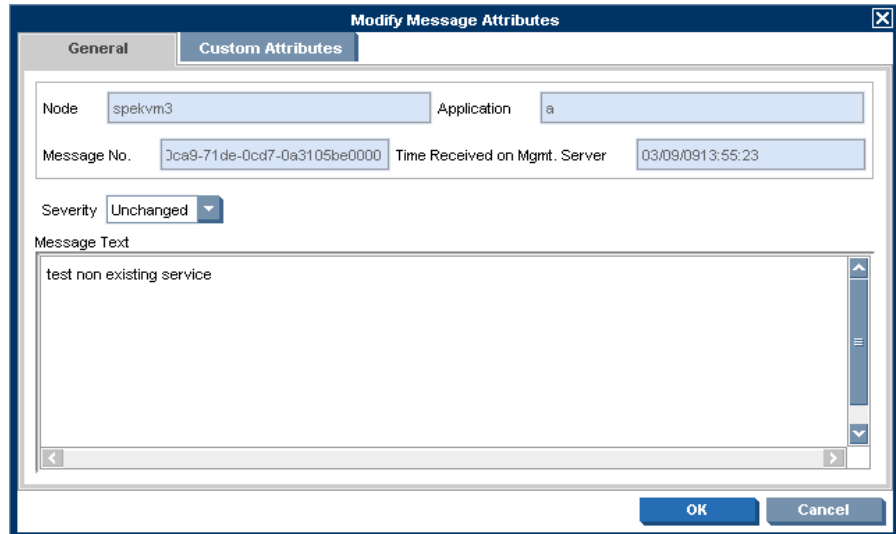
The **Modify...** button is displayed only if you have been granted the right to modify the attributes of a message.

Modifying Message Attributes

The Modify Message Attributes window enables you to modify the severity and the text of a message, as shown in Figure 1-52.

Figure 1-52

Modify Message Attributes Window



Use this window if you want to increase or decrease the severity of a message.

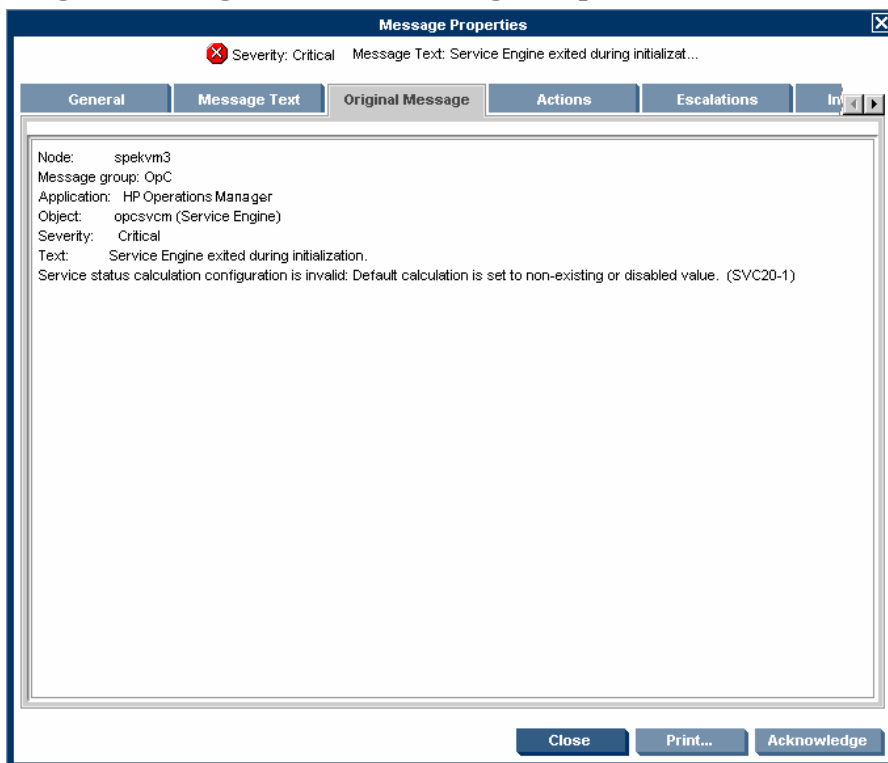
In the Modify Message Attributes window, the original message text is not changed, only the message text as it is presented by HPOM. All modifications are tracked through automatic annotations.

Reviewing the Original Message Text

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

Figure 1-53 shows an example of the Original Message tab in the Message Properties window.

Figure 1-53 Original Message Tab in the Message Properties Window



NOTE

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

Custom Message Attributes

Custom message attributes are message attributes that the HPOM 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.

HPOM 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 128.

❑ **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 tool 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 HPOM Variables” on page 151.

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 1-54.

Figure 1-54 Custom Message Attribute as a Column in the Message Browser

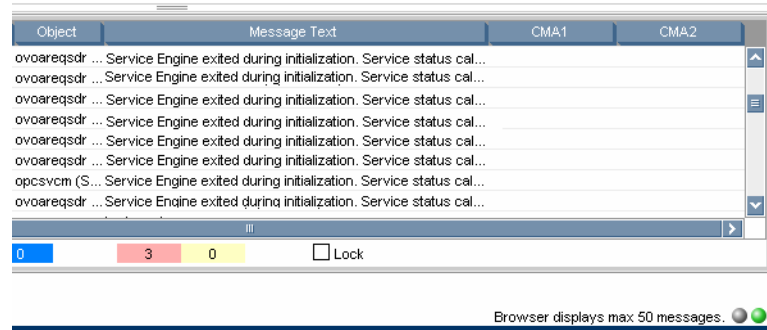
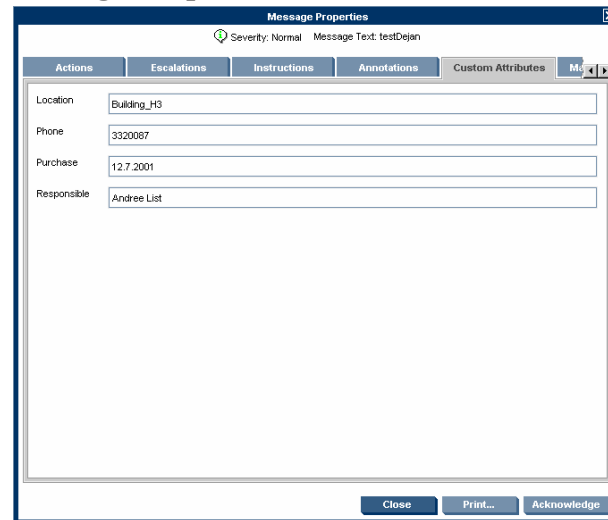


Figure 1-55 shows the Message Properties window with the Custom Attributes tab for available custom message attributes.

Figure 1-55 Message Properties Window 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 129.

❑ Services

If Service Navigator is installed and configured on your system, the 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 applications (tools) integrated with HPOM. These tools help you to further diagnose the problem. For details, see “Using HP Software Products in the Diagnostic Dashboard” on page 133.

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 “Current State Chart” on page 130.

❑ History Chart

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

For details, see “History Chart” on page 132.

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.

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 1-56 shows a current state chart, formatted as two-dimensional (2D) bar chart, displaying a number of messages with a specific severity.

Figure 1-56

Current State Chart as a Bar Chart

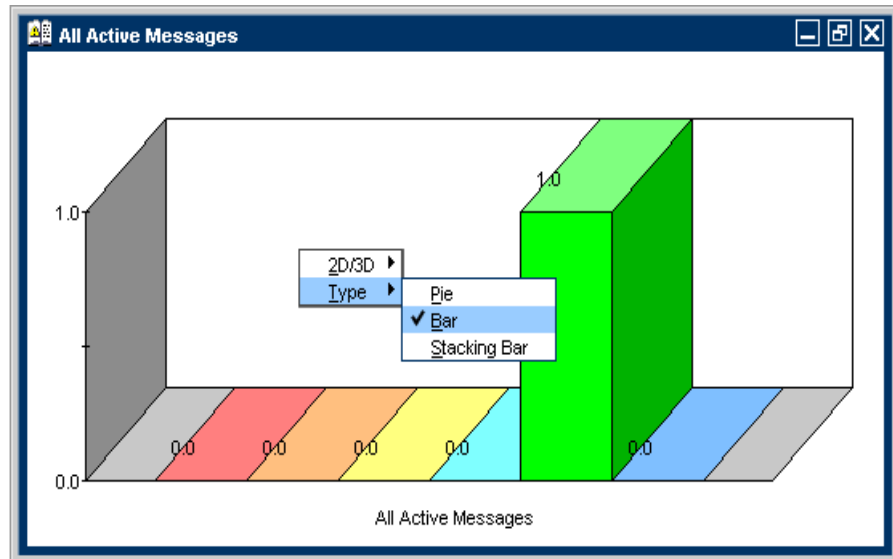
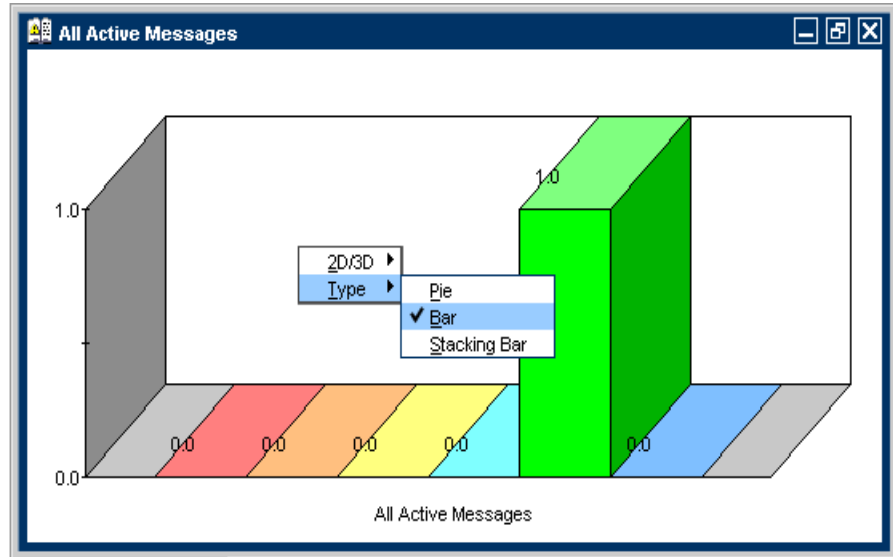


Figure 1-57 shows a current state chart of all active messages, formatted as a two-dimensional (2D) pie chart with a pop-up menu.

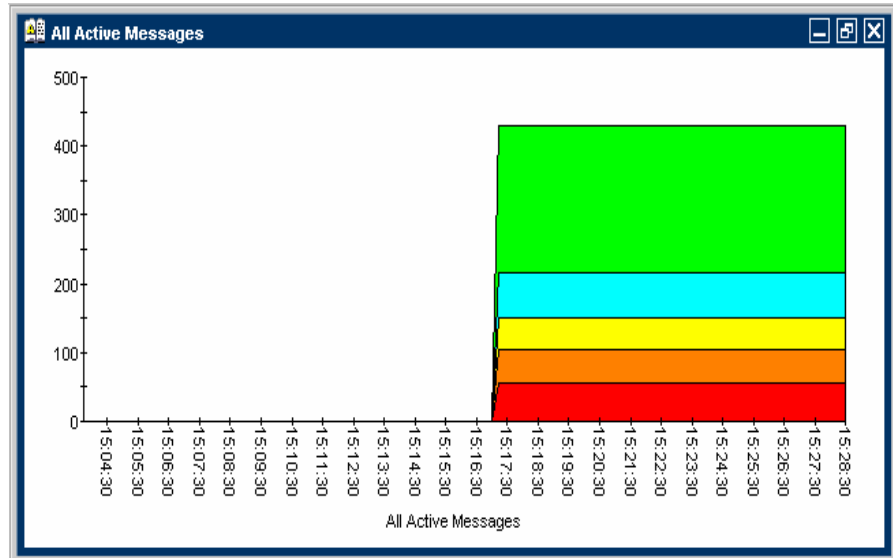
Figure 1-57 Current State Chart as a Pie Chart



History Chart

The history chart displays the severity changes over time of all messages in the currently selected message browser, as shown in Figure 1-58.

Figure 1-58 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.

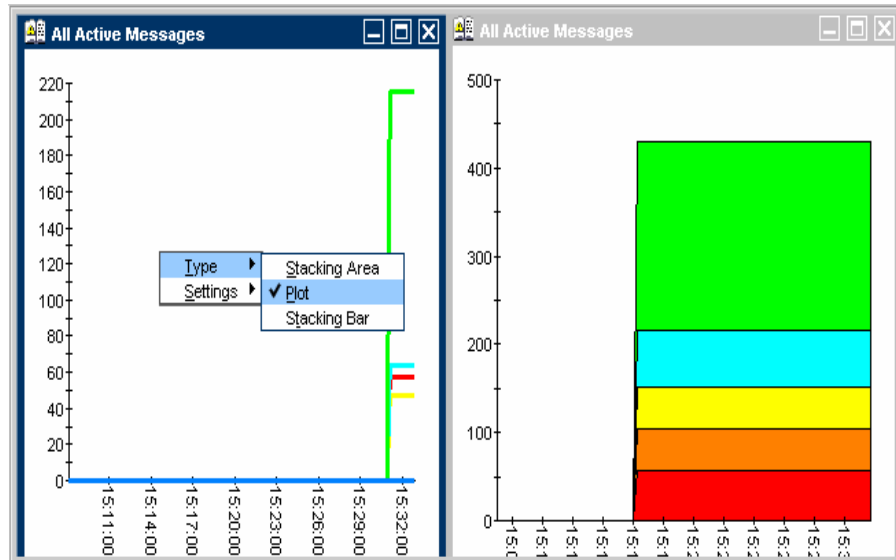
From the pop-up menu in the history chart, you can choose any one of three formats for the history chart:

- Stacking Area
- Plot
- Stacking Bar

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

Figure 1-59 shows two history graphs with an associated pop-up menu.

Figure 1-59 Two History Graphs and an Associated Pop-up Menu



Finding Impacted Service Navigator Services with the Services Workspace

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

Using HP Software Products in the Diagnostic Dashboard

Additional HP Software tools may be installed on top of HPOM. If these additional tools are installed and configured, you can access them in the Diagnostic Dashboard tab of the workspace pane. For details, see “Diagnostic Dashboard Workspace” on page 56. To find out how you can use these tools to investigate a problem further, see the documentation of the respective tool.

Investigating Message Histories

As shown in Figure 1-24 on page 72, 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 HPOM.

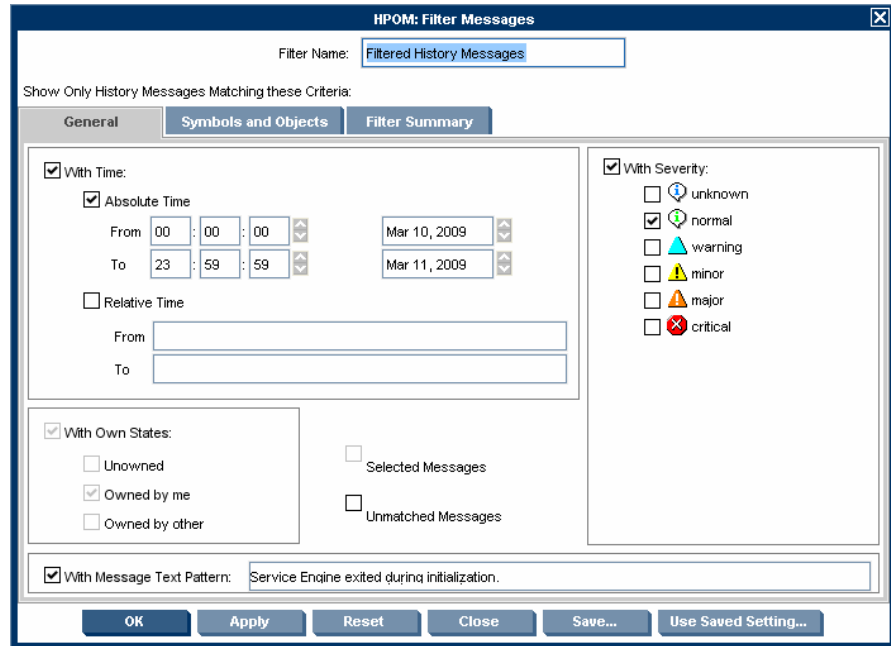
NOTE

For details about the filtered history message browser, see “Filtered History Message Browser” on page 71. For more information on message acknowledgment and automatic acknowledgments, see “Documenting Solutions in Your Environment” on page 155.

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 HPOM 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 window to define a set of message browser filters, and to open the filtered history message browser, as shown in Figure 1-60.

Figure 1-60 Filter Messages Window



NOTE

The With Time check box 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 window 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 windows, see “Customizing the Message Browser Columns” on page 203.

Investigating Pending Messages

The filtered pending messages browser displays all messages that arrive on the HP Operations 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 “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 HPOM administrator:

- ❑ Tools
- ❑ Automatic actions
- ❑ Broadcast command
- ❑ Operator-initiated actions
- ❑ Operator instructions
- ❑ Terminal access

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

- ❑ **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 Tools**

Explains how to start and customize tools.

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

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 “Message Ownership” on page 139.

Message Ownership

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

Ownership Modes

HPOM 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 HPOM 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.
- 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.
- 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 HPOM administrator can unmark any marked message.

Ownership Display Modes

The ownership display mode determines whether owning or marking a message influences status propagation.

HPOM 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 window 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, HPOM automatically writes the `stdout` and `stderr` actions as annotations for automatic and operator-initiated actions.

Review Object Status

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

Reviewing and Rerunning Automatic Actions

The HPOM 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 window. For details, see “Message Browser” on page 64 and “Examining Message Attributes” on page 123.

After an automatic action has completed, you can review the results to ensure that the problem has been corrected. If the HPOM administrator has configured annotations for the message, you can review the results of an automatic action by reading these annotations. The `stdout` and `stderr` actions 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.

❑ Pop-up Menu

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

Reviewing Annotations to Automatic Actions

The HPOM 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 155.

Configuring Automatic Acknowledgements

Your HPOM administrator can configure an automatic acknowledgment of automatic actions that execute successfully. If HPOM 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 HPOM 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.

❑ Pop-up Menu

Right-click the message in the message browser, then choose Perform/Stop Action -> Perform Operator-initiated Action from the pop-up 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 window. For details, see “Examining Message Attributes” on page 123.

After an operator-initiated action has completed, you can review the results to ensure that the problem has been corrected. If the HPOM administrator has configured annotations for the message, you can review the results of an operator-initiated action by reading these annotations. The `stdout` and `stderr` actions 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

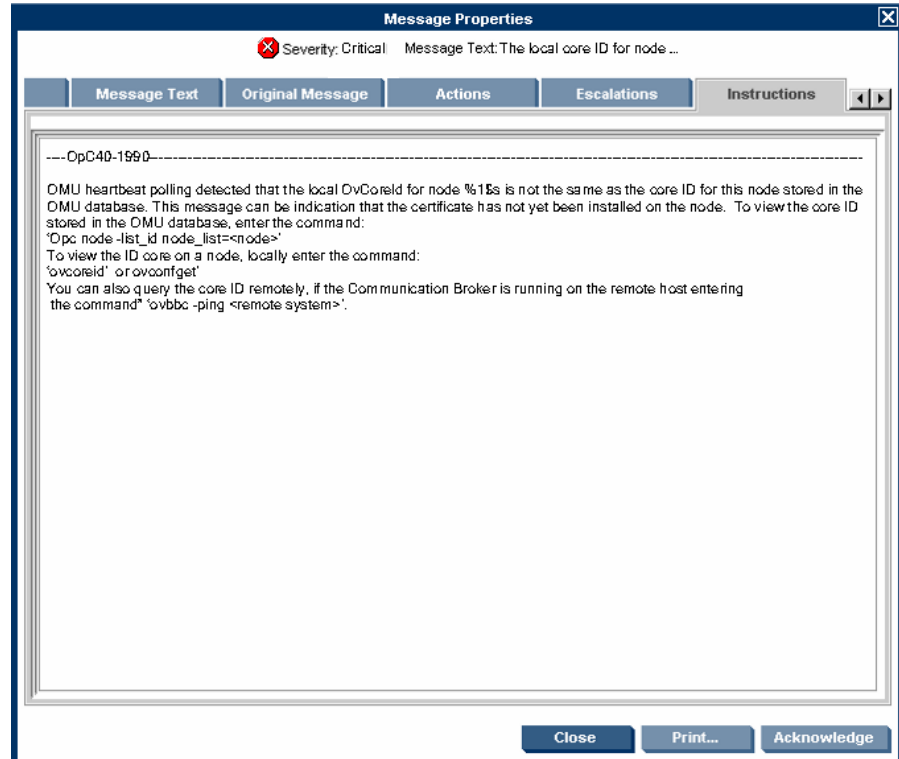
The HPOM administrator evaluates the effectiveness of operator-initiated actions by reviewing annotations and determines whether additional or different operator-initiated actions should be configured.

Reading Operator Instructions

To help you solve a problem, the HPOM administrator can provide you with instructions for a message, as shown in Figure 1-61.

Figure 1-61

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 142.
- Describe Operator-initiated Action**
Provide details of how you should perform an operator-initiated action. For details, see “Starting and Reviewing Operator-initiated Actions” on page 143.

❑ Describe Steps

Describe any manual steps required for solving a problem (for example, “Start Tool X”).

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

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

Starting and Customizing Tools

Applications (tools) are scripts or programs that have been integrated into HPOM. The HPOM administrator first examines your environment, then determines which tools you need to maintain it. Each tool has predefined start-up attributes, including a list of the managed nodes for individual operators.

Applications (tools) 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 log-on capabilities.

Starting Tools

As an operator, you can start tools 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 a tool to resolve a problem.

NOTE

To start tools with no graphical interface, such as `cmd.exe` or `telnet`, as local tools in Java GUI, the start-up parameters must be properly configured by HPOM administrator when assigning Java GUI operator defaults. For more information, see the *HPOM Administrator's Reference*.

You can start tools from one of three locations:

Shortcut Bar

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

Object Pane

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

Message Browser

You can start tools from pop-up menus on messages in the message browser.

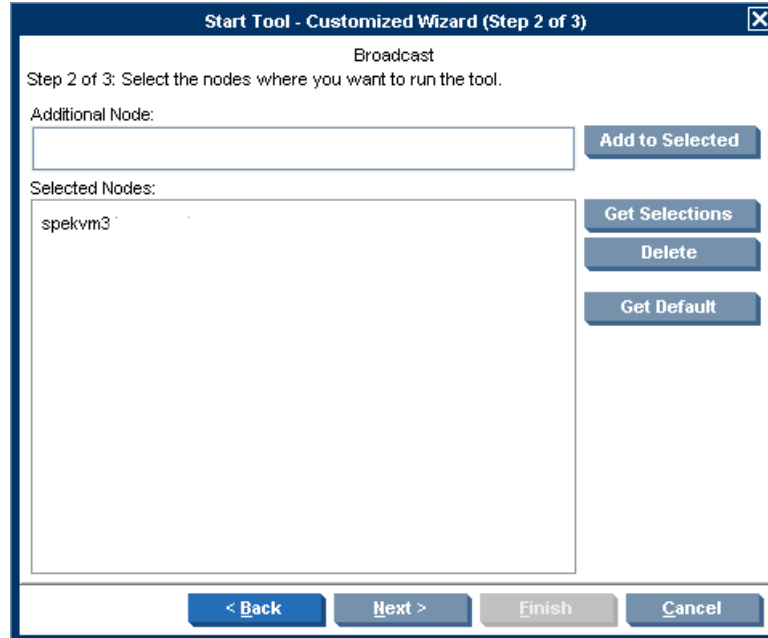
NOTE

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

Customizing Tools

If the HPOM administrator has set up the correct permissions, you can change many of the start-up attributes of a tool by using the Start Customized Tool wizard, as shown in Figure 1-62.

Figure 1-62 Start Customized Tool Wizard (Step 2 of 3)



For example, you can change the nodes on which a tool 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 HPOM Variables” on page 151.

Operating with the Java GUI from Other Java Applications

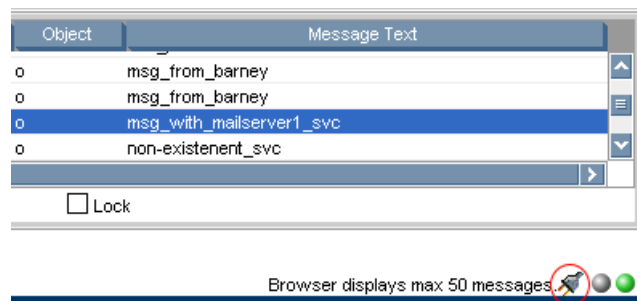
You can control certain features in the Java GUI remotely from other Java applications by using the Java GUI Remote APIs. The features can be controlled from the following:

- ❑ 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 HPOM 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 1-63:

Figure 1-63 Icon Indicating Enabled Java GUI Remote APIs Feature in the Java GUI



For more information about the concept, integration details, and usage of the Java GUI Remote APIs, see the *HPOM Application Integration Guide*.

For details about the available Remote APIs, see 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 Operations Manager for UNIX Developer's Toolkit.

Adding HPOM Variables

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

Figure 1-64 shows how to add HPOM variables as parameters in the Start Customized Tool wizard.

Figure 1-64

Start Customized Tool Wizard (Step 3 of 3)

Start Tool - Customized Wizard (Step 3 of 3)

Broadcast

Step 3 of 3: Specify additional information needed to run the tool.

Command: /opt/OV/bin/OpC/call_sqlplus.sh sel_msg

Additional Parameters: 2483507e-cfb0-71ds-02bb-0f887e320000

User Name: opc_op

Password: ●●●●●●●●●●

Presentation: Output only.

Click Finish to launch your customized tool.

< Back Next > Finish Cancel

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` tool always starts the wizard.

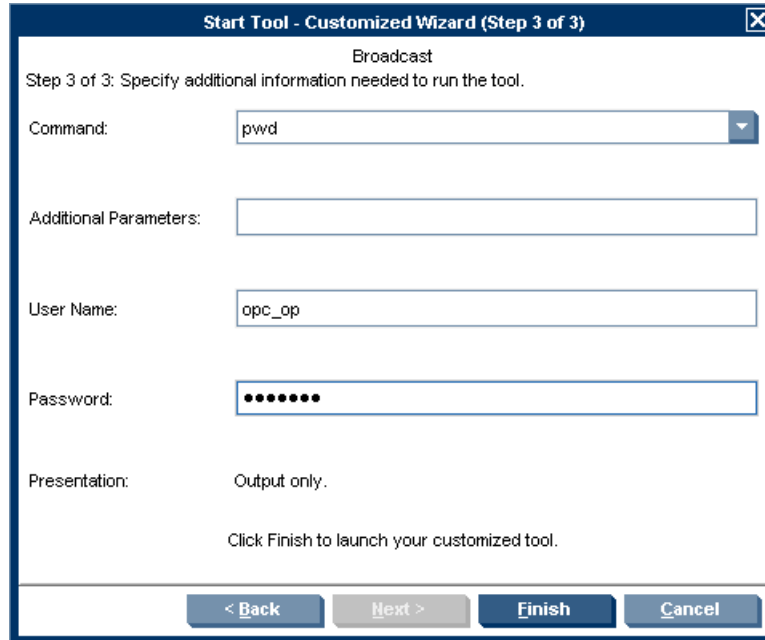
NOTE

The `Broadcast` tool may not be available to you by default. The HPOM administrator may need 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 HPOM 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 1-65 shows the last step in completing the broadcast command wizard.

Figure 1-65 **Completing the Broadcast Command Wizard**



To retrieve the commands from the current session, click the arrow in the Command call, as shown in Figure 1-65.

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. By using this window, you can investigate problems, issue commands or scripts, or start tools.

NOTE

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

You can use a virtual terminal to access many of the managed nodes within your environment. The HPOM administrator can configure a default user name and password, so you do not need to enter the information. Start the virtual terminal tool 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.

Accessing the Command Line Tool

To enter the Command Line Login mode, follow these steps:

1. On the log-on screen, choose Command Line Login. The log-on screen disappears and is replaced by a console prompt.
2. Supply your user ID and password as prompted.

The Command Line Login mode is not a desktop session. When your system is in the Command Line Login mode, the desktop is suspended. You log on by using your operating system mechanism rather than Login Manager. There are no windows because the X server is not running.

NOTE

Certain types of configurations (for example, X terminals) do not provide the Command Line Login mode option. The Command Line Login mode is not available if you start `dtlogin` as `root`.

To leave the Command Line Login mode, type **exit** from the command-line prompt.

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 explains 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.

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

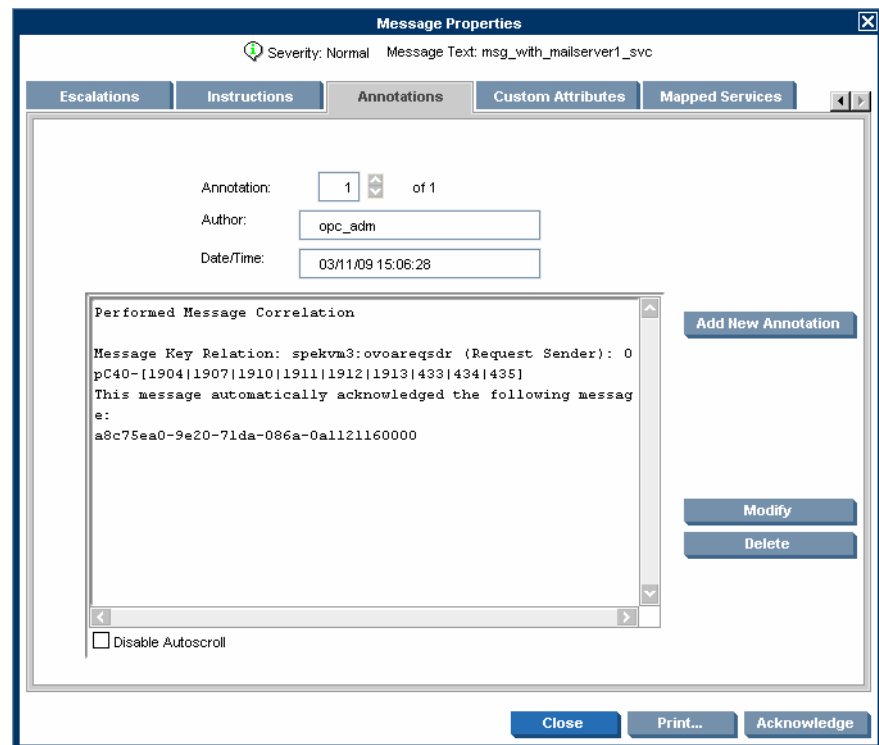
Adding Annotations

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 window contains all annotations related to a single message, as shown in Figure 1-66.

Figure 1-66

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

Printing Messages

HPOM 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.

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 137.

Automatic Acknowledgments from the Administrator

The HPOM 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 by using the filtered history message browser.

Automatic Acknowledgments from HPOM

Messages can be acknowledged automatically by succeeding messages if HPOM 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 tool is running again).

Reviewing Acknowledgments

Messages that have been acknowledged are stored in the history database. You can review these messages by using the filtered history message browser. For details, see “Investigating Message Histories” on page 134.

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 HPOM 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 Pop-up Menus
- Customizing the Toolbar
- Customizing Message Event Notification
- Customizing General Preferences

❑ Customizing Message Browsers

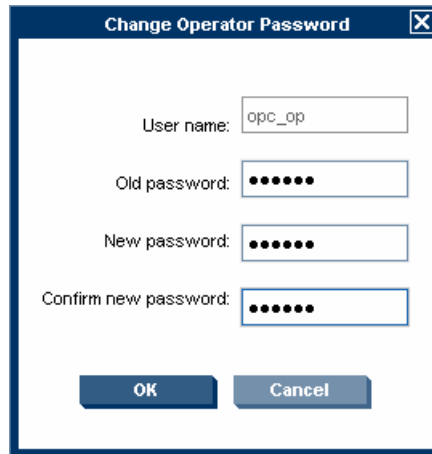
- Setting Up Message Browser Filters
- Setting Up Message View Filters
- Adding Message Browser Tabs in the Browser Pane
- Switching Message Colors to an Entire Line
- Customizing the Message Browser Columns
- Showing and Hiding Message Browser Columns
- Saving the Customized Message Browser Layout

Changing Operator Passwords

HPOM enables you to change your log-on password from the Change Operator Password window, as shown in Figure 1-67.

Figure 1-67

Change Operator Password Window



The screenshot shows a dialog box titled "Change Operator Password". It has a close button (X) in the top right corner. The dialog contains the following fields and controls:

- User name:** A text input field containing the text "opc_op".
- Old password:** A password input field with six dots.
- New password:** A password input field with six dots.
- Confirm new password:** A password input field with six dots.
- Buttons:** Two buttons at the bottom, "OK" and "Cancel", both with a blue gradient.

You can access this window 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-on operator can be changed.

On the first logon as any of the default users, you must change your default password for security reasons. Although you can change your password again at a later time, you are not 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 HPOM administrator. As a result, the first time you log on to the HPOM Java GUI, you receive a set of default components, provided by your HPOM administrator.

As an operator, you can do 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, detaching windows, 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 see these changes, which override the default configuration originally provided by your HPOM 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 HPOM administrators by selecting `File: Reload Assigned Defaults` from the menu bar.

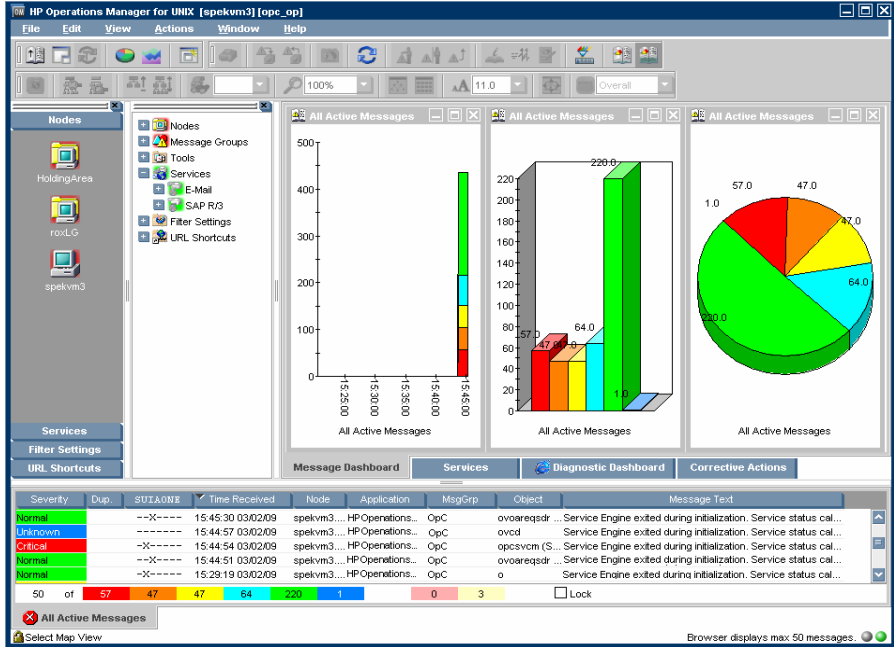
CAUTION

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 HPOM administrator.

Operator Defaults Assigned by the System

Figure 1-68 shows the operator defaults assigned by the system.

Figure 1-68 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 HP BTO Software Home URL shortcut:
<http://welcome.hp.com/country/us/en/prodserv/software.html>

❑ **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 “Message Dashboard Workspace” on page 55.

2. Services (if any services are available)

In the `Services` workspace, a service graph for all first-level services is opened. For details, see “Services Workspace” on page 55.

3. Diagnostic Dashboard

In the `Diagnostic Dashboard` workspace, other tools that integrate with HPOM are displayed. For details, see “Diagnostic Dashboard Workspace” on page 56.

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 “Corrective Actions Workspace” on page 57.

❑ **Browser Pane**

In the browser pane, a message browser is opened, displaying the latest 50 of all active messages the operator is responsible for. For details, see “Browser Pane” on page 62.

Operator Defaults Assigned by the HPOM Administrator

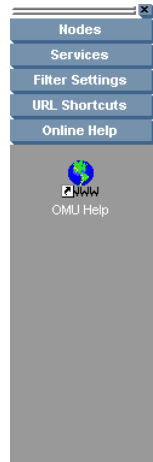
The HPOM administrator can define default start-up behaviors for operator areas of the Java GUI with two application groups:

❑ **Shortcuts**

The HPOM 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 tool. The same tree level found under the shortcuts application group is added to the shortcut bar, as shown in Table 1-9.

Figure 1-69 shows an example of the Online Help shortcut group and the HPOM Java GUI shortcut, which were added to the shortcut bar as defaults by the HPOM administrator on the management server. The Figure 1-12 on page 58 shows this example displayed within the HPOM Java GUI window.

Figure 1-69 Online Help Shortcut Assigned by the HPOM Administrator



Workspaces

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

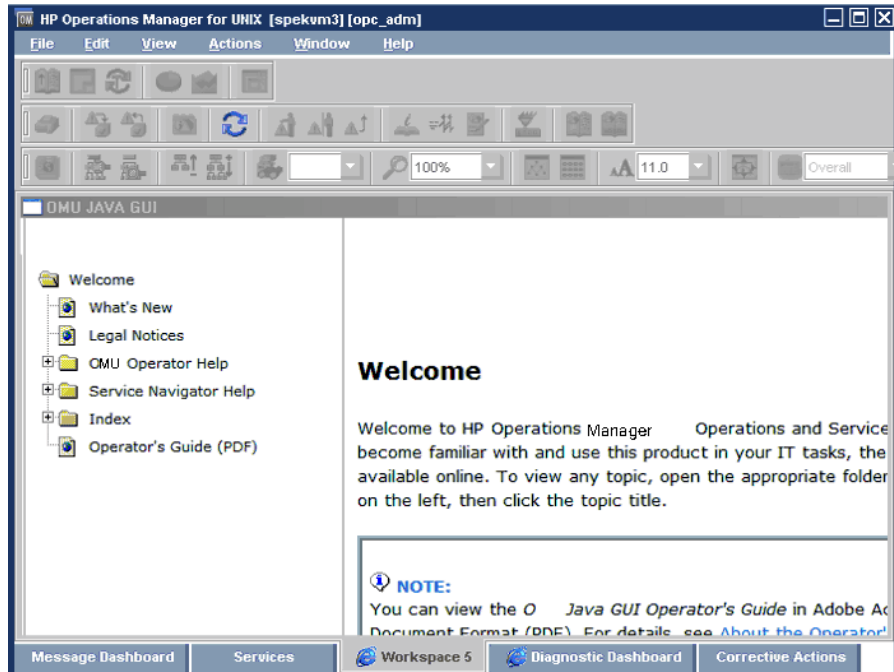
Because the default container type for workspaces is *not* ActiveX, you *cannot* use a Microsoft Internet Explorer web browser in default workspaces. If you want to use Internet Explorer, you must create a new workspace with the ActiveX container type.

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

Figure 1-70 shows an example of the Online Help workspace that presents the Java GUI online help introduction page. The Figure 1-12 on page 58 shows this example displayed within the HPOM Java GUI window.

Figure 1-70

Online Help Workspace Assigned by the HPOM Administrator



For information on how to create application groups and tools on the management server to set the operator defaults, see the *HPOM Administrator's Reference*.

NOTE

HPOM 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 window. However, if you make the refresh interval too a large, you may not be immediately informed of any status changes.

NOTE

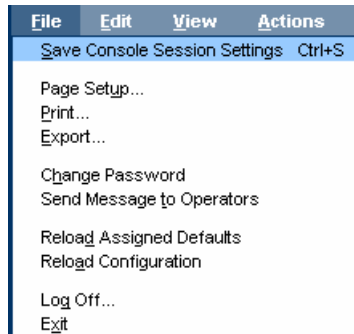
After the HPOM administrator performed any configuration updates, such as change of your responsibilities, managed nodes, or tools, Java GUI reflects the changes automatically. No actions are required to synchronize Java GUI after configuration changes.

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 1-71.

Figure 1-71

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 log on 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 tools
- 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

❑ **Filtered Message Browsers**

Message browser filters applied to message browsers

❑ **Detached windows**

Position and settings of detached windows

NOTE

If global mode is enabled, you may not be able to save your console settings. For more information, see “Using Global Java GUI Property Files” on page 207.

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

❑ Windows 2003 and Windows XP

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

❑ Solaris

`/export/home/<user>`

❑ Other platforms

`/home/<user>`

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 window, you can select one of the following look-and-feel options:

- Metal
- HP One Voice (default look)
- Windows (available *only* on Windows systems)
- Aqua (available *only* on Mac operating systems)

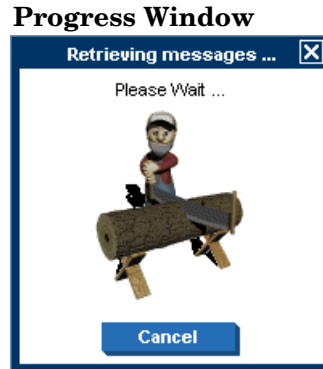
For a description of each option on the Preferences window, see “Preferences Dialog Box” on page 498.

Customizing the Progress Window

You can change the image that appears inside of a progress window by placing an image named `customImg.gif` into your home directory.

Figure 1-72 shows the progress window. The progress window opens when HPOM performs tasks that take a long time to complete.

Figure 1-72



Note that HPOM resizes custom images to fit into the progress window.

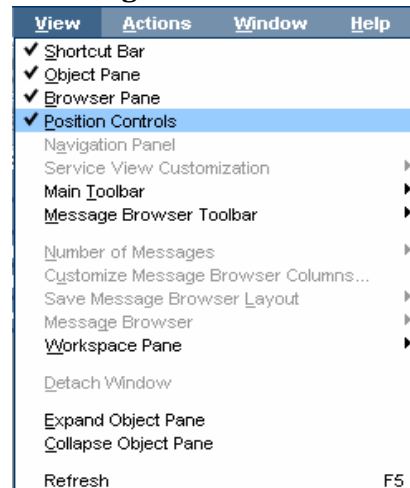
Showing and Hiding the Position Controls

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 clearing `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 1-73 shows how to enable the position controls from the menu bar.

Figure 1-73

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 1-74.

Figure 1-74 Moving the Object Pane: Before

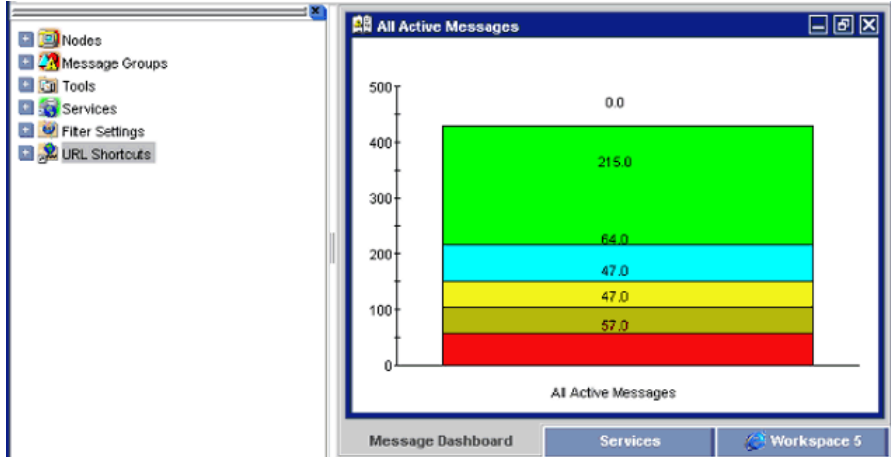
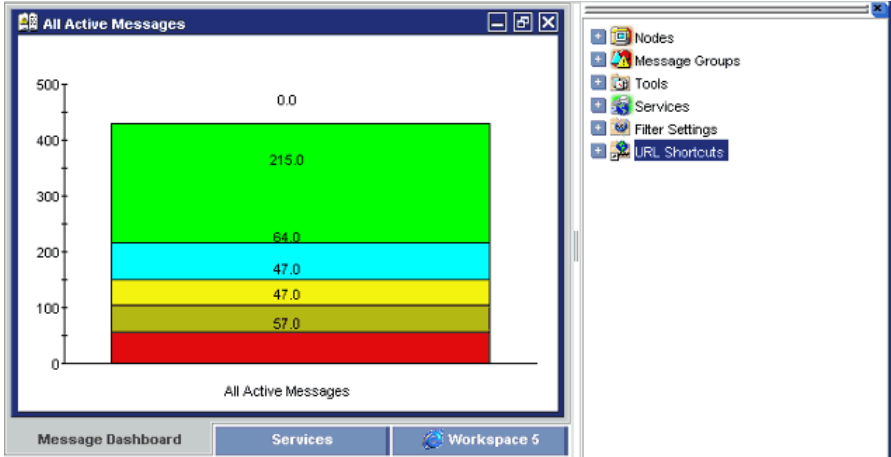


Figure 1-75 shows object pane moved to the right of the workspace pane.

Figure 1-75 Moving the Object Pane: After



Showing and Hiding Panes and Areas

HPOM 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 1-76 shows how to enable the shortcut bar by selecting **View: Shortcut Bar** in the menu bar.

Figure 1-76 Enabling the Shortcut Bar and Object Pane

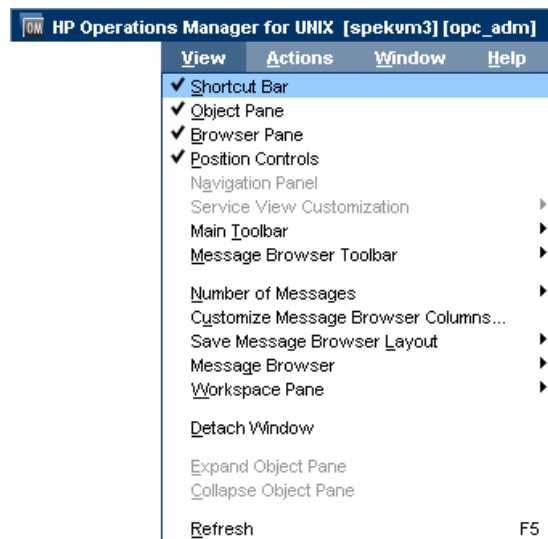


Figure 1-77 shows how to disable the shortcut bar by clearing View: Shortcut Bar in the menu bar.

Figure 1-77 **Disabling the Shortcut Bar**

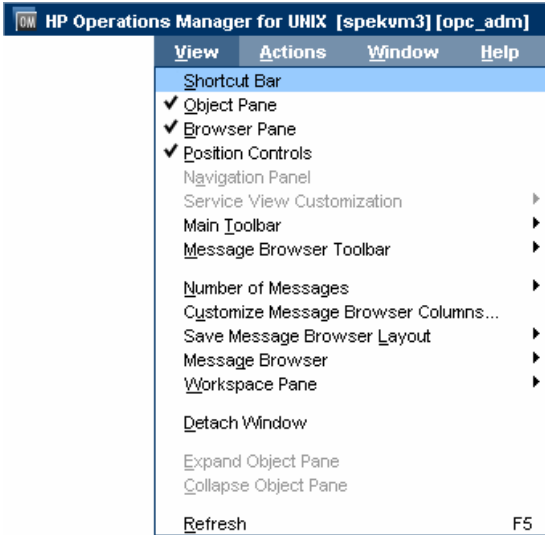
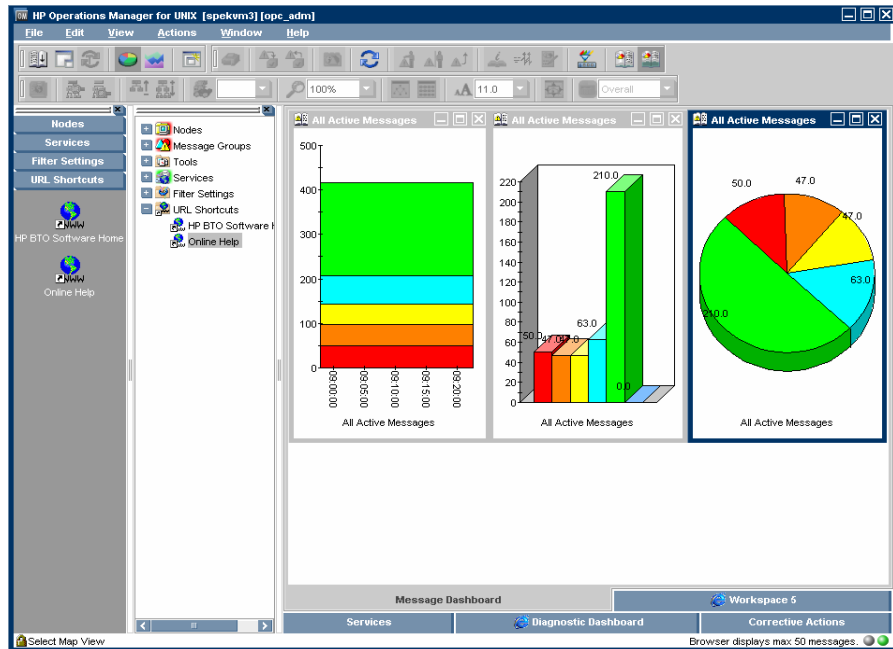


Figure 1-78 shows how the HPOM GUI looks like after you have selected Close from the pop-up menu on all browser tabs in the browser pane.

Figure 1-78 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 Shortcuts` from the pop-up menu in the object pane.

❑ Customize Shortcut Groups

Add, rename or delete shortcut groups from the pop-up menu in the shortcut bar.

❑ Customize Shortcuts

Rename or delete shortcuts from the pop-up 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` window.

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

Choosing a Web Browser

Instead running an external web browser in the background, you can run your favorite web browser from within the HPOM 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 HPOM Java GUI.

For details about choosing a web browser, see “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. For more information about the toolbar components, see “Toolbar” on page 78.

You can also reposition any of the toolbar components by creating a floating toolbar or by moving a component within the docked toolbar.

For more information on how to perform these actions, see “To Customize the Toolbar” on page 289.

Customizing Pop-up Menus

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

HPOM enables you to limit the number of tools that display in pop-up menus. The *Tailored Set of Tools* limits pop-up menu items to tool that are related to currently selected messages. Related tools are defined with the `$OPC_MSG` string in the application call. If there are no tools with currently selected `$OPC_MSG` string, the pop-up menu does not contain any tools.

To enable tailored pop-up menus, you select Tailored Set of Tools from the General tab in the Preferences window, as shown in Figure 1-79. Likewise, to switch the feature off, you clear the check box.

Figure 1-79

Preferences Check Box for a Tailored Set of Tools

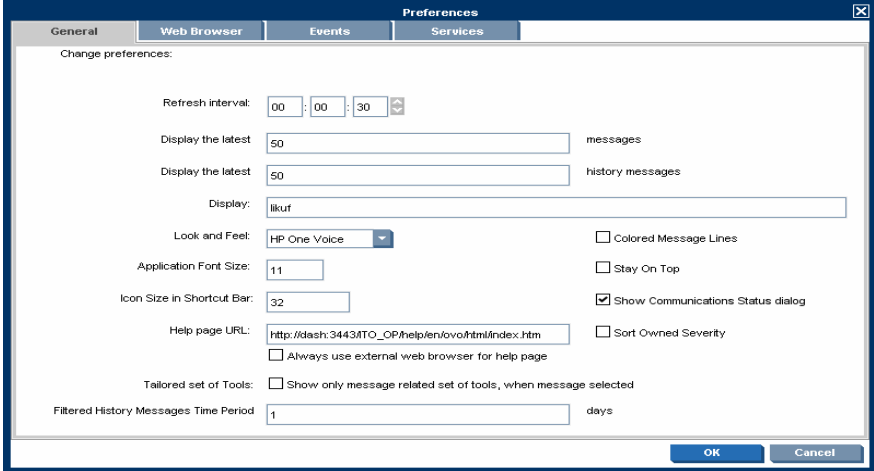
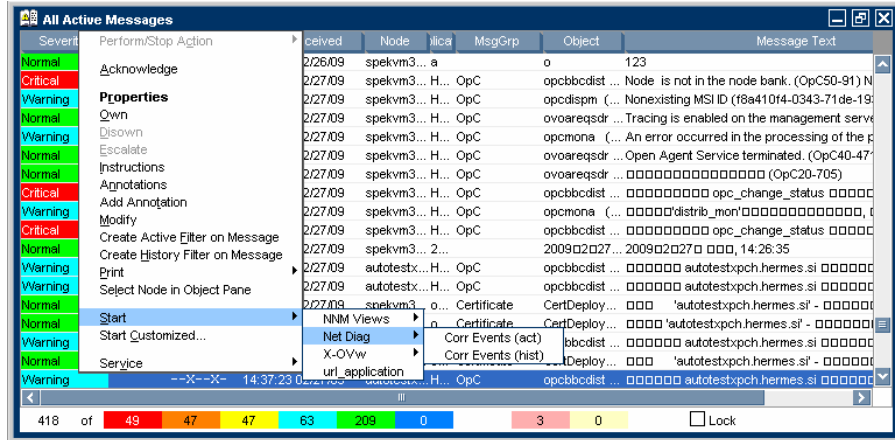


Figure 1-80 shows a pop-up menu for a tailored set of tools. The marked tools use message-related variables and are therefore shown in the pop-up menu on the selected message.

Figure 1-80 Pop-up Menu for a Tailored Set of Tools

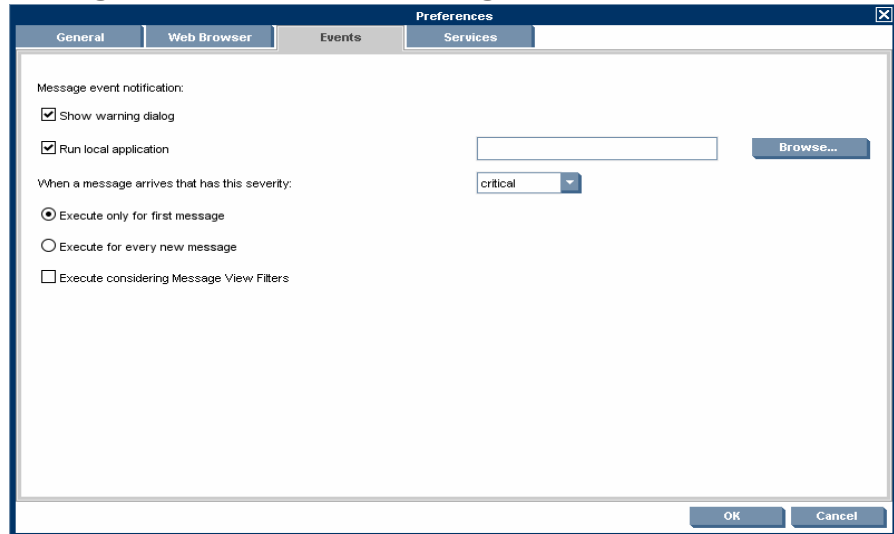


Customizing Message Event Notification

You can enable or disable message event notification, run local tools (for example, to produce acoustic warnings), or reset the severity threshold for notification, from the Events tab of the Preferences window, as shown in Figure 1-81.

Figure 1-81

Message Event Notification Settings in the Preferences Window



For an overview of message event notification, see “Message Event Notification” on page 113.

Customizing General Preferences

Customizing General Font Size

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

Customizing Font Size in Service Graphs and Maps

You can set the default value of the font size in service graphs and maps in the Service Graph Font Size drop-down list Services tab of the Java GUI Edit: Preferences window.

Each time a new service graph or map is opened this value is used.

IMPORTANT

To find out more about customizing the font size in service graphs and maps, see the *HP Service Navigator Concepts and Configuration Guide*.

Disabling HPOM Communications Status dialog

You can enable, or disable the HPOM Communications Status dialog by selecting the Show Communications Status dialog checkbox in the General tab of the Java GUI Edit: Preferences window. Or by setting the `itopr` file. See “itopr Options and Parameters” on page 559.

Disabling this dialog is useful in an environment with many clients logged in with the same user name at the same time. When one of these clients reloads the Java GUI configuration, the HPOM Communications Status dialog boxes are:

- displayed only on those clients where this option is enabled.
- refrained from disturbing the rest of the clients where this option is disabled locally.

For a description of each option on the General tab of the Preferences window, see “Preferences: General Tab” on page 499.

Setting Up Message Browser Filters

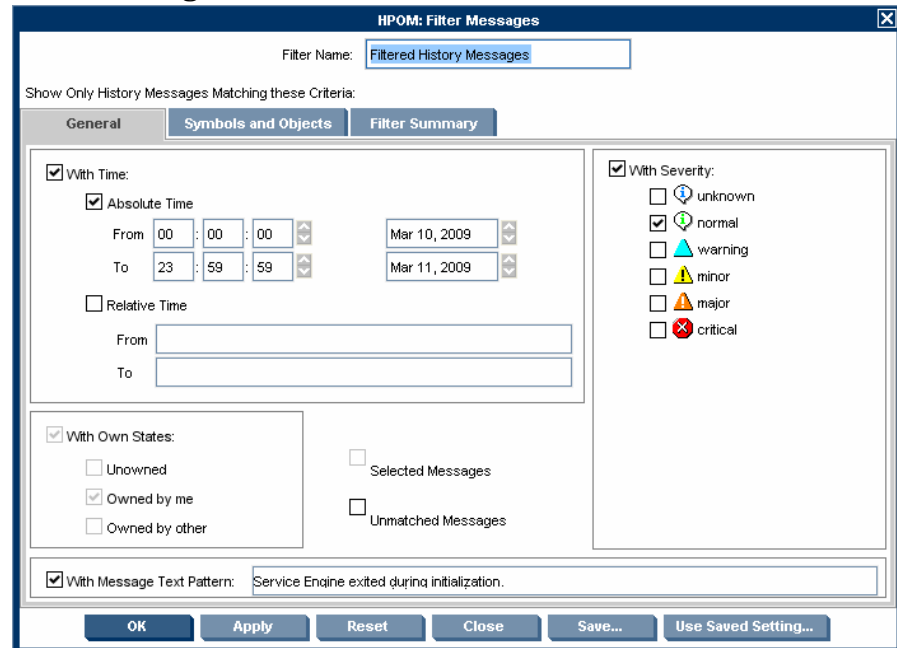
Message browsers with message browser filters applied show only a subset of all available messages, filtered according to criteria you select yourself. For example, if you want to display messages with severity levels of **Warning** or **Critical**, you can specify that messages of all other severity levels are not loaded from the management server.

You can also set up message view filters to isolate specific messages in a message browser. Message view filters apply a second level of filtering to a browser that already has message browser filters applied. For more information about message view filters, see “Setting Up Message View Filters” on page 189

You can add new message browser filters and modify existing filters through the Filter Messages window, as shown in Figure 1-82.

Figure 1-82

Filter Messages Window



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

The Filter Messages window contains the following options:

❑ 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.

When using relative time filtering with enabled relative time recalculation, the relative time filtering is done at a specified time interval. Active Message Browser is refreshed with new messages and drops the messages that become too old to satisfy the filter criteria. This behavior should be enabled by the administrator using the `OPCUIWWW_FILTER_RELATIVE_TIME_RECALC` server parameter. For more information, see the *HPOM Administrator's Reference*.

NOTE

If the Java GUI is running on a system with a timezone setting different from the setting on the HP Operations management server, the time stamps in the messages displayed in the Java GUI are taken from the local system (the system where the Java GUI is running on) and not from the HP Operations 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 and With Pattern Filter

The message texts pattern filters (*With Message Text Pattern* and *With Pattern*) are used to see only messages that match a specified text pattern. You can specify a filter pattern in the Message Filters dialog box as follows:

- In the *With Message Text Pattern* field in the General tab.
- In the Name field of the Symbols and Objects tab. (The object type must be set to CMA and *With Pattern* must be selected.)

The syntax of the pattern in the Name field is the same as in the *With Message Text Pattern* field. The same limitations apply.

- *Control characters*

If you use control characters such as angle brackets (<>) or square brackets ([]) in the With Message Text Pattern field, precede these characters with a backslash (\). Otherwise the following error message appears:

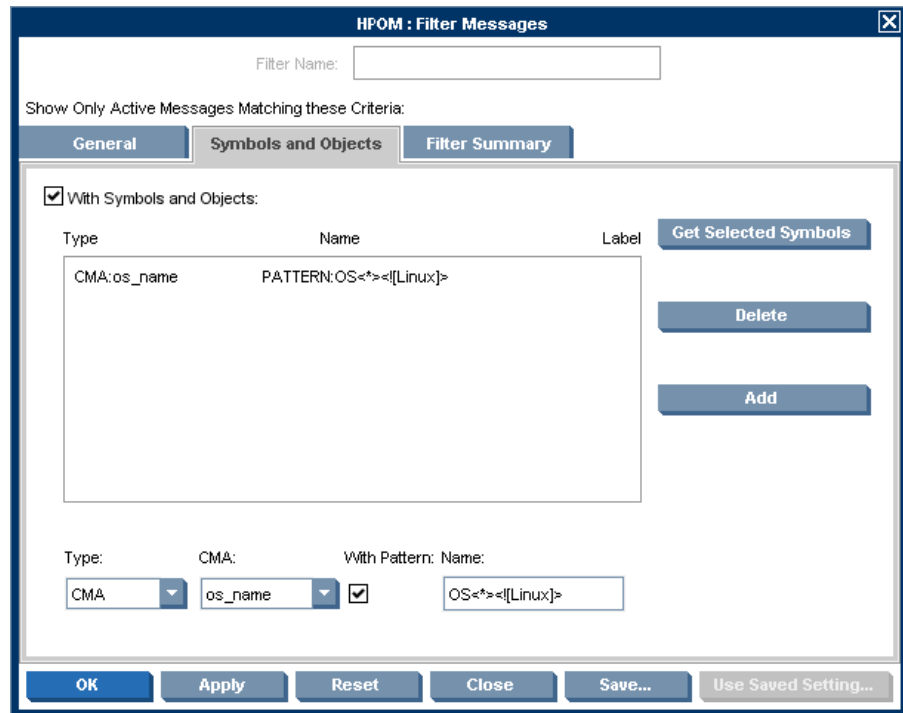
```
"Syntax error in pattern definition "[message".  
(OpC20-235) "
```

- *Maximum of 254 characters*

The message text pattern is limited to 254 characters.

Figure 1-83 shows an example of the Symbols and Objects tab. The pattern OS<*><![Linux]> filters for messages with custom message attributes of type os_name. The custom message attribute value may contain all operating systems except for Linux.

Figure 1-83 Value Pattern for Custom Message Attributes



Saving and Reusing Message Browser Filters

After you have configured a message browser 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 window remains open. If you are satisfied with your filter, you can save it for later reuse.

❑ Save Filter Settings

Use the Filter Messages window to save the settings for reuse, as shown in Figure 1-84 on page 187. 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 window to choose from a list of existing settings that may be modified and renamed to suit individual needs, as shown in Figure 1-85 on page 187. 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 the Browser Settings windows 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 windows are closed automatically.

The Browser Settings window 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 1-84 shows the Save Browser Filter Settings window.

Figure 1-84 Save Browser Filter Settings Window

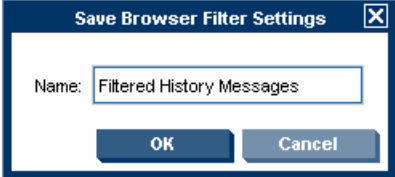


Figure 1-85 shows the Browser Settings window.

Figure 1-85 Browser Settings Window



Saving Message Browser Filters to the Object Pane

HPOM 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 298.

Accessing Message Browser Filters Quickly

HPOM enables you to access message browser filters quickly and easily.

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

- ❑ **Shortcut Bar**

For details, see “Shortcut Bar Pop-up Menu” on page 81.

- ❑ **Object Pane**

For details, see “Object Pane Pop-up Menu” on page 82.

Setting Up Message View Filters

Message view filters temporarily hide messages from view. They consist of criteria and rules that define which of the already loaded messages are displayed in an already existing message browser. The loaded messages may already have gone through a first level of filtering applied through message browser filters. In this case, message view filters apply a second level of filtering.

This section explains the following topics:

- ❑ Rules and Criteria in Message View Filters
- ❑ Quick, Simple, and Advanced Message View Filters
- ❑ Syntax for Message View Filters
- ❑ Saving Message View Filters

Rules and Criteria in Message View Filters

Message view filters consist of rules and criteria:

❑ Rules

Rules in message view filters can contain one or more criteria. The rules define the relation between multiple criteria and rules. You can combine criteria and rules with a logical AND or OR. Each relation can be negated by using the NOT operator. Rules can be nested to create complex filters.

❑ Criteria

Criteria define the search pattern of the filter. A criterion consists of a message browser column, an operator, and a value to match:

- *Message browser column*

A message browser column as input for the filter, for example, Application or Time Received.

- *Operator*

An operator such as equals (==) or begins (BEGINS). A wide range of operators is available to make your criteria as flexible as possible.

The list of available operators depends on the selected message browser column. For example, the `begins` operator is not appropriate for columns that contain numeric data. For a list of available operators, see “Operators for Message View Filters” on page 198.

- *Value*

A value, for example, `jacko.deu.hp.com`. You can define a value in the following ways:

- Type your own custom value.
- Choose a value from the list of available messages.
- Select a predefined value such as `(Management Server)` or `(Today)`. (Predefined values always appear in parentheses.) See also “Predefined Values for Message View Filters” on page 199.

In combination with the `equals (==)` operator, you can also use wildcard characters to match multiple strings:

- *Question mark*
A question mark (?) matches any single character.
- *Asterisk*
An asterisk (*) matches any group of one or more characters.

TIP

To match a question mark (?), an asterisk (*), or a backslash (\), precede these characters with a backslash (\). When writing message view filters in text format, enclose values that contain spaces in quotation marks (“”).

For more information about the syntax used in message view filters, see “Syntax for Message View Filters” on page 195.

Quick, Simple, and Advanced Message View Filters

HPOM distinguishes the following types of message view filters:

- **Quick message view filters**

See “Quick Message View Filters” on page 191.

❑ **Simple message view filters**

See “Simple Message View Filters” on page 192.

❑ **Advanced message view filters**

See “Advanced Message View Filters” on page 194.

Quick Message View Filters The pop-up menu on the message browser headline offers quick access to filters that show only those messages that match the selected value of a column.

For example, in Figure 1-86, the pop-up menu shows entries for the tools `SNMPTraps` and `alarmgen`, because the browser contains only messages generated by these tools. If `SNMPTraps` is selected, the set of visible messages changes, and the browser shows only messages that are generated by the `SNMPTraps` tool. Selecting `alarmgen` changes the message browser to additionally show messages generated by the tool `alarmgen`.

If you select more than one value for a single column, the message must match only one of these values (OR relation). If you apply quick filters to more than one message browser column, the messages must match all criteria (AND relation). The operator in a quick message view filter is always equals.

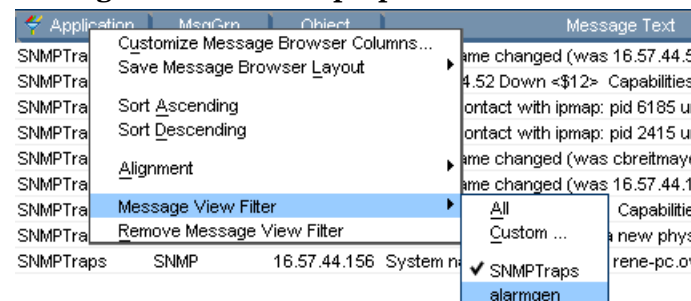
The following example shows a quick filter in text format:

```
"Application" == "SNMPTraps"
OR "Application" == "alarmgen"
```

This filter matches messages that are generated by the `SNMPTraps` or the `alarmgen` tool. Two criteria are combined by an OR rule. Each criterion consists of a message browser column (`Application`), an operator (`==`), and a value (`SNMPTraps` or `alarmgen`).

Figure 1-86

Message View Filter Pop-up Menu



Simple Message View Filters Simple message view filters are similar to quick message view filters, but are defined in a different way and offer more flexibility.

Simple message view filters have the following characteristics:

❑ **Rules in simple message view filters**

In simple message view filters, an OR rule combines criteria that filter the same message browser column. An AND rule combines criteria that filter different message browser columns. You cannot change the AND and OR operators in rules of simple filters.

You can, however, negate rules in simple message view filters by using the NOT operator.

❑ **Operators in criteria of simple message view filters**

For simple message view filters, you can choose among all available operators. (For quick message view filters, only the equals operator is allowed.)

❑ **Configuring simple message view filters**

Use the Simple View tab of the Message View Filter window to define simple message view filters as shown in Figure 1-87.

The following example shows a simple filter in text format:

```
NOT "Object" CONTAINS "opc"  
AND (  
    "Application" == "alarmgen"  
OR "Application" == "SNMPTraps"  
)
```

This filter matches messages that are not associated with an object that contains the word `opc`, and that are generated by the `SNMPTraps` or the `alarmgen` tool.

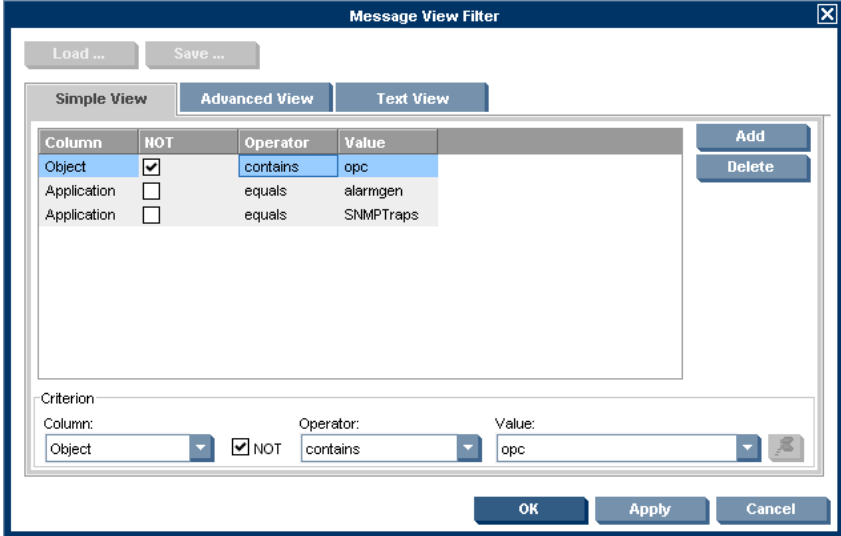
The filter contains three rules:

- ❑ The first rule is a negative rule. It contains a criterion that uses the Object message column and the CONTAINS operator.
- ❑ The second rule is an AND rule. It combines the first rule with a third, nested rule.

- ❑ The third rule combines two criteria with the OR operator. Each criterion consists of a message browser column (Tool), an operator (==), and a value (SNMPTraps or alarmgen).

Figure 1-87

Message View Filter Window: Simple View Tab



Advanced Message View Filters Compared to quick and simple message view filters, advanced message view filters offer maximum flexibility. You can configure any criterion and any rule as needed, without any restrictions apart from the fact that the filter syntax must be correct. For more information about the filter syntax, see “Syntax for Message View Filters” on page 195.

Figure 1-88 shows the Advanced View tab of the Message View Filter window where you configure advanced message view filters. In the figure, a criterion is currently selected. When you select a rule, the lower half of the window changes so that you can change the logical operator of the rule or invert the rule, if needed.

The following example shows an advanced filter in text format:

```
NOT "Object" CONTAINS "opc"
AND (
  "Application" == "alarmgen"
  OR NOT "Severity" < "Minor"
  OR (
    "Time Received" == "TODAY"
    AND "Application" == "SNMPTraps"
  )
)
```

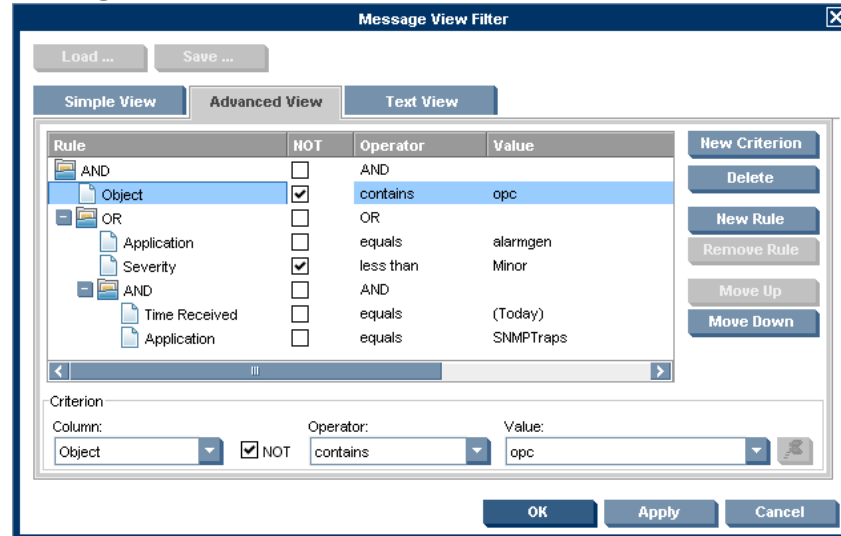
This filter matches messages that are not associated with an object that contains the word `opc`, and match *one of* the following additional criteria:

- Generating tool is `alarmgen`.
- Message severity is not less than minor (that is, it is major or critical).

- ❑ Message was received between 00:00:00 and 23:59:59 on the current day, and generated by the SNMPTraps tool.

Figure 1-88

Message View Filter Window: Advanced View Tab



TIP

The Text View tab lets you configure message view filters in plain text format without using the fields and buttons in the other tabs.

Syntax for Message View Filters

Message view filters conform to the following syntax rules:

```

filter := rule;
rule := NOT rule | (rule) | rule logical rule |
      criterion;
logical := AND | OR;
criterion:= COLUMN_NAME operator VALUE;
operator := == | > | >= | < | <= | BEGINS | ENDS | CONTAINS;
    
```

The following example shows a complex message view filter:

```
"Severity" >= "Minor"  
AND "Flags" == "O--FX-E"  
AND NOT "Message Text" BEGINS "Memory"  
AND (  
    "Time Received" == "TODAY"  
    OR "Node" CONTAINS "hp.com"  
)
```

The filter matches messages with the following characteristics:

- Severity is greater than or equals to minor (that is, minor, major, or critical).
- Message is owned by you, has failed automatic actions, and has operator-initiated actions available. The unmatched, instructions, and annotations status must not be set.
- Message text does not begin with `Memory`.
- Message was received today or issued by a node from the `hp.com` network.

To see more examples for message view filters, see “Quick, Simple, and Advanced Message View Filters” on page 190.

The message view filter syntax uses the following parameters:

filter

A filter is a rule.

rule

A rule can be negated with the NOT operator.

A rule can be enclosed in parentheses (). Parentheses define the precedence order. By default, AND takes precedence over OR.

Two or more rules (rule) can be related with a logical operator.

A rule can consist of a single criterion.

logical

The logical operators AND and OR.

criterion

A criterion consists of a column name (COLUMN_NAME), operator, and value (VALUE).

COLUMN_NAME

Message attribute or column ID key.

operator

For a list of available operators for criteria in message view filters, see Table 1-9 on page 198.

VALUE

Any string value for message view filters. The following applies:

- *Values with spaces*
 Enclose values that contain spaces in quotation marks (“”).
- *Predefined values*
 Predefined values are available for node and time-related values. For a list of predefined values, see “Predefined Values for Message View Filters” on page 199.
- *Severity column*
 Reserved words for message severity are Unknown, Normal, Warning, Minor, Major, and Critical. The words are not case-sensitive.
- *Number of duplicates column*
 Only positive integer and zero (0) values are allowed.
- *Flags column*
 Seven characters (that is, one for each flag) are expected. The following values are allowed:

Flag	Valid Values
1 (State)	? - O M X R N

Flag	Valid Values
2 (Unmatched)	? - X
3 (Instructions)	? - X
4 (Automatic action)	? - X S F R
5 (Operator-initiated action)	? - X S F R
6 (Annotations)	? - X

The question mark (?) represents any value. The hyphen (-) means that the flag is not set.

- *Time and date columns*

The valid time and date format depends on the regional setting of the Java GUI client system.

Operators for Message View Filters There are two types of operators for message view filters:

❑ **Operators for criteria**

The available criteria operators depend on the type of data displayed in the message browser column. There are operators for columns with numeric or string data.

The operators listed in Table 1-9 are available:

Table 1-9 Operators for Criteria

Data Type	Operator	Keyword
String data only	begins with	BEGINS
	ends with	ENDS
	contains	CONTAINS

Table 1-9 Operators for Criteria (Continued)

Data Type	Operator	Keyword
Numeric or string data	equals	==
	greater than	>
	greater than or equals	>=
	less than	<
	less than or equals	<=

❑ Operators for rules

The following operators are available for rules:

- AND
 Logical operator AND (logical conjunction).
- OR
 Logical operator OR (logical disjunction).
- NOT

A rule can be inverted with the NOT operator. For example, if you want to find messages that do not begin with a certain character, use NOT "<COLUMN_NAME>" BEGINS "<VALUE>" or select the **NOT** check box in the Message View Filter window.

Predefined Values for Message View Filters A number of predefined values for message view filters exist to help you make your filters more flexible and reusable. Predefined values always come first in the list of available values, and are enclosed in parentheses () to help you identify them as predefined values.

Time values are relative values. They are resolved on the Java GUI client system based on the locale and time zone that is set on that system. This means that the data resulting from applied message view filters may be different for users in different regions.

The only valid operator for predefined time values is the equals (==) operator.

Table 1-10 lists the predefined values that can be used in message view filters.

Table 1-10 Predefined Values for Message View Filters

	Predefined Value	Description
Node values	(Management Server)	Fully qualified domain name (FQDN) of the management server system.
Time values	(Today)	Time interval from 00:00:00 to 23:59:59 on the current day.
	(Yesterday)	Time interval from 00:00:00 to 23:59:59 on the previous day.
	(Current Week)	Time interval from 00:00:00 on the first day to 23:59:59 on the last day of the current week.
	(Previous Week)	Time interval from 00:00:00 on the first day to 23:59:59 on the last day of the previous week.
	(Current Month)	Time interval from 00:00:00 on the first day to 23:59:59 on the last day of the current month.
	(Previous Month)	Time interval from 00:00:00 on the first day to 23:59:59 on the last day of the previous month.

Saving Message View Filters

You can save message view filters in the following ways:

❑ Console session settings

When you save your console settings, any message view filters that are currently applied to message browsers are also saved. The next time you start the Java GUI, your message browsers automatically have the message view filters applied.

To save your console settings, select `File: Save Console Session Settings` from the menu bar.

❑ Message browser layout

When you save a customized message browser layout, any currently applied message view filter is also saved to the `itooopbrw` file. The next time you open a browser with a saved layout, the message view filter is automatically applied to the browser.

To save your message browser layout, select `View: Save Message Browser Layout` from the menu bar.

❑ Named message view filters

If you find that you use the same message view filters during several Java GUI sessions, you may want to save the filters for future use. Named message view filters are stored independently of the console settings and the browser layout so that you can later load and apply them to a message browser.

HPOM distinguishes global and personal named message view filters:

- *Global message view filters*

Global message view filters are stored by the HPOM administrator on the management server. Operators can load global filters for their personal use, but cannot create or save them.

- *Personal message view filters*

Personal message view filters are available only to the operator who created them. They are also stored on the management server system, but in user-specific locations.

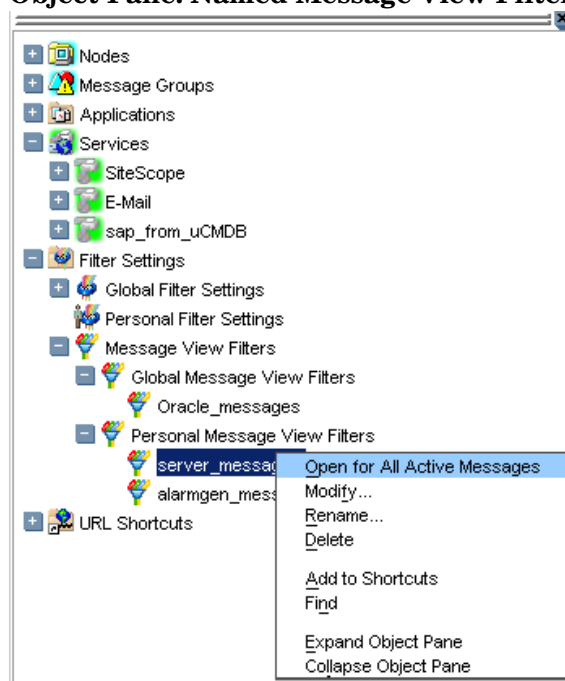
You can access and apply named message view filters by loading them into the Message View Filter window or by selecting them in the object pane as shown in Figure 1-89.

NOTE

A named message view filter currently cannot be applied to history or pending message browsers from the object pane.

Figure 1-89

Object Pane: Named Message View Filters



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 **Put Message Browser to Browser Pane** toolbar button (“Toolbar Icons and Drop-down Lists” on page 415). After it is in the browser pane, the browser can be moved back to the workspace pane by using the same toolbar button.

Figure 1-17 on page 63 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 colored modes, choose **Edit: Preferences . . .** from the menu bar. Then, in the General tab of the Preferences window, select or clear the **Colored Lines** check box, and 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

HPOM 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 window which message attributes to show or hide. For details, see “Showing and Hiding Message Browser Columns” on page 205.

❑ **Customize Column Labels**

Specify new labels for message browser columns in the Customize Browser Columns window. For details, see “Customize Message Browser Columns Window” on page 465.

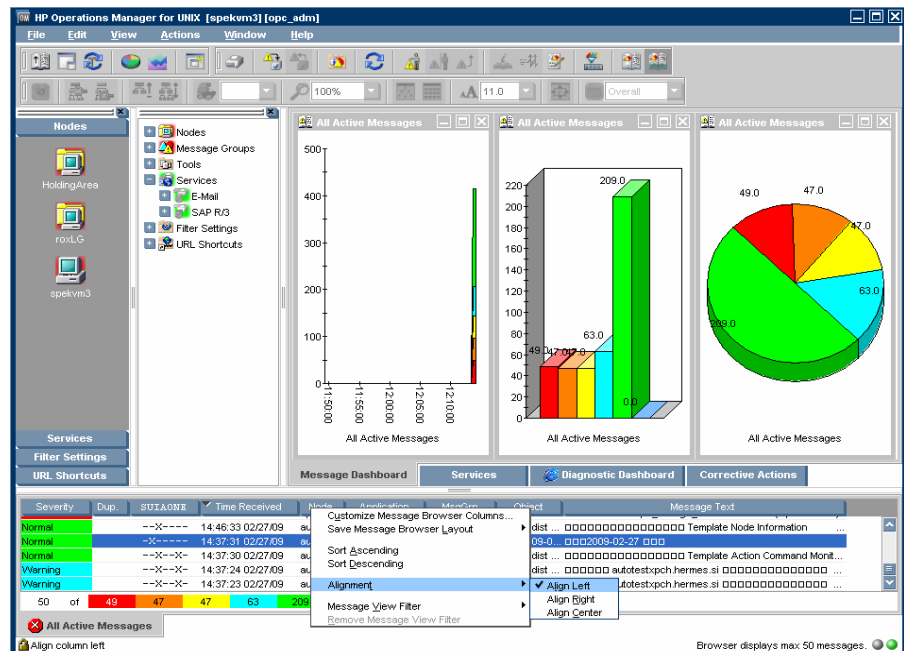
❑ **Align the Column Content**

Align the column content by using a pop-up menu in the message browser opened on the message browser headline. Alignment can be set to left, right, or center. See Figure 1-90 on page 204.

These settings can be saved for future sessions by using the Save Message Browser Layout item of the View or pop-up menus.

To find out how to save the message browser layout, see “Saving the Customized Message Browser Layout” on page 206.

Figure 1-90 Customizing Browser Layout from the Message Browser



Showing and Hiding Message Browser Columns

You can configure HPOM 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 window.

To access this window, 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 pop-up menu.

The Customize Browser Columns window contains two tabs:

❑ **General tab**

List of general message attributes. Figure 1-48 on page 117 shows the General tab for displaying default columns in the Customize Browser Columns window. 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 1-49 on page 118 shows the Custom tab for displaying custom message attributes as columns in the Customize Browser Columns window.

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 you press [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

When you customize the Java GUI, your changes are stored in property files, which reside in your home directory. The next time you start the Java GUI, your property files are evaluated and your customized settings are loaded. Customizations are stored in the following property files:

❑ **Console settings**

Changes to the console settings are stored in the file `HP_OV_consoleSettings_<server_name>_<user>`. See also “Saving Console Settings” on page 168.

❑ **Preferences window**

Changes made in the Preferences window are stored in the Java GUI resource file `itooprc`.

❑ **Browser settings**

Changes made to the message browsers are stored in the browser settings file `itooibrw`.

The administrator can configure a global mode for Java GUI clients so that local property files are ignored in favor of global settings. The global property files reside in a shared location under administrator control.

With global mode enabled, you are not able to save your customizations. Instead, a message is displayed informing you about global mode being enabled. Only the administrator and, if configured, selected operators are allowed to continue saving and using their local settings.

When the global property files change in the shared location, HPOM displays a message and requests a restart of Java GUI.

For more information about enabling global property files, see the *HPOM Administrator's Reference*.

Secure HTTPS Communication

This section describes how to secure the communication between the Java GUI and the management server by setting up an HTTPS-based Java GUI.

The following topics are discussed:

- ❑ **Architecture**

A description of the underlying concepts and architecture of the HTTPS-based Java GUI. For more information, see “HTTPS-Based Java GUI Architecture” on page 209.

- ❑ **Establishing secure communication**

A description of the process for establishing a secure communication. See “Establishing Secure Communication” on page 210.

- ❑ **Certificates**

A description of the certificates and the authentication modes. For more information, see “Certificates” on page 213.

For more information about configuring secure communication between a HTTPS-based Java GUI and the HP Operations management server, see “Configuring Secure HTTPS-based Java GUI Communication” on page 324.

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

HTTPS-Based Java GUI Architecture

The standard Java GUI supplied with HPOM 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 HP Operations management server. The SSL encryption is based on the Core functionality components.

The HTTPS protocol acts as a guardian for applications (tools), gauging which incoming communication requests are trustworthy for secure exchange of data. For details on how the secure communication is established, see “Establishing Secure Communication” on page 210.

The HTTPS functionality provides three prerequisites for network security:

- ❑ Secrecy
- ❑ Data integrity
- ❑ Authentication

After a user logs on 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 “Certificates” on page 213.

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

Establishing 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 HP Operations 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, see the *HPOM Administrator's Reference*.

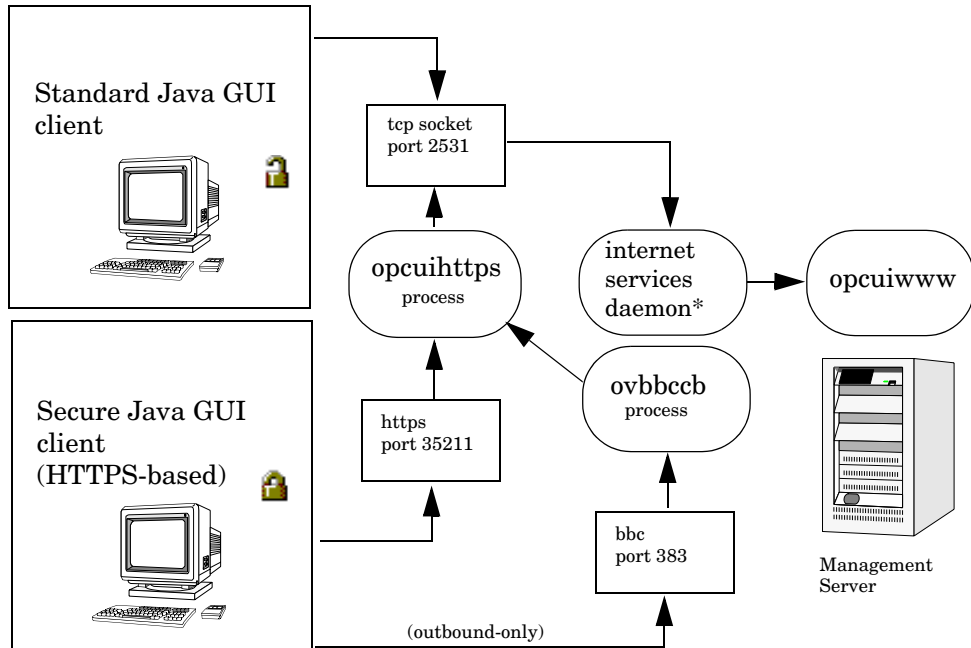
The Java GUI communicates with the `opcuihttps` process using a secure HTTPS protocol on the port 35211. As an outbound-only variant, it is possible to connect to `opcuihttps` through the BBC port 383 (refer to the *HPOM Administrator's Reference* guide for information on how to configure this connection.) 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` (on UNIX) and `xinetd` (on Linux) process, as well as the requests from non-secure Java GUI clients.

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

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

Figure 1-91 on page 211 shows the client-server communication.

Figure 1-91 Client-Server Communication



* inetd on UNIX and xinetd on Linux.

Authentication Process

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

1. Operator logs on.

The operator enters a user name and a password at logon.

For the logon to work, a certificate does not need be installed on the HTTPS-based Java GUI client. For details, see “Certificates” on page 213.

2. 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. For more information about the authentication modes, see “Certificates” on page 213.

4. Communication channel is opened.

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

NOTE

If HTTPS-based communication between Java GUI and the HP Operations management server fails to establish, you are prompted to use a non-secure communication type. If you press Cancel, the log-on window is displayed.

If you set the `https_only` parameter in the `ito_op` start-up script to **yes**, you are not prompted to use a non-secure communication. For more information about the start-up parameters for the HTTPS-based communication, see the “Configuring HTTPS-based Communication on the Java GUI Client” on page 325.

Figure 1-91 on page 211 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 log-on 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.

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 user name 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.

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 HP Operations 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 329.

Daily Tasks

Secure HTTPS Communication

2 Performing Daily Tasks

Detecting Problems with HPOM

HPOM detects problems and potential problems in the managed environment.

This section describes the following:

- ❑ **Monitoring HPOM**

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

- ❑ **Viewing Messages**

When you start the HPOM 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 HPOM problems solving process, see “Problem Solving Process” on page 108.

Monitoring HPOM

To monitor your HPOM 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 217.

❑ 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 218.

❑ 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 218.

❑ 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 219.

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 “Shortcut Bar” on page 40. For an image of nodes in the shortcut bar, see Figure 1-50 on page 120.

❑ 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 “Object Pane” on page 42. For an image of nodes in the object tree, see Figure 1-4 on page 44.

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 “Message Browser” on page 64).
2. Right-click the message, then select `Select Node in Object Pane` from the pop-up menu.

This highlights the node or nodes in the object pane. You can now start applications (tools) 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 112.

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 “Find Dialog Box” on page 476.

NOTE

If you want, 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. 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 “Message Event Notification” on page 113.

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 290. For descriptions of options in the *Preferences* dialog box, see “Preferences Dialog Box” on page 498.

Viewing Messages

When you start the HPOM GUI, a message browser opens in the browser pane, and automatically displays the latest 50 of all active messages from the nodes assigned to you.

NOTE

For an overview of the message browser, see “Message Browser” on page 64. For an overview of the browser pane, see “Browser Pane” on page 62. For an image of messages in the message browser, see Figure 1-15 on page 62.

You can change the maximum number of messages displayed so that all messages are shown (see “Changing the Number of Messages Displayed” on page 321). 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 222.

TIP

Use message view filters to quickly isolate specific messages in a message browser. Message view filters temporarily hide messages from view. To learn how to use message view filters, see “Working with Message View Filters” on page 300.

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 Pending 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 “[Toolbar Icons and Drop-down Lists](#)” on page 415).

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 222.

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 “[Object Pane](#)” on page 42.
A pop-up menu opens.
2. In the pop-up 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 pop-up menu, the message browser shows either active or history messages.

For an overview of the workspace pane, see “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 221.

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 “Filter Messages Dialog Box” on page 469.

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 “Filter Messages Dialog Box” on page 469.

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 (pop-up menu)
 - By selecting **Actions: Messages** from the menu bar.
-

To View Older 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, lock the message browser by clicking the **Lock** checkbox placed at the bottom of message browser, as shown in the Figure 2-1.

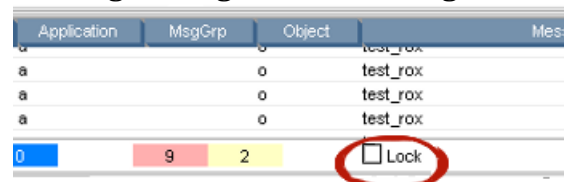
The locked message browser shows the changes in the messages that are already visible while the acknowledged messages disappear from the browser. Newly arriving messages are nevertheless stopped from showing.

Moving scroll slider unlocks the message browser while changing sorting, clicking on the column header, or scrolling inside the message browser with keys does not unlock it, which makes possible to navigate through messages while the message browser is locked.

Moreover, an appropriate information is displayed in a locked message browser' status bar to indicate its status.

Figure 2-1

Locking Messages in the Message Browser



To View Pending Messages

Use the filtered pending messages browser to review and manage messages that arrive on the HPOM management server outside of defined service hours. For an overview of the filtered pending messages browser, see “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 “Filter Messages Dialog Box” on page 469.

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 571). 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 579).

Investigating Problems with HPOM

If HPOM 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 227.

You can modify and even forward the message to another operator or to the HPOM administrator. For details, see “To Send an HPOM Message to Another Operator” on page 227.

❑ **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 228.

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 “Message Browser” on page 64. For a description of default elements in the message headline, see “Message Browser Headline” on page 521.

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

❑ **Sort Messages**

You can sort messages by date and time, or by attribute (including custom message attribute). For details, see “Changing the Layout of Browser Windows” on page 319.

❑ **Resize Columns**

You can resize the columns of the message browser. For details, see “Changing the Layout of Browser Windows” on page 319.

❑ **Change Attributes**

You can change the attributes of a message. For details, see “To Modify the Attributes of a Message” on page 229. For descriptions of message attributes, see “Message Fields” on page 525.

❑ **Lock the Message Browser**

You can lock the message browser to make sure that the older messages you are currently viewing remain visible while new messages arrive. For details, see “To View Older Messages” on page 223.

To Send an HPOM 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 HPOM 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 HPOM 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 pop-up menu.

- *Toolbar*

Select the message. Then, from the toolbar, click the Show Properties button (see “Toolbar Icons and Drop-down Lists” on page 415).

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 “Message Properties Dialog Box” on page 482.

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 HPOM Messages and Application Output” on page 258.

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 HPOM 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 pop-up 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 230.

❑ Diagnostic Dashboard

You can monitor other HP Software applications (tools) that integrate with HPOM in the Message Dashboard workspace. For details, see “Monitoring Tools in the Diagnostic Dashboard Workspace” on page 231.

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 “Current State Chart” on page 130.

❑ History Chart

Displays the severity changes over time of all messages in the currently selected message browser. For details, see “History Chart” on page 132.

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 “Toolbar Icons and Drop-down Lists” on page 415). 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 “Message Dashboard Workspace” on page 55.

Monitoring Tools in the Diagnostic Dashboard Workspace

The Diagnostic Dashboard workspace enables you to monitor other HP Software applications (tools) that integrate with HPOM.

For example, the following applications (tools) provide integration points for HPOM:

- Performance (HP Performance for Windows)
- Network Neighbor View
- Network Path
- Internet Services

For more information about how applications (tools) can help you investigate problems, see the documentation supplied with the applications.

For an overview of the Diagnostic Dashboard workspace, see “Diagnostic Dashboard Workspace” on page 56.

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 “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 “Object Pane” on page 42.

2. Open a filtered history message browser.

Right-click the message, then select `Filter History Messages` from the pop-up 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 “Filter Messages Dialog Box” on page 469.

3. Click `[OK]`.

A filtered history message browser opens displaying only the messages matching your selected criteria (see “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 HPOM 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 263.

❑ **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 238.

NOTE

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

Solving Problems with HPOM

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 Tools
- ❑ Starting Applications (Tools)
- ❑ Starting X-OVw Tools
- ❑ To Customize the Startup Attributes of a Tool
- ❑ To Broadcast a Command

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 “Workspace Pane” on page 53).
2. Do one of the following:
 - *Toolbar*
In the toolbar, click the Own button (see “Toolbar Icons and Drop-down Lists” on page 415).
 - *Popup Menu*
Right-click the message, then select Own from the pop-up menu.
 - *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 HPOM 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 “Workspace Pane” on page 53).

2. Do one of the following:

- *Toolbar*

In the toolbar, click the `Disown` button (see “Toolbar Icons and Drop-down Lists” on page 415).

- *Popup Menu*

Right-click the message, then select `Disown` from the pop-up menu.

- *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 579).

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 224.

2. Do one of the following:

- *Popup Menu*

Right-click the message and select Unbuffer from the pop-up menu.

- *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 HPOM 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 pop-up menu.

- *Toolbar*

Select the message. Then, from the toolbar, click the Show Properties button (see “Toolbar Icons and Drop-down Lists” on page 415).

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 “Toolbar Icons and Drop-down Lists” on page 415).

- *Popup Menu*

Right-click the message and use the pop-up menu.

- *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 pop-up menu.

- *Toolbar*

Select the message. Then, from the toolbar, click the Properties button (see “Toolbar” on page 78).

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 “Toolbar Icons and Drop-down Lists” on page 415).

- *Popup Menu*

Right-click the message, then select Perform/Stop Action -> Perform Operator-Initiated Action from the pop-up 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 pop-up menu, click `Properties`.
3. Click the `Instructions` tab to review the instructions written for you.

To View Operator-assigned Tools

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 246 shows all operator-assigned actions as viewed from the `Actions` menu.

❑ **Object Pane**

In the object pane, do one of the following:

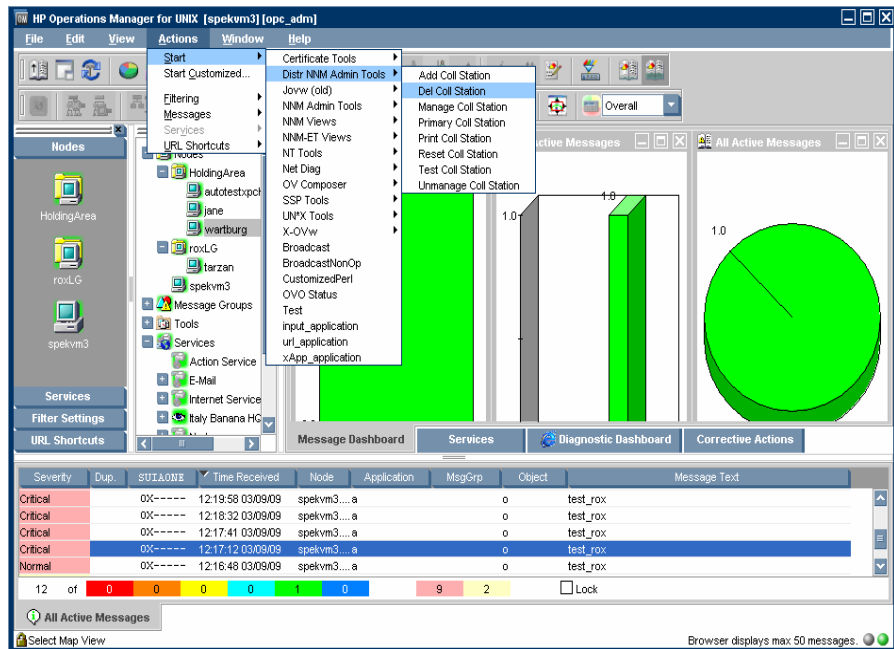
- Double-click a tool in the `Tools` folder.
- Right-click a tool in the `Tools` folder, then select one of the following from the pop-up menu:
 - `Start`
 - `Start Customized...`

For descriptions of pop-up menu options in the object pane, see “Object Pane Pop-up Menu Items” on page 428.

NOTE

When Use Tailored Set of Tools is checked in the Preferences dialog box, the set of available tools in the pop-up menu is smaller than the set of available tool in the Actions menu. For descriptions of options in the Preferences dialog box, see “Preferences Dialog Box” on page 498.

Figure 2-2 Viewing All Operator-assigned Actions from the Actions Menu



Starting Applications (Tools)

You can start an application (tool) from HPOM to remedy an unsuccessful automatic action or operator-initiated action, or to handle a message for which no action has been configured. Tools are executed on the management server, configured nodes, or nodes you have selected.

NOTE

All tools assigned to an operator are displayed in the `Actions: Start` and the `Tools: Start Customized...` wizard in the menu bar.

From the menu bar and pop-up menus, there are two ways to start a tool:

Start

Start the tool directly through the `Start` menu without further customizing the tool. Figure 2-2 on page 246 shows all operator-assigned actions as viewed from the `Actions` menu.

Start Customized

Start through the `Start Customized Tool` wizard, which enables you to customize the tool (for example, add parameters to the tool call. For details, see “To Customize the Startup Attributes of a Tool” on page 252. For descriptions of options in the `Start Customized Tool` wizard, see “Start Customized Tool Wizard” on page 518.

This section describes how to do the following:

- To Start a Tool from the Menu Bar
- To Start a Tool from the Object Pane
- To Start a Tool from the Message Browser

To Start a Tool from the Menu Bar

To start a tool 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 tool.

NOTE

You can use the search function to find the node. To find out how, see “To Search the Object Pane” on page 218. For an overview of the search function, see “Searching the Object Pane” on page 112. For descriptions of options in the Find dialog box, see “Find Dialog Box” on page 476.

2. In the Actions menu, select one of the following:

- Start -> <Tool>

Starts the tool without further customizing the tool. Figure 2-2 on page 246 shows all operator-assigned actions as viewed from the Actions menu.

- Start Customize...

Starts the Start Customized Tools wizard, which enables you to customize the tool (for example, add parameters to the tool call. For details, see “To Customize the Startup Attributes of a Tool” on page 252.

For more information about the Actions menu, see “Actions Menu” on page 403.

3. Select the tool 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 HPOM Messages and Application Output” on page 258.

To Start a Tool from the Object Pane

To start a tool 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 tool.

2. Right-click the node.

A pop-up menu of available application groups and tools opens. For more information about this pop-up menu, see “Object Pane Pop-up Menu Items” on page 428.

3. From the pop-up menu, choose one of the following items:

- Start -> <Tool>

Starts the tool without further customizing the tool. Figure 2-2 on page 246 shows all operator-assigned actions as viewed from the Actions menu.

The list of available tools in the pop-up menu can be further reduced by checking the checkbox *Tailored set of Tools* in the *General* tab of the *Preferences* dialog box. If the *Tailored set of Tools* checkbox is checked, HPOM automatically selects the tools that make sense for the node. That is, HPOM would not offer Microsoft Windows tools for a UNIX node. For details, see “Customizing Pop-up Menus” on page 178 and “Preferences Dialog Box” on page 498.

- Start Customize...

Starts the *Start Customized Tool* wizard, which enables you to customize the tool (for example, add parameters to the tool call. For details, see “To Customize the Startup Attributes of a Tool” on page 252.

NOTE

All outputs are displayed in a new workspace pane window. This output can also be printed. For details, see “Printing HPOM Messages and Application Output” on page 258.

To Start a Tool from the Message Browser

HPOM enables you to start tools on a node from a pop-up menu in the message browser, as shown in Figure 1-80 on page 180. 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` tool from the pop-up menu. The tool is then started on the node `abc.hp.com`.

If you start a tool from multiple messages in the message browser, the tool takes the node attributes from all selected messages. If some selected messages have duplicate (identical) node attributes, the tool uses the node attributes only once, thereby preventing the tool from being started on the node more than once.

To start a tool from the message browser, follow these steps:

1. In the message browser, right-click a message.
2. From the pop-up menu, choose one of the following items:

- `Start -> <Tool>`

Starts the tool without further customizing the tool. Figure 2-2 on page 246 shows all operator-assigned actions as viewed from the Actions menu.

The list of available tools in the pop-up menu can be further reduced by checking the checkbox `Tailored set of Tools` in the `General` tab of the `Preferences` dialog box. If the `Tailored set of Tools` checkbox is checked, HPOM automatically selects the tools that make sense for the node. That is, HPOM would not offer `Windows` tools for a `UNIX` node. For details, see “Customizing Pop-up Menus” on page 178 and “Preferences Dialog Box” on page 498.

- `Start Customize...`

Starts the `Start Customized Tool` wizard, which enables you to customize the tool (for example, add parameters to the tool call. For details, see “To Customize the Startup Attributes of a Tool” on page 252.

Starting X-OVw Tools

Network Node Manager (NNM) is integrated into the HPOM GUI by way of tools in the X-OVw application group. NNM can be installed locally or remotely.

IMPORTANT

NNM cannot be installed on the same system as the HP Operations management server.

This section describes the following:

- ❑ Types of X-OVw Tools
- ❑ To Start X-OVw Tools

Types of X-OVw Tools

There are three NNM-specific tools 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.
- ❑ **Highlight Selected Node**

Maps the selected node to an NNM system, and highlights the node in an OVw session of that NNM system.
- ❑ **Start OVw**

Starts an OVw session on a remote NNM system.

NOTE

HPOM-specific symbols and submaps are not displayed in the accessed OVw map. The map displayed shows a pure network view, with no HPOM-related status messages.

To Start X-OVw Tools

You can start X-OVw tools in the normal way from the HPOM GUI. For details, see “Starting Applications (Tools)” on page 247.

To Customize the Startup Attributes of a Tool

You can change the preconfigured startup attributes of a tool (for example, parameters, username, and password), and specify the nodes on which you want to start the tool, by using the HPOM *Start Customized Tool* wizard, as shown in Figure 1-64 on page 151.

NOTE

For descriptions of options in the *Start Customized Tool* wizard, see “Start Customized Tool Wizard” on page 518.

To customize the startup attributes of a tool, follow these steps:

- 1. Select managed nodes.**

In the object pane, select the managed node or nodes on which you want to start the tool. For an overview of the object pane, see “Object Pane” on page 42.

- 2. Select a tool.**

Hold down **CTRL** and click a tool in the object pane.

At this point, both the managed node(s) and the tool are selected in the object pane.

- 3. Open the Start Customized Tool 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 pop-up menu.

The Start Customized Tool wizard, Step 1 of 3, displays an tool menu tree and the following four buttons:

- [<Back]
- [Next>]
- [Finish>]
- [Cancel]

NOTE

Depending on the tool you chose, there are either two or three steps involved in customizing the start of a tool. You can go back and forward between the steps by using the [<Back] and [Next>] buttons. For descriptions of options in the Start Customized Tool wizard, see “Start Customized Tool Wizard” on page 518.

4. Customize the tool.

To customize the tool, follow these steps:

- a. From the tool tree in Step 1 of 3, choose the tool you want to execute, then click [Next>].
- b. Choose the node or nodes on which you would like to execute the tool.

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.

If the command accepts node names or message IDs as an option, you can specify nodes in the Command field, for example,
-nodes \$OPC_NODES.

Possible variables are:

- \$OPC_NODES Returns the names of all regular nodes that are selected at the time the tool 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.

- `$OPC_MSG_NODES` Returns the names of all nodes on which the events that generated currently selected messages took place. The names are separated by spaces. The nodes need not be in the node bank. If the same message is selected in more than one of these browsers, the duplicate selections is ignored. Only nodes of messages currently selected in the topmost browser are returned.
- `$OPC_EXT_NODES` Returns the node pattern of all external nodes that are selected at the time the tool is executed. The names are separated by spaces.
- `$OPC_MSGIDS_ACT` Returns the Message IDs (UUIDs) of the messages currently selected in the Active/All and any Message Browser(s). Note that if the same message is selected in more than one of these browsers, the duplicate selections will be ignored.
- `$OPC_MSGIDS_HIST` Returns the Message IDs (UUIDs) of the messages currently selected in the History Message Browser.
- `$OPC_MSGIDS_PEND` Returns the Message IDs (UUIDs) of the messages currently selected in the Pending Messages Browser.
- `$OPC_ENV(env variable)` Returns the value of the environmental variable for the user who has started HPOM, for example `PATH`, `NLS_LANG`, `EDITOR`, `SHELL`, `HOME`, `TERM`.
- `$OPC_USER` Returns the name of the HPOM user who is currently logged in on the node.

IMPORTANT

Do not use the `$AGENT_USER` variable. Only the HPOM administrator can set this variable as a startup attribute of a tool. See the *HPOM Administrator's Reference* for more information.

5. Start the tool.

Click [Finish>] to exit the Customized Startup wizard and start the tool.

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 568). 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 HPOM 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 pop-up menu.

The `Start Customized Tool` wizard opens, with the `Broadcast` selected in `Step 1 of 3`. For descriptions of options in this wizard, see “`Start Customized Tool Wizard`” on page 518.

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.

Documenting Solutions with HPOM

The final step in the HPOM 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 HPOM 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 “Message Browser” on page 64.

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, then select Add Annotation from the pop-up menu.

- *Toolbar*

Click the Show Message Annotations button in the toolbar (see “Toolbar Icons and Drop-down Lists” on page 415). 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 “Message Properties Dialog Box” on page 482.

The Add Annotation dialog box opens. For descriptions of options in the Annotations dialog box, see “Add Annotation Dialog Box” on page 460.

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 HPOM Messages and Application Output

HPOM enables you to print the following:

❑ **Messages**

To find out how to print messages, see “To Print Messages” on page 259.

❑ **Message Details**

To find out how to print message details, see “To Print Message Details” on page 260.

❑ **Application Output**

To find out how to print application output, see “To Print Application Output” on page 261.

For an example of a print dialog box, see “Example of the Print Dialog Box (for Microsoft Windows)” on page 262.

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 “Toolbar Icons and Drop-down Lists” on page 415).

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, then select one of the following from the pop-up 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, then select one of the following from the pop-up 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*

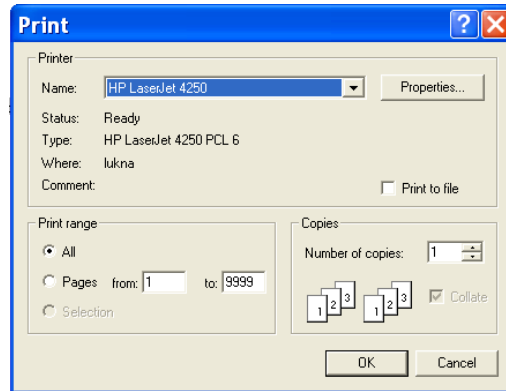
Click the Print button in the toolbar (see “Toolbar Icons and Drop-down Lists” on page 415).

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 HPOM 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 HPOM 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 tool 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.

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 “Message Browser” on page 64.

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 “Toolbar Icons and Drop-down Lists” on page 415).

- *Popup Menu*

Right-click the selected messages in the message browser, then select **Acknowledge** from the pop-up 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 pop-up 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 “Toolbar Icons and Drop-down Lists” on page 415).

- *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 pop-up 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 “Toolbar Icons and Drop-down Lists” on page 415) 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 “Toolbar Icons and Drop-down Lists” on page 415).

- *Popup Menu*

Right-click the selected messages in the message browser, then select `Unacknowledge` from the pop-up 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 HPOM users, for example to inform them of an unexpected system failure or to remind them of a planned outage. Likewise, the HPOM 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 HPOM 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`, type 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 HPOM user names separated by commas (,).
4. Click `[OK]`. The message is sent to the specified HPOM 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 HPOM users. See the `opcwall(1)` man page for more information.

Customizing HPOM

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 Font Size
 - Detaching Windows

❑ **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
- Working with Message View Filters
- 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 Customize the Color Preferences for the Message Browser

To Change Your Operator Password

HPOM 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 HPOM operators. When you change your password, you must use it for all future HPOM sessions, or until you change it again.

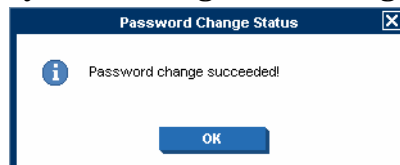
To change your operator password, follow these steps:

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 HPOM Java GUI, you receive a set of default components. HPOM 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 HPOM or your HPOM system administrator, do the following:

- ❑ From the menu bar, select `File: Reload Assigned Defaults`.

To Reload the Configuration

After your HPOM administrator performed configuration updates, such as change of your responsibilities, managed nodes, or tools, Java GUI reflects the changes automatically. No actions are required to synchronize Java GUI after configuration changes.

However, in case of some configuration updates, like change of filters definition or change of services with the disabled `Automatic Service Reload` option, you need to reload your new configuration from the HPOM management server. You do not need to log out of the Java GUI.

Reload the configuration as follows:

- ❑ From the menu bar, select `File: Reload Configuration`.

You can also refresh the message browser manually. For details, see “To Refresh the Java GUI Manually” on page 272.

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 “[Toolbar Icons and Drop-down Lists](#)” on page 415

To find out how to change the browser refresh preset interval for the current session, see “[To Customize the Refresh Interval](#)” on page 273. For descriptions of toolbar icons, see “[Toolbar Icons and Drop-down Lists](#)” on page 415.

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 523). The HPOM 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 “Preferences Dialog Box” on page 498

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 used only for retrieving the latest messages or service status. It does not update browsers with the Relative Time filter set on.

NOTE

After your HPOM administrate performed configuration updates, such as change of your responsibilities, managed nodes, or tools, Java GUI reflects the changes automatically. No actions are required to synchronize Java GUI after configuration changes.

To Customize Console Settings

To customize console settings, follow these steps. The next time you start the Java GUI, the stored settings are read and restored in the Java GUI.

NOTE

If global mode is enabled, you may not be able to save your console settings. See “Using Global Java GUI Property Files” on page 207 for more information.

1. Make any of the following changes to the console:

- *Position Controls*

Change the position of moveable areas, or switch them on or off.

For instructions, see “Customizing Movable Panes” on page 278.

- *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 280.

- *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 284.

- *Browser Pane*

Add, change, or delete tab names, descriptions, and so on.

For instructions, see “Changing the Layout of Browser Windows” on page 319.

- *Message Browser Toolbar*

Show or hide the message browser toolbar in the main toolbar, workspace pane, and browser pane.

For instructions, see “To Customize the Toolbar” on page 289.

- *Filtered Message Browsers*

Apply message browser filters to message browsers.

For instructions, see “Working with Message View Filters” on page 300.

- *Detached Windows*

Change the following in the Java GUI:

- Detach windows.
- Change the size and position of detached windows.

Increase the amount of visible space in detached windows:

- Show or hide the toolbar in detached windows.
- Show or hide the horizontal scroll bar in detached message browser.
- Show or hide the status summary area in detached message browsers.

For instructions, see “Detaching Windows” on page 294.

2. From the menu bar, choose `File: Save Console Session Settings`.

To Customize the Look and Feel of the Java GUI

To customize the look and feel of the HPOM 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 “`Preferences Dialog Box`” on page 498

2. In the `Look and Feel` pulldown menu of the `General` tab, select one of the following styles:

- `Metal`
- `Motif`
- `HP One Voice` (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 HPOM 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, perform these steps:

1. Choose a custom image in GIF format and name it `customImg.gif`.
2. Place `customImg.gif` in your home directory.

Your home directory is in the following location:

- *Windows 2003 and XP*
`C:\Documents and Settings\`
- *Solaris*
`/export/home/<user>`
- *Other platforms*
`/home/<user>`

3. Restart the Java GUI.

Note that HPOM 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 “Position Controls” on page 79.

❑ **Shortcut Bar**

For an overview of the shortcut bar, see “Shortcut Bar” on page 40.

❑ **Object Pane**

For an overview of the object pane, see “Object Pane” on page 42.

❑ **Workspace Pane**

For an overview of the workspace pane, see “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 “Shortcut Bar” on page 40.

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 pop-up menu.
3. From the pop-up 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 pop-up menu.

The **Add New URL Shortcut** dialog box opens. For descriptions of options in this dialog box, see “Add New URL Shortcut Dialog Box” on page 461

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 pop-up menu, select **Modify Shortcut**.

The **Modify Shortcut** dialog box opens. For descriptions of options in this dialog box, see “Modify Shortcut Dialog Box” on page 496

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 pop-up 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 pop-up menu, select `Add New Group`.

The `Add New Group` dialog box opens. For descriptions of options in the `Add New Group` dialog box, see “`Add New Group Dialog Box`” on page 460.

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 pop-up 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 pop-up 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 “`Preferences Dialog Box`” on page 498.

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 pop-up 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 “Workspace Properties Dialog Box” on page 517. 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 “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 pop-up 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 “Workspace Properties Dialog Box” on page 517. 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 pop-up 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, HPOM 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 284.

3. In the `Web Browser` tab, select one of the following options:

- Use external web browser

Click `[Browse]` to select an external web browser (for example, Mozilla) installed on your computer.

- Use 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 284.

NOTE

The ActiveX Internet Explorer Control option is available on Windows systems only.

For a description of each option on the `Web Browser` tab of the Preferences dialog box, see “Preferences: Web Browser Tab” on page 501

4. 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 274.

To Customize Popup Menus

HPOM enables you to limit the number of tools that are displayed in pop-up menus. The Tailored Set of Tools limits pop-up menu items to tool that are related to currently selected messages. Related tools are defined with the \$OPC_MSG string in the application call. If there are no tools with currently selected \$OPC_MSG string, the pop-up menu does not contain any tools.

To Enable Tailored Popup Menus

To enable tailored pop-up 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 Tools` checkbox.

To Disable Tailored Popup Menus

To disable tailored pop-up 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 Tools` 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 pop-up menu. You can make any of the components visible again by reselecting these options.

For information about the toolbar and its components, see “Toolbar” on page 78.

❑ **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 “Message Event Notification” on page 113. To find out how to respond to message event notification, see “To View Message Event Notifications” on page 219.

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 “Preferences: Events Tab” on page 502.

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 Font Size

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 “Preferences: General Tab” on page 499.

IMPORTANT

For detailed information on customizing the font size in service graphs and service maps, refer to the *HP Service Navigator Concepts and Configuration Guide*.

To Customize the Font Size in Service Graphs and Services Maps

To set the font size in the Java GUI, do the following:

1. Select `Edit: Preferences...` from the menu bar.
2. In the `Services` tab of the Preferences window, specify a value in the `Service Graph Font Size` drop-down list.
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 “Preferences: General Tab” on page 499.

To Customize the Display of the HPOM Communications Status Dialog Box

Java GUI clients check for changes to the global property files in the shared location. If a change is detected, the HPOM Communications Status dialog box displays a message, which informs the operator of the changes and requests a restart of the Java GUI.

The Show Communications Status dialog option enables or disables the HPOM Communications Status dialog box from displaying. By default this option is selected.

To Disable the HPOM Communications Status Dialog Box

To disable the display of the HPOM Communications Status dialog, follow these steps:

1. Select `Edit: Preferences...` from the menu bar.
2. In the General tab of the Preferences dialog box, deselect the Show Communications Status dialog checkbox.

Disabling this option is useful if you want to disable this behavior in an environment with many clients logged in with the same user name at the same time.

This way, when one of these clients reloads the Java GUI configuration, the HPOM Communications Status dialog boxes are:

- displayed only on those clients where this option is enabled.
- refrained from disturbing the rest of the clients where this option is disabled locally.

HPOM enables you to set this option manually, by editing the `itooopc` resource file, adding the `show_comm_status_dlg` parameter option. See “itooopc Options and Parameters” on page 559.

Detaching Windows

HPOM enables you to detach windows from the main Java GUI window so that you can move them outside of the main window, for example, to another monitor. You can detach message browsers, service graphs, service submaps, and custom service maps.

For more information about detached windows, see “Detached Windows” on page 86.

To Detach a Window from the Main Java GUI Window

To detach a window from the main Java GUI window, follow these steps:

1. Select the window that you want to detach.
2. Select `View: Detach Window` from the main menu bar. Or click the `Detach Window` icon in the main toolbar.

HPOM places the detached window at the center of your screen, and adds a menu and toolbar to the detached window.

To Attach a Detached Window to the Main Window

To attach a detached window to the main Java GUI window, follow these steps:

1. Select the workspace where you want to attach the window.
2. Select the detached window that you want to attach.
3. Select `View: Attach Window` from the menu bar of the detached window. Or click the `Attach Window` icon in the toolbar of the detached window.

HPOM attaches the window to the currently selected workspace and removes the menu and toolbars from the window.

If you want to obtain more space within a detached window, you can hide the following window components:

- Menu or toolbar in detached windows
- Status summary area in detached message browsers
- Horizontal scroll bar in detached message browsers

To Show or Hide the Menu or Toolbar in Detached Windows

To hide the menu or toolbar in detached windows, follow these steps:

1. Right-click the background of the toolbar of a detached window.

The toolbar pop-up menu opens.

2. Select the window component that you want to hide in the pop-up menu.

The selected window component disappears from the detached window.

To show a hidden component again, select the component in the toolbar pop-up menu.

To Show or Hide the Status Summary area in Message Browsers

To show or hide the status summary area in message browsers, follow these steps:

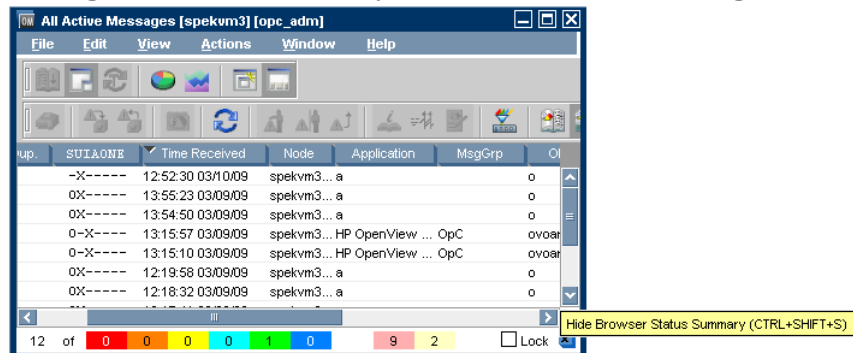
- To hide the status summary area in a detached message browser, click the Hide Browser Status Summary icon in the lower-right corner of the browser. Or press **CTRL+SHIFT+S**.

The status summary area disappears from the message browser.

- To show the summary area again, press **CTRL+SHIFT+S** again.

Figure 2-5

Hiding the Status Summary Area in Detached Message Browsers



To Show or Hide the Horizontal Scroll Bar in Message Browsers

To show or hide the horizontal scroll bar in message browsers, follow these steps:

- ❑ To hide the horizontal scroll bar in a detached message browser, click the `Hide Horizontal Scroll Bar` icon in the message browser toolbar, or press **CTRL+SHIFT+H**.

The horizontal scroll bar disappears from the message browser.

- ❑ To show the scroll bar again, click the toolbar icon again, or press **CTRL+SHIFT+H** again.

To Create a Filtered Message Browser

HPOM 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 Message Browser Filters” on page 183. For descriptions of options in the `Filter Messages` dialog box, see “Filter Messages Dialog Box” on page 469.

- *Popup Menu*

In the object tree, right-click `Personal Filter Settings`, then select `Add New Filter` from the pop-up menu. Then define the new filter in the `Filter Messages` dialog box.

This option is available for operators only. Administrators can only add new filters in the `Global Filter Settings`.

For descriptions of options in the `Filter Messages` dialog box, see “Filter Messages Dialog Box” on page 469.

❑ 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 319.

Options for Displaying External Nodes in the Message Browser

When creating the browser filter in the Java GUI, the following options are available for displaying external nodes:

- To filter on external nodes in general, use the `OPC: prefix`.
- To filter on external nodes with an IP-address match pattern, use the `OPC:EA prefix`.
- To filter on external nodes with an IP-name match pattern, use the `OPC:EN prefix`.
- To filter on external nodes with a non-IP match pattern, use the `OPC:EO prefix`.

To Save the Browser Filter Settings

If you find that you use the same filtered active, history, or pending messages browser during several HPOM 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 HPOM 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 316.

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 “`Filter Messages Dialog Box`” on page 469.

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 “`Save Browser Filter Settings Dialog Box`” on page 507.

5. Click `[OK]`.

Your browser settings are now saved.

NOTE

Your HPOM 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 HPOM 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 pop-up menu in one of two locations:

- ❑ **Shortcut Bar**

For details, see “`Shortcut Bar Pop-up Menu`” on page 81.

- ❑ **Object Pane**

For details, see “`Object Pane Pop-up Menu`” on page 82.

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 “Toolbar Icons and Drop-down Lists” on page 415).

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.

Working with Message View Filters

Message view filters let you isolate specific messages in a message browser by applying filter criteria and rules to the browser. The browser displays only messages that match the filter.

This section describes how to do the following:

- To Create Quick Filters on Message Browser Columns
- To Create Simple Message View Filters
- To Create Advanced Message View Filters
- To Write Message View Filters in the Text View
- To Save Named Message View Filters
- To Apply Saved Message View Filters
- To Modify Saved Message View Filters
- To Remove Filters from Message Browser Columns

To Create Quick Filters on Message Browser Columns

The pop-up menu on the message browser headline offers a quick and convenient way to find and work with a subset of messages in a message browser. See also “Quick Message View Filters” on page 191 for more information about this filter type.


To use quick filters on message browser columns:

1. Right-click the label of the message browser column that you want to filter.

A pop-up menu opens.

2. Select `Message View Filter` and the value from the column by which you want to filter.

For example, to show all messages with generated by the tool `SNMPTraps`, open the pop-up menu on the `Application` column label, and select `Column Filter: SNMPTraps` from the pop-up menu.

The message browser displays only those messages that match the message view filter. In addition, the message view filter icon  appears on the column label and on the filtered message browser itself.

NOTE

The Java GUI truncates the values in the pop-up menu if there are too many values or the values are too long to display. This is typically the case for values in the `Message Text` column. If no values are shown at all and `Custom` is selected in the pop-up menu, a simple or advanced message view filter is currently applied, and can only be changed in the `Message View Filter` dialog box.

Messages in the browser are updated each time a message view filter is applied and, for filtered time and date related columns, at every refresh interval.

For more information about removing message view filters, see “To Remove Filters from Message Browser Columns” on page 314.

To Create Simple Message View Filters

To create simple message view filters, use the `Simple View` tab of the `Message View Filter` dialog box. For more information about this filter type, see “Simple Message View Filters” on page 192.

To create simple message view filters:

1. Select the message browser that you want to filter.
2. Do one of the following:
 - *Menu Bar*
Select `Actions: Filtering -> Message View Filter...` from the menu bar.
 - *Popup Menu*
Right-click the message browser headline and select `Message View Filter: Custom...` from the pop-up menu.
 - *Toolbar*
Click the `Open Message View Filter Dialog Box` icon on the main toolbar.

The `Message View Filter` dialog box opens with the `Simple View` tab displayed. If no message view filter is configured for the browser, this tab is empty.

If the `Advanced View` tab opens, an advanced message view filter is applied. To switch to the `Simple View` tab, first remove the existing advanced filter.

3. Click `[Add]`.
An empty criterion is added to the tab, and the lower half of the dialog box is now available for you to make selections.
4. Select or type the `Column` name on which you want to filter.
The list of available column names offers all existing names, including custom message attribute names.
5. *Optional:* Select `[NOT]` to invert the criterion.
For example, if you choose `[NOT]` and the `equals` operator, the criterion filters messages that *do not* match the chosen value.


6. Select an Operator.

The operators vary, depending on the contents of the specified message browser column. Only appropriate operators are offered for numeric or string data. See also “Operators for Message View Filters” on page 198.

7. Choose a Value to match.

You can type your own custom value, choose a value from the list of available messages, or select a predefined value such as (Management Server) or (Today). See also “Predefined Values for Message View Filters” on page 199.

If the equals operator is selected, you can also use the question mark (?) and asterisk (*) wildcard characters. A question mark matches any single character. An asterisk matches any group of one or more characters.

8. *Optional:* For time-related columns and the Flags columns, select the  button, and use the subsequent dialog boxes to help you enter a value.


9. Press **Enter** if the filter is not updated in the tab.

10. *Optional:* To create additional criteria, click [Add] and modify the criteria as required.

11. Apply the filter:

- Click [Apply] to apply the filter without closing the dialog box.
- Click [OK] to apply the filter and close the dialog box.

If the filter does not conform to the syntax rules, a message appears and explains the problem. See “Syntax for Message View Filters” on page 195 for a description of the required syntax.

The message browser displays only those messages that match the message view filter. In addition, the message view filter icon  appears on the column label and on the filtered message browser itself.

Messages in the browser are updated each time a message view filter is applied and, for filtered time and date related columns, at every refresh interval.

To Create Advanced Message View Filters

Use the `Advanced View` tab of the `Message View Filter` dialog box to create advanced message view filters. See “Advanced Message View Filters” on page 194 for more information about this filter type.

You cannot switch from the `Advanced View` tab to the `Simple View` tab if an advanced filter is defined because the complex structure of an advanced filter can be displayed only in the `Advanced View` or the `Text View` tab.

To create advanced message view filters:

1. Select the message browser that you want to filter.

2. Do one of the following:

- *Menu Bar*

Select `Actions: Filtering -> Message View Filter...` from the menu bar.

- *Popup Menu*

Right-click the message browser headline and select `Message View Filter: Custom...` from the pop-up menu.

- *Toolbar*

Click the `Open Message View Filter Dialog Box` icon on the main toolbar.

The `Message View Filter` dialog box opens. If no message view filter is configured for the browser, the `Simple View` tab displays. Click `Advanced View` to open the `Advanced View` tab.

If the `Advanced View` tab opens, an advanced message view filter is already applied to this browser. You must delete it before you can create a new one. Or simply modify the existing filter.

3. Create criteria:

a. Click `[New Criterion]`.

An empty criterion is added to the tab. The lower half of the dialog box is now available for you to make selections.

- b. Select or type the `Column` name on which you want to filter.

The list of available column names offers all existing names, including custom message attribute names.

- c. *Optional:* Select `[NOT]` to invert the criterion.

For example, if you choose `[NOT]` and the `equals` operator, the criterion filters messages that *do not* match the chosen value.


- d. Select an `Operator`.

The operators vary, depending on the contents of the specified message browser column. Only appropriate operators are offered for numeric or string data. See also “Operators for Message View Filters” on page 198.

- e. Choose a `Value` to match.

You can type your own custom value, choose a value from the list of available messages, or select a predefined value such as `(Management Server)` or `(Today)`. See also “Predefined Values for Message View Filters” on page 199.

If the `equals` operator is selected, you can also use the question mark (?) and asterisk (*) wildcard characters. A question mark matches any single character. An asterisk matches any group of one or more characters.

- f. *Optional:* For time-related columns and the `Flags` columns, select the  button, and use the subsequent dialog boxes to help you enter a value.

- g. Press **Enter** if the filter is not updated in the tab.

- h. Click `[New Criterion]` again, and modify any additional criteria as required.

When you add a second criterion, it is combined with the first criterion by an `AND` rule, which means that the messages must match both criteria.

4. Create a rule:

- a. Click `[New Rule]`.

An empty rule is added to the tab and the lower half of the dialog box changes for you to configure the rule.

- b. Select the rule operator. You have a choice between `AND` and `OR`.

- c. *Optional:* Select [NOT] to invert the rule.

For example, if you choose [NOT] and the AND operator, the rule filters messages that *do not* match either of the configured criteria.

- d. Press **Enter** if the filter is not updated in the tab.
e. Add criteria to the rule as required.

TIP


You can also create a rule by selecting two or more criteria or rules, and by clicking [New Rule]. The selected items become members of the new rule. The selected items must directly belong to the same parent rule. Otherwise a new rule cannot be created for them.

5. *Optional:* Use [Move Up] and [Move Down] to change the order and nesting of criteria and rules.

6. Apply the filter:

- Click [Apply] to apply the filter without closing the dialog box.
- Click [OK] to apply the filter and close the dialog box.

If the filter does not conform to the syntax rules, an error message appears and explains the problem. See “Syntax for Message View Filters” on page 195 for a description of the required syntax.

The message browser displays only those messages that match the message view filter. In addition, the message view filter icon  appears on the column label and on the filtered message browser itself.

Messages in the browser are updated each time a message view filter is applied and, for filtered time and date related columns, at every refresh interval.

To Write Message View Filters in the Text View

If you feel more comfortable writing message view filters in text format, you can use the `Text View` tab of the `Message View Filter` dialog box to define message view filters.

NOTE

Enclose column names and values that contain spaces in quotation marks (“”).

To create message view filters using the `Text View` tab:

1. Familiarize yourself with the message view filter syntax described in “Syntax for Message View Filters” on page 195.
2. Select the message browser that you want to filter.
3. Do one of the following:

- *Menu Bar*

Select `Actions: Filtering -> Message View Filter...` from the menu bar.

- *Popup Menu*

Right-click the message browser headline and select `Message View Filter: Custom...` from the pop-up menu.

- *Toolbar*

Click the `Open Message View Filter Dialog Box` icon on the main toolbar.

The `Message View Filter` dialog box opens.


4. Click `Text View` to open the `Text View` tab.
5. Place the cursor in the editable text area, and type your filter definition.
6. Click `[Check]` to verify that your filter definition is syntactically correct.

An information message informs you about the results. If errors are detected, correct the filter and check the syntax again.

7. Apply the filter:

- Click [Apply] to apply the filter without closing the dialog box.
- Click [OK] to apply the filter and close the dialog box.

If the filter does not conform to the syntax rules, a message appears and explains the problem.

The message browser displays only those messages that match the message view filter. In addition, the message view filter icon  appears on the column label and on the filtered message browser itself.

Messages in the browser are updated each time a message view filter is applied and, for filtered time and date related columns, at every refresh interval.

To Save Named Message View Filters

You can store message view filters as part of the console session settings and of any customized browser layout. The next time you start the Java GUI or open a browser with a saved layout, the stored message view filters are immediately applied to the browsers.

You can also store message view filters independently of the console settings and the browser layout as described below. Saved message view filters are listed in the `Filter Settings` folder of the object tree. See also “Saving Message View Filters” on page 201.

To save a named message view filter:

1. Select the message browser that you want to filter.
2. Do one of the following:

- *Menu Bar*

Select Actions: Filtering -> Message View Filter... from the menu bar.

- *Popup Menu*

Right-click the message browser headline and select Message View Filter: Custom... from the pop-up menu.

- *Toolbar*

Click the Open Message View Filter Dialog Box icon on the main toolbar.

The Message View Filter dialog box opens. If a message view filter is already applied to the message browser, the Message View Filter dialog box displays this filter.

3. *Optional:* If the Message View Filter dialog box is empty, create a message view filter.

See “To Create Simple Message View Filters” on page 302 and “To Create Advanced Message View Filters” on page 304 for more information.

4. Click [Save...].

The Save Message View Filter dialog box opens.

5. Select the filter type: Global or Personal.

If you are not the HPOM administrator, the Global option is not available to you. You can store the filter for your personal use only.

6. Type a descriptive name for your message view filter into the Name field.

Filter names can contain only alpha-numeric characters and the underscore character (A ... Z, a ... z, 0 ... 9, and _). The length is limited to 254 characters.

7. Click [OK] to save the filter and close the Save Message View Filter dialog box.

8. In the Message View Filter dialog box, click [OK] to apply the filter and close the dialog box.

See “To Apply Saved Message View Filters” on page 311 and “To Modify Saved Message View Filters” on page 312 for information about applying saved filters and loading them for modification.

To Apply Saved Message View Filters

You can apply saved message view filters to a specific browser or to the `All Active Messages` browser.

To apply a saved message view filter to a specific browser:

1. Select the message browser that you want to filter.
2. Load the saved message view filter into the `Message View Filter` dialog box, and click `[Apply]`.

For information about loading saved message view filters, see “To Modify Saved Message View Filters” on page 312.

To apply a saved message view filter to the `All Active Messages` browser:

1. Select a saved message view filter in the `Filter Settings` folder of the object tree.
2. Do one of the following:
 - Select `Open for All Active Messages` in the pop-up menu
 - Double-click the saved filter.
 - Drag the saved filter onto the workspace or browser pane.

An `All Active Messages` browser opens and displays all active messages that match the applied message view filter.

To Modify Saved Message View Filters

After you have saved a message view filter, you can access it again by loading it into the Message View Filter dialog box.

You can also modify a saved message view filter by selecting the filter in the object pane and selecting *Modify...* in the pop-up menu. You can then modify the filter in the Message View Filter dialog box and save it but you cannot apply it to a browser because the filter requires, but does not have, the context of a specific browser.

CAUTION

When you load a saved message view filter into the Message View Filter dialog box, it replaces any previously listed filters.

To load a message view filter:

1. Select the message browser that you want to filter.
2. Do one of the following:
 - *Menu Bar*
Select *Actions: Filtering -> Message View Filter...* from the menu bar.
 - *Popup Menu*
Right-click the message browser headline and select *Message View Filter: Custom...* from the pop-up menu.
 - *Toolbar*
Click the *Open Message View Filter Dialog Box* icon on the main toolbar.

The Message View Filter dialog box opens.

3. Click [Load...].
The Load Message View Filter dialog box opens.
4. Select the saved message view filter that you want to load.
5. Click [OK] in the Load Message View Filter dialog box.

In the Message View Filter dialog box, the selected filter replaces any previously listed filters.

6. Modify the loaded message view filter as required.

NOTE

Operators can load both global and personal filters but can only save personal filters. Administrators can load and save only global filters.

7. Click [OK] to apply the loaded filter and close the Message View Filter dialog box.

To Remove Filters from Message Browser Columns


You can undo message view filtering by removing filter criteria from a single message browser column or by removing the entire filter from the browser.

To remove a single criterion from a message browser column:

1. Right-click the label of the message browser column from which you want to remove the criterion.

A pop-up menu opens.

2. Deselect the criterion in the Message View Filter pop-up menu

The criterion is removed from the selected message browser column. The message view filter icon  remains on the column label if other filter criteria are selected for the message browser column.


If filter criteria are applied to other message browser columns, the browser shows only those messages that match the remaining criteria.

To remove all criteria from a single message browser column:

1. Right-click the label of the message browser column from which you want to remove the filter.

A pop-up menu opens.

2. Select Message View Filter: All.

The filter criteria are removed from the selected message browser column only, and the message view filter icon  disappears from the column label.

If filter criteria are applied to other message browser columns, the browser shows only those messages that match the remaining criteria.


To remove a message view filter from a message browser:

1. Select the message browser from which you want to remove the message view filter.

2. Do one of the following:

- Select Actions: Filtering -> Remove Message View Filter from the menu bar.

- Right-click the message browser headline and select Remove Message View Filter from the pop-up menu.

The message browser shows all messages it is configured to display and, the message view filter icon  disappears from the message browser.

NOTE

Removing a message view filter from a message browser does not delete any saved message view filters.

Saving the Browser Layout

If you change the size of the browser or customize the columns during several HPOM 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 HPOM GUI.

NOTE

Any changes to the browser filters must be saved separately. For details, see “To Save the Browser Filter Settings” on page 298.

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 319.

2. Apply message view filters, as needed.

For instructions, see “Working with Message View Filters” on page 300.

3. Make sure the browser for which you want to save the layout is active.

4. 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.

HPOM saves the layout in the `itoopbrw` file in your home directory.

This file is usually stored in the following directories:

- *Windows 2003 and XP*

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

- *Solaris*

`/export/home/<user>`

- *Other platforms*

`/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 message browser filter settings.

NOTE

If you have not already done so, define the message browser 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 297.

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 319.

3. Apply message view filters, as needed.

For instructions, see “Working with Message View Filters” on page 300.

4. Make sure that the browser for which you want to save the layout is active.

5. Select View: Save Message Browser Layout -> Save For Filter Name.

HPOM saves the layout in the `itooopbrw` file in your home directory.

This file is usually stored in the following directories:

- *Windows 2003 and XP*
C:\Documents and Settings*<user>*
- *Other platforms*
/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 1-90 on page 204 for an example of a sorted browser column with numerical values.

❑ Aligning the Column Content

You can align the column content using a pop-up 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 223.

❑ **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 pop-up menu. For details, see “Customize Message Browser Columns Window” on page 465.

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 316.

Changing the Number of Messages Displayed

You may view all messages in the active 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 active or history message browser, do one of the following:

- ❑ **Toolbar**

In the toolbar, click the Show All Messages icon (see “Toolbar Icons and Drop-down Lists” on page 415).

- ❑ **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 “Toolbar Icons and Drop-down Lists” on page 415).

- ❑ **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 active or history message browser. For details, see “View Menu” on page 398. If you choose Latest Messages, you can change the number messages displayed at one time.

To change the number of messages displayed in an active 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 “Preferences Dialog Box” on page 498

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, HPOM colors just the *Severity* column in the message browser. If you want, you can configure HPOM to color the entire line in the message browser according to the severity of each message. Coloring the entire line is useful when running HPOM 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 “*Preferences Dialog Box*” on page 498

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 HPOM management server. The following topics are discussed:

❑ **Startup Script Parameters**

Describes the parameters in the `ito_op` (`ito_op.bat`) startup script related to HTTPS-based Java GUI. For more information, see **“Configuring HTTPS-based Communication on the Java GUI Client” on page 325.**

❑ **Core Functionality**

Outlines the role that the Core functionality has in the process of establishing the secure communication and explains how to install it. For more information, see **“Installing Core Functionality” on page 327.**

❑ **Certificates**

Explains how to provide certificates for both, server and full, modes of authentication. For more information, see **“Providing Certificates” on page 329.**

❑ **Firewall**

Explains how to configure the connection between the HPOM management server and the Java GUI client through the proxy server. For more information, see **“Configuring the HTTPS-based Java GUI Connection through Firewalls” on page 332.**

For more information about the HTTPS-based Java GUI underlying concepts and architecture, see “HTTPS-Based Java GUI Architecture” on page 209.

Configuring HTTPS-based Communication on the Java GUI Client

To configure HTTPS-based communication between the Java GUI and the management server, set the parameters listed in Table 2-1 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</code>	Sets the 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</code>	The port on which <code>opcuihttps</code> is listening. (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. 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 `itopr` configuration file, which is located in the user's home directory.

IMPORTANT

Startup parameters specified in the `itooopr` configuration file using the global settings mode on the HPOM management server are ignored upon HPOM Java GUI startup; only locally specified startup parameters are applied. Refer to the *HPOM 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 *HPOM Administrator's Reference*.

For information about configuring the connection between the HPOM management server and the Java GUI client through a proxy server, see “Configuring HTTPS-based Communication on the Java GUI Client” on page 325.

The process for establishing a secure communication is described in “Establishing Secure Communication” on page 210.

Installing Core Functionality

The Core functionality is required on the client system if you have chosen to set the full authentication mode, but there is no Operations HTTPS agent installed on the Java GUI client.

Using the Core functionality you can also configure the proxy server through which the connection between the HPOM management server and the Java GUI client is established. However, having Core functionality installed is not mandatory for the proxy server configuration. See “Configuring the HTTPS-based Java GUI Connection through Firewalls” on page 332 for more information.

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 HPOM management server are detailed in the *HPOM Installation Guide for the Management Server*.

To Install the Core Functionality

1. Copy the following packages:

```
HPOvXpl  
HPOvBbc  
HPOvSecCo  
HPOvSecCC
```

from the HPOM management server vendor tree, at the following location:

```
/var/opt/OV/share/databases/OpC/mgd_node/vendor/  
<VENDOR>/<FAMILY>/<OS>/<HPOM_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/08.52.006/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**

See “To Provide Certificates for Server Authentication Mode” on page 329.

❑ **Full authentication**

See “To Provide Certificates for Full Authentication Mode” on page 330.

For more information about certificates and authentication modes, see “Certificates” on page 213.

To Provide Certificates for Server Authentication Mode

To use the HTTPS-based Java GUI, it is not necessary to have any certificate installed, because the GUI connects to the HPOM management server anonymously.

The certificates are generated upon first connection to the HPOM management server, and stored together with the public key in the local Certificate Store. The certificates are then used by the `opcuihttps` 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 the Java GUI and the HPOM management server is established without any notice.

❑ **Certificate does not exist on the client.**

The HPOM `Server Certificate` dialog window is displayed. This dialog window prompts you to accept the HPOM server certificate. The following selections are available:

- If you choose **Yes**, the HPOM 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 HPOM management server is cancelled. In the newly displayed login window, you can choose another HPOM management server, or cancel the login procedure.
- If you choose **Always**, the HPOM server certificate will be used for the current and all subsequent Java GUI sessions.

To Provide Certificates for Full Authentication Mode

To provide the certificates for the full authentication mode, the following has to be performed:

1. Configure the `opcuihttps` process to enable the full authentication mode. 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 *HPOM Administrator's Reference* guide for more information about configuring the `opcuihttps` parameters.

2. Ensure that the client certificate is present on the client system.

If the Operations HTTPS agent is installed on the Java GUI client system, you can use its HPOM client certificate for authentication; otherwise you should install the client certificate manually. See “To Install the Client Certificate Manually” on page 331 for details about the manual client certificate installation.

3. Set the Java GUI startup parameter `lcore_defaults` to **yes**, so that the Java GUI can use the default Core functionality. The Core functionality is either installed with the HPOM agent in case it exists on the Java GUI client, or you have to install it additionally. See “Installing Core Functionality” on page 327 for more information.

To Install the Client Certificate Manually To install the client certificate manually on the client system, follow these steps:

1. On the Java GUI client system, install the Core functionality, if it is not already installed. For information about installing the Core functionality, see “Installing Core Functionality” on page 327.
2. On the Java GUI client system, create a client core ID using the following command:

```
ovcoreid
```

3. On the HPOM 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 *<system_name>* is the HPOM management server hostname, *<passphrase>* is a password, *<client_coreid>* is the client core ID, and *<filename>* is the name of the file where the certificate is stored.

4. Transfer the file containing the certificate to the client system, for example using the ftp service.
5. 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 HPOM management server through a firewall, you can either configure the firewall to allow the HTTPS-based Java GUI direct access to the HPOM management server, or you can configure the HTTPS-based Java GUI to use a proxy server for all communication with the HPOM management server. The default port on which the `opcuihttps` process is listening on the management server is 35211. (The standard Java GUI uses port 3521.)

There are different methods for specifying a proxy server for the HTTPS-based Java GUI:

❑ *Using the Core functionality:*

To Configure a Proxy Server with the Core Functionality.

❑ *Without Core functionality installed:*

To Configure a Proxy Server Using the `ito_op` Command Line Tool.

To Configure a Proxy Server Using the `itoopec` File.

To Configure a Proxy Server in the Login Dialog Box.

To Configure a Proxy Server for Java GUI Applets.

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 HPOM 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 HPOM 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.

To Configure 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 HPOM 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 332 for details of `<proxy_config>`.

To Configure a Proxy Server Using the `itoopec` File

You can also set the parameter `bbc.http:proxy <proxy_config>` in the `itoopec` file. The `itoopec` file is located in the user’s home directory.

For example, to enable a connection to the HPOM management server `barney.hp.com` through the proxy server `proxy.hp.com`, which runs on the port 8088, add the following line to the `itoopec` file:

```
bbc.http:proxy proxy.hp.com:8088+(barney.hp.com)
```

See “Configuring the HTTPS-based Java GUI Connection through Firewalls” on page 332 for details of `<proxy_config>`.

See “itoopec Resource File” on page 559 for more information about available options.

To Configure 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 332 for details of the proxy configuration syntax.

For example, to enable a connection to the HPOM 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 through the `ito_op` command line tool or in the `ito_op_applet.html` applet file.

`<proxy_server>`

Select an already defined `<proxy_server>` to use for the connection to the HPOM 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 HPOM 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.

To Configure a Proxy Server for Java GUI Applets

To configure a proxy for the HTTPS-based Java GUI running as an applet, perform the following procedure on the management server:

1. Edit the file:

```
/opt/OV/www/htdocs/ito_op/ito_op_applet.html
```

by setting 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 332 for details of *<proxy_config>*.

2. Restart the HTTPS-based Java GUI applet.

For example, to enable a connection to the HPOM 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)">
```

To Configure 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 327 for more information.

NOTE

You do not need to install the Core functionality if the HP Operations HTTPS agent is present on the Java GUI client system. It is automatically installed upon the HPOM agent installation.

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 332 for details of `<proxy_config>`.

For example, to enable a connection to the HPOM 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 **Service Navigator**

What Is Service Navigator?

HP Operations Service Navigator is an add-on component to the standard HP Operations Manager (HPOM) product. It enables you to manage your information technology (IT) environment while focusing on the IT services you provide.

HPOM detects, solves, and prevents problems occurring in networks, systems, and applications (tools) in your IT environment. Service Navigator takes you one step further. Service Navigator maps the problems discovered by HPOM 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 HPOM provides. If a problem occurs on one of the objects managed by HPOM, 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 HPOM 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 Operations 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 HPOM Maps Messages to Services

HPOM 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 (tool) on which an event happened, or the message group of the message.

Service Navigator allows the HPOM 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, HPOM 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 HPOM 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 HPOM problems solving process, see “Problem Solving Process” on page 108.

In general, the HPOM 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 HPOM and Service Navigator” on page 358.

❑ **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 HPOM and Service Navigator” on page 364.

❑ **Solving Problems**

HPOM provides a number of tools to help you solve the problem (for example automatic or operator-initiated actions, operator instructions, and tools). In addition, the HPOM administrator may have configured service-specific actions. For details, see “Solving Problems with HPOM and Service Navigator” on page 367.

❑ **Documenting Solutions**

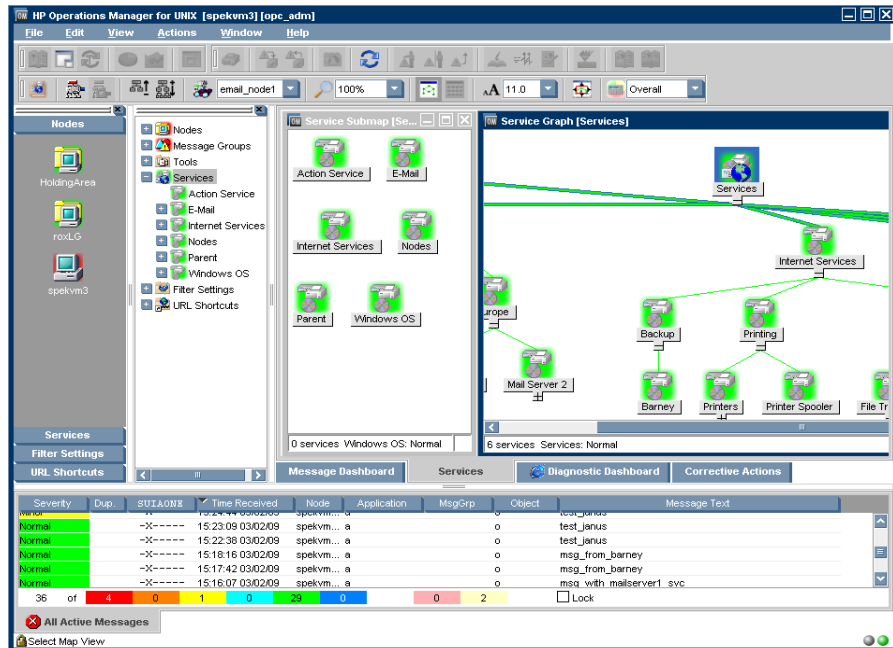
The problem management process is documented by instructions and annotations associated with each message. Instructions and annotations can serve as a helpful reference the next time the problem arises. For details, see “Documenting Solutions with HPOM and Service Navigator” on page 370.

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.

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 pop-up 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 pop-up 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 "Preferences Dialog Box" on page 498 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 pop-up 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 "Preferences Dialog Box" on page 498 for a description of each option on the Preferences dialog box.

❑ **Saving service graph layout**

You can save the service graph layout according to the operator's arrangement of the services, except for the Root Cause and Impact Static Service graphs. The saved information includes the position of the services and the expanded status of the services.

There are the two types of layout, the auto layout, which is the default layout, and the custom layout. The toggle button enables you to switch between auto and custom layout on a currently selected service graph. If it is ON, the custom layout is enabled. If it is OFF, the auto layout is enabled.

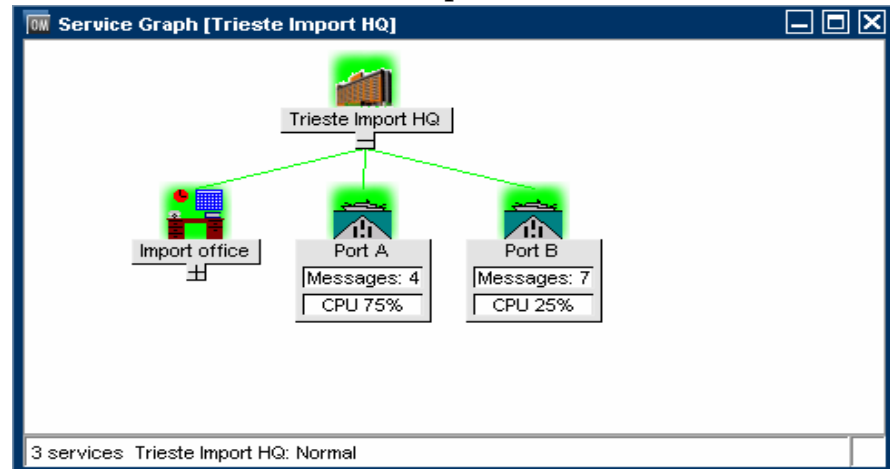
To learn more on how to personalize your service graph and map view, see the *HP Service Navigator Concepts and Configuration Guide*.

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 HPOM administrator.

Enhanced Service Submaps

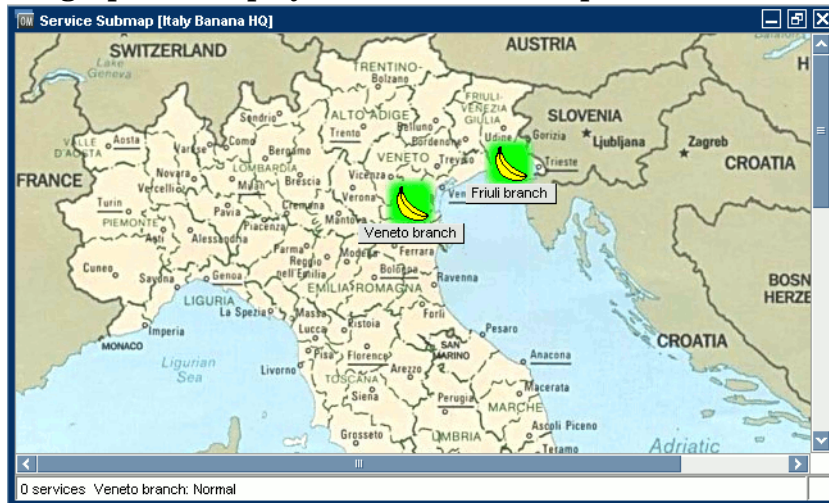
Service submaps can be enhanced with alternative background images, for example a network schematic or a country map. The administrator can also define the display position of subservice icons on the background image to create a clearer overview of the services being managed. For example, the service 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

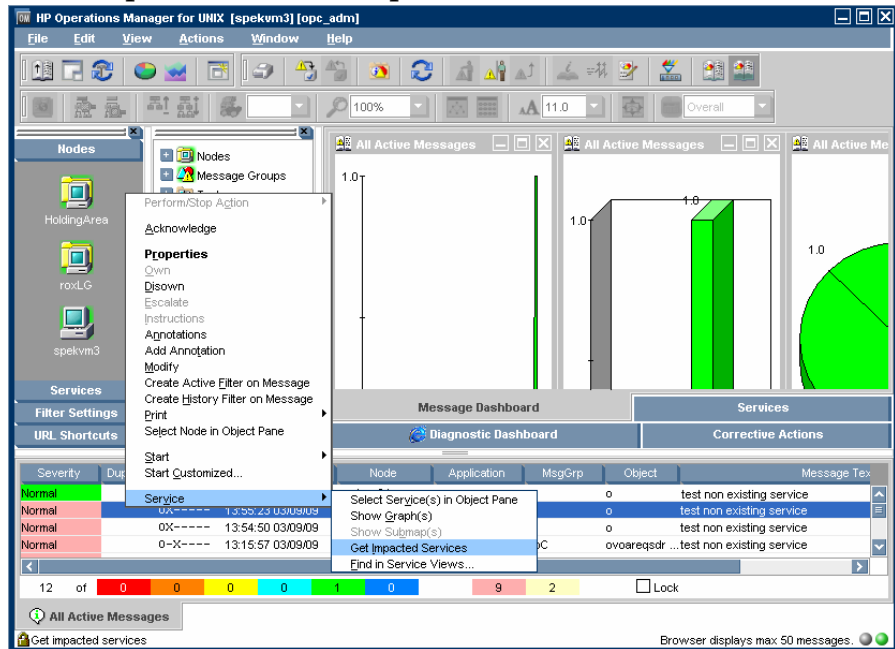
These options are available in the Java GUI only if previously configured by the HPOM administrator.

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 pop-up 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 Pop-up Menu” on page 355.

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 pop-up 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 pop-up 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 “Preferences: Services Tab” on page 503.

When you disable loading services on demand, you will be notified through the `HPOM 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 271.

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 “Preferences: Services Tab” on page 503.

Example of Expanding More Hierarchical Levels Using the Pop-up Menu

The following example describes how to expand more than one hierarchical level at once, using the pop-up 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 pop-up 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

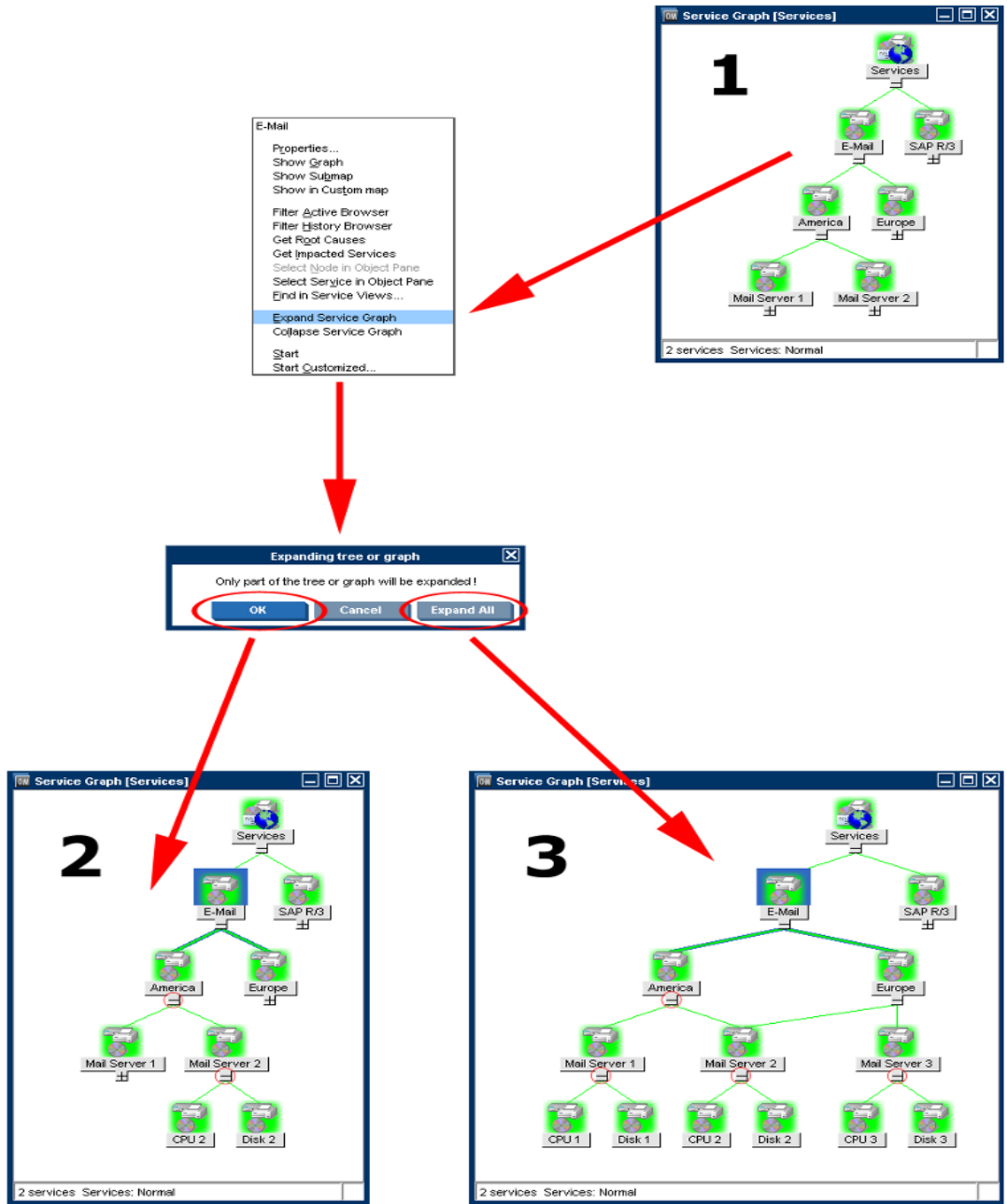
Service tree or graph that shows all subservices of the selected service.

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 “Status Bar” on page 76.

Figure 3-5 Expanding Service Graph with Use Service Load on Demand



4 Performing Daily Tasks with Service Navigator

Detecting Problems with HPOM and Service Navigator

HPOM 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 359
- ❑ “Viewing Service Details” on page 360
- ❑ “To View Service-related Messages” on page 361
- ❑ “Finding a Service in Multiple Service Hierarchies” on page 362

NOTE

For an overview of the Service Navigator problem solving process, see “Managing Problems with Service Navigator” on page 343.

You can use HPOM to detect problems in your managed environment, as follows:

- ❑ “To View a Message Node Manually” on page 217
- ❑ “Viewing Messages” on page 220
- ❑ “To Refresh the Java GUI Manually” on page 272
- ❑ “To Reload the Configuration” on page 271

NOTE

For an overview of the HPOM problems solving process, see “Problem Solving Process” on page 108.

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 pop-up 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 HPOM 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 349.

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:

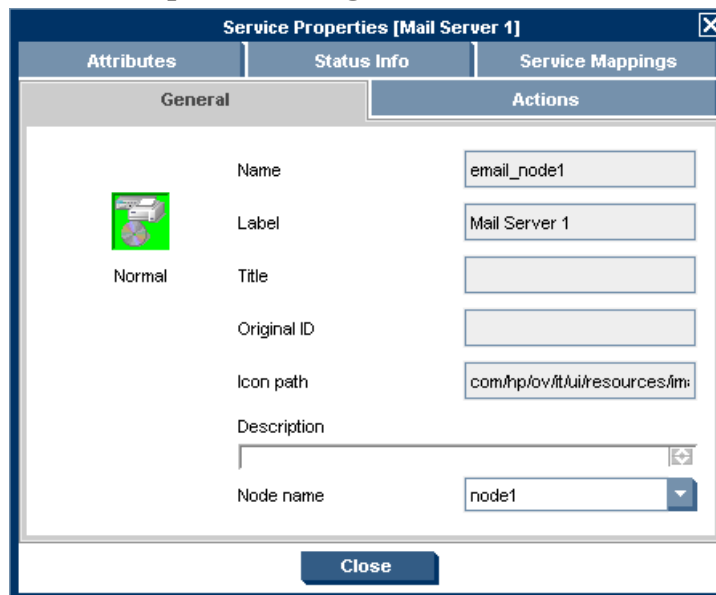
1. In the object pane, right-click the service for which you want details.
2. From the pop-up menu, select `Properties`.

The `Service Properties` dialog box opens, as shown in Figure 4-1.

For information about the options in the `Service Properties` dialog box, see “`Service Properties Dialog Box`” on page 510.

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 HPOM 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 pop-up 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 1-60 on page 135.

For descriptions of the options in this dialog box, see “Filter Messages Dialog Box” on page 469.

Finding a Service in Multiple Service Hierarchies

NOTE

This section is only relevant for you if the HPOM administrator uses HP Operations 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. Because 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 pop-up 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.

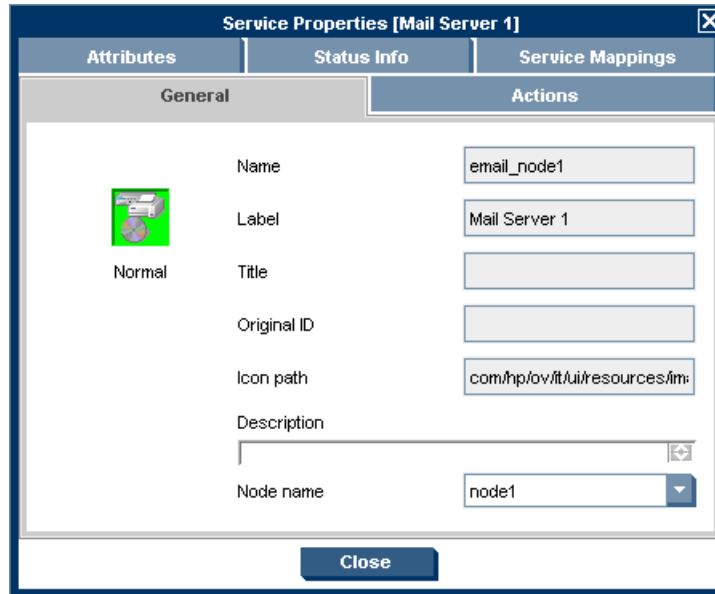
3. Select one of the identified services and click `[Show Graph]`. A service graph opens with the selected service highlighted.

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 HPOM and Service Navigator

After HPOM 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 365
- ❑ “To Identify the Root Cause of a Problem” on page 365
- ❑ “To Identify Impacted Services” on page 366

NOTE

For an overview of the Service Navigator problem solving process, see “Managing Problems with Service Navigator” on page 343.

You can use HPOM to investigate problems in your managed environment, as follows:

- ❑ “Investigating Problems with the Message Browser” on page 226
- ❑ “To View Detailed Message Information” on page 228
- ❑ “Investigating Message Histories” on page 232
- ❑ “To View a Message Node Automatically” on page 218

NOTE

For an overview of the HPOM problems solving process, see “Problem Solving Process” on page 108.

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 pop-up menu, select `Select Service in Object Pane`.

HPOM 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 365 and “To Identify Impacted Services” on page 366.

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 pop-up 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.

However, a Service Impact Graph may display additional impacted parent services that they are not assigned to you. This is because the impact analysis is done on the entire service hierarchy regardless of any service assignments.

To identify impacted services, follow these steps:

1. In the object pane, right-click the service.
2. From the pop-up 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 HPOM 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 368
- ❑ “To Start a Tool from a Service” on page 369

NOTE

For an overview of the Service Navigator problem solving process, see “Managing Problems with Service Navigator” on page 343.

You can use HPOM to solve problems in your managed environment, as follows:

- ❑ “To Unbuffer a Pending Message” on page 238
- ❑ “To Modify the Attributes of a Message” on page 229
- ❑ “Owning Messages” on page 236
- ❑ “Verifying Automatic Actions” on page 239
- ❑ “Verifying Operator-initiated Actions” on page 242
- ❑ “To View Operator-assigned Tools” on page 245
- ❑ “Starting Applications (Tools)” on page 247
- ❑ “Starting X-OVw Tools” on page 251
- ❑ “To Customize the Startup Attributes of a Tool” on page 252
- ❑ “To Broadcast a Command” on page 255

NOTE

For an overview of the HPOM problems solving process, see “Problem Solving Process” on page 108.

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 pop-up 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.

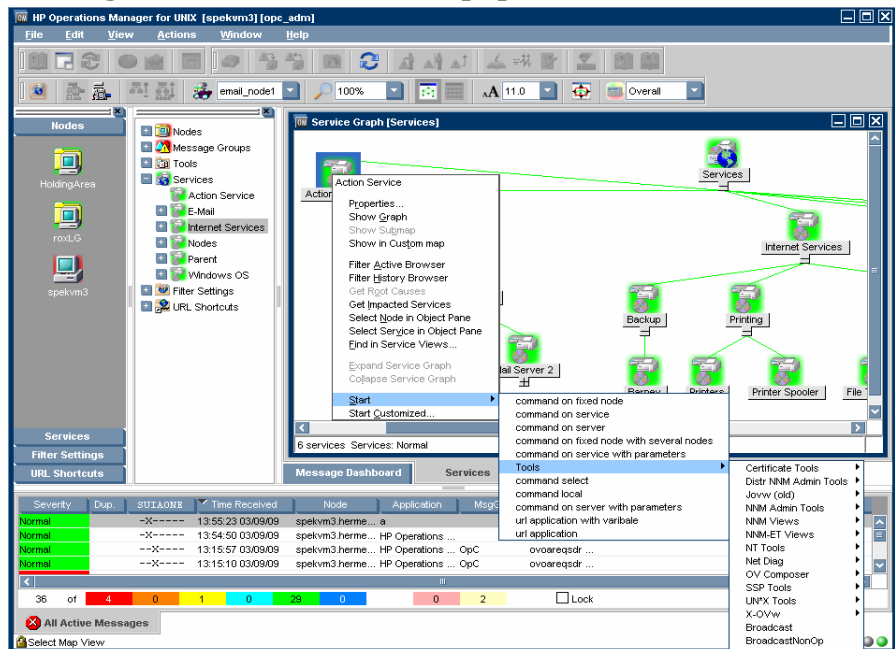
To Start a Tool from a Service

To start a tool from a service, follow these steps:

1. In the Services tab of the object pane, right-click a service or subservice.
2. From the pop-up menu, choose the tool you want to start, as shown in Figure 4-3.

In the figure, tools in the red box are service tools.

Figure 4-3 Starting a Tool from a Service Popup Menu



NOTE

You can also start regular tools from Service menus. For example, can quickly run a background task on the management server while simultaneously viewing the service tree.

Documenting Solutions with HPOM and Service Navigator

The final step in the HPOM 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 343.

You can use HPOM to solve problems in your managed environment, as follows:

- ❑ “To Annotate a Message” on page 257
- ❑ “Printing HPOM Messages and Application Output” on page 258
- ❑ “Acknowledging Messages” on page 263

NOTE

For an overview of the HPOM problems solving process, see “Problem Solving Process” on page 108.

Customizing HPOM and Service Navigator

You can customize HPOM and Service Navigator to help streamline your IT tasks.

You can customize your managed environment, as follows:

- ❑ “To Change Your Operator Password” on page 270
- ❑ “To Load the Default Configuration” on page 271
- ❑ “To Customize Console Settings” on page 274
- ❑ “Customizing Movable Panes” on page 278
- ❑ “Customizing the Shortcut Bar” on page 280
- ❑ “Customizing Workspace Pane Workspaces” on page 284
- ❑ “To Change Your Integrated Web Browser” on page 286
- ❑ “To Customize the Toolbar” on page 289
- ❑ “To Create a Filtered Message Browser” on page 297
- ❑ “To Save the Browser Filter Settings” on page 298
- ❑ “Saving the Browser Layout” on page 316
- ❑ “Changing the Layout of Browser Windows” on page 319
- ❑ “Changing the Number of Messages Displayed” on page 321
- ❑ “To Customize the Refresh Interval” on page 273
- ❑ “To Customize the Look and Feel of the Java GUI” on page 276
- ❑ “To Customize the Color Preferences for the Message Browser” on page 323
- ❑ “To Customize the Font Size” on page 291
- ❑ “To Customize the Progress Dialog Box” on page 277

A Troubleshooting

General Troubleshooting

In general, if you encounter problems with HPOM, 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 378.

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:

```
/var/opt/OV/log/OpC/mgmt .sv
```

For other supported agent platforms, ask your HPOM 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 HPOM GUI Does Not Start**

What to do if you receive the error message in a MS-DOS terminal window.

❑ **If an HPOM Tool Does Not Start**

What to do if a tool set up in HPOM 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.

NOTE

For general troubleshooting procedures, see “General Troubleshooting” on page 374.

If the HPOM GUI Does Not Start

If you receive the error message when trying to login, make sure the management server is reachable and that the HPOM 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 HPOM management server is reachable.

Try the `ping` command from an MS-DOS terminal window:

```
ping <HPOM_management_server>
```

2. Make sure the HPOM server processes are running on the management server.

Ask your HPOM administrator to check the status of the server processes.

If an HPOM Tool Does Not Start

If you can no longer start a tool set up in HPOM on a managed node, either adapt the HPOM default tool startup configuration or use customized startup options.

Problem A

A tool has been upgraded, and its command path, access security, or something else has been changed.

Solution A

Adapt the HPOM default tool startup accordingly.

Problem B

The user's password for default tool startup has been changed.

Solution B

Use customized tool startup options. For details, see "To Customize the Startup Attributes of a Tool" on page 252.

Problem C

A tool with no graphical interface, such as `cmd.exe` and `telnet`, does not appear to be running upon startup.

Solution C

Since the tool has no graphical interface, it is not visible, even though it is running. Starting tools like this have to be properly configured by the HPOM administrator when assigning Java GUI operator defaults. Refer to *HPOM 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 HPOM.

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 HPOM.

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-acal-750b-1f6a-de6eb9cfe391  
Cache-Control: no-cache  
Content-Type: text/html
```

Solution

This message can be safely ignored.

B **References**

In this Appendix

This appendix contains the following detailed reference information:

❑ **Keyboard Shortcuts**

Explains how to enter menu bar and pop-up 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 “Menu Bar” on page 77.

❑ **Toolbar Icons and Drop-down Lists**

Explains icons in the toolbar. For an overview of the toolbar, see “Toolbar” on page 78.

❑ **Types of Pop-up Menu Items**

Explains pop-up menu items in the Java GUI. For an overview of the Java GUI, see “Tour of the HPOM Java GUI” on page 38.

❑ **Types of Dialog Boxes**

Explains options that are available within dialog boxes throughout the Java GUI.

❑ **Start Customized Tool Wizard**

Explains how to change the preconfigured startup attributes of a tool.

❑ **Message Browser Headline**

Describes the default elements that are available in the headline of the message browser.

❑ **Message-related Variables**

Explains the parameters for extended message-related variables used in HPOM messages. For an overview of extended message-related variables, see “Adding HPOM Variables” on page 151.

❑ **Types of HPOM Variables**

Explains the variables used in HPOM or passed to external programs.

❑ **itooopbrw File**

Explains how to customize and save a message browser layout with the `itooopbrw` file. For an overview of customizing message browsers, see “Changing the Layout of Browser Windows” on page 319 and “Saving the Browser Layout” on page 316.

❑ **ito_op Startup Options**

Describes the startup options evaluated by the Java GUI when it is started with the `ito_op` startup script.

❑ **itoooprc Resource File**

Describes the options that can be added in the `itoooprc` file, which stores operator preferences.

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 **CTRL+S** which lets you save the console session settings.

See “Java GUI Key Accelerators” on page 391 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 pop-up 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 394.

- *Pop-up Menus*

Select an item with a right-click, or select the item and press **SHIFT+F10**, to get a pop-up 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 pop-up menus, as well as their keyboard mnemonics, see “Types of Pop-up Menu Items” on page 419.

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**

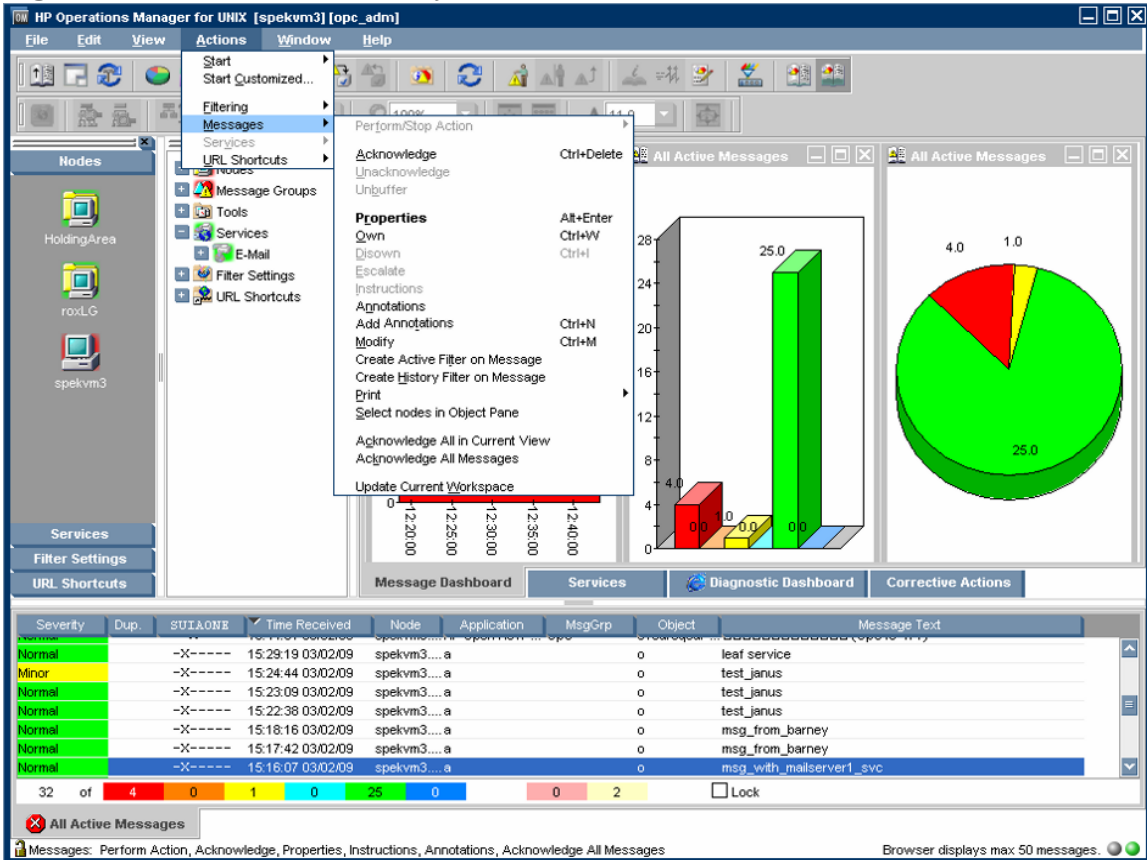
Key Accelerator	Action
ALT+ENTER	Shows the Property dialog box of one selected message or multiple selected services.
CTRL+PLUS SIGN or CTRL+MINUS SIGN	Zooms in or out of all graphs and the custom map.
CTRL+F6 or CTRL+SHIFT+F6	Moves to the next or previous internal window.
CTRL+DEL	Acknowledges one or more selected messages.
CTRL+SHIFT+S	<i>In detached message browsers only.</i> Shows or hides the status summary area in detached message browsers.
CTRL+SHIFT+H	<i>In detached message browsers only.</i> Shows or hides the horizontal scroll bar in detached message browsers.
CTRL+TAB or CTRL+SHIFT+TAB	Moves to the next or previous workspace tab.
CTRL+C	Copies one or more messages.
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+V	Pastes one or more messages. Fields of the message are separated with tabs. This makes possible organizing messages into Excel spreadsheets, where each field of each message is a separate column in the row.

Table B-1 Key Accelerators in the Java GUI (Continued)

Key Accelerator	Action
CTRL+W	Owns 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 393 for presentation of key accelerators in the Java GUI.

Figure B-1 Java GUI Key Accelerators



Types of Menu Bar Items

This section describes the menu items that are available in the menu bar:

❑ **File Menu**

See “File Menu” on page 395.

❑ **Edit Menu**

See “Edit Menu” on page 397.

❑ **View Menu**

See “View Menu” on page 398.

❑ **Actions Menu**

See “Actions Menu” on page 403.

❑ **Window Menu**

See “Window Menu” on page 413.

❑ **Help Menu**

See “Help Menu” on page 414.

For an overview of the menu bar itself, see “Menu Bar” on page 77.

NOTE

If Service Navigator is installed, additional menu bar options are available in the Actions menu.

File Menu

The File menu (**ALT+F**) in the menu bar has the following options:

Save Console Session Settings (**ALT+FS**)

Stores any customization 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 HPOM” on page 268 and “Preferences Dialog Box” on page 498. 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 HPOM Messages and Application Output” on page 258.

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 the Java GUI and Other Applications” on page 96.

Change Password (**ALT+FH**)

Opens the Change Operator Password dialog box. For descriptions of options in this dialog box, see “Change Operator Password Dialog Box” on page 464.

Send Message to Operators (**ALT+FT**)

Opens the Send Message to Operator(s) dialog box. For descriptions of options in this dialog box, see “Send Message to Operator(s) Dialog Box” on page 508.

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 HPOM” on page 268 and “Preferences Dialog Box” on page 498. If you change any of these preferences, you must save them with File: Save Console Session Settings in the menu bar. For details, see “File Menu” on page 395. 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 HPOM 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.

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 112. For descriptions of options in the Find dialog box, see “Find Dialog Box” on page 476.

Preferences... (**ALT+EP**)

Opens the Preferences dialog box. For descriptions of options in the Preferences dialog box, see “Preferences Dialog Box” on page 498.

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 “Shortcut Bar” on page 40.

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 “Object Pane” on page 42.

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 “Browser Pane” on page 62.

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 “Position Controls” on page 79.

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 “Toolbar Icons and Drop-down Lists” on page 415.

Refer to *Service Navigator Concepts and Configuration Guide* to learn more about navigating through service graphs and maps.

Main Toolbar (**ALT+VT**) (or Toolbar (**ALT+VT**) in detached windows)

Shows or hides any of the toolbar components. For descriptions of icons that belong to these components, see “Toolbar Icons and Drop-down Lists” on page 415.

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 “Toolbar Icons and Drop-down Lists” on page 415.

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.

Browser Status Summary (**ALT+VS**)

In detached message browsers only. Shows or hides the status summary area in detached message browsers. For an overview of detached windows, see “Detached Windows” on page 86.

Horizontal Scroll Bar (**ALT+VH**)

In detached message browsers only. Shows or hides the horizontal scroll bar in detached message browsers. For an overview of detached windows, see “Detached Windows” on page 86.

Number of Messages (**ALT+VN**)

Enables you to choose one of two methods 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 319). Also, you can create message filters that meet your specific requirements (see “To Create a Filtered Message Browser” on page 297).

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 321.

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 “Customize Message Browser Columns Window” on page 465. For an overview of custom message attributes, see “Custom Message Attributes” on page 127.

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 pop-up menu items toolbar menu items. For descriptions of these options, see “Browser Pane Pop-up Menu Items” on page 446 and “Toolbar Icons and Drop-down Lists” on page 415.

Show Chart (**ALT+VGS**)

See “Browser Pane Pop-up Menu Items” on page 446 and “Toolbar Icons and Drop-down Lists” on page 415.

Browser Pane Tab Properties (**ALT+VGP**)

See Properties in “Browser Pane: Browser Tab Menu” on page 447.

Close Browser Pane Tab (**ALT+VGL**)

See Close in “Browser Pane: Browser Tab Menu” on page 447.

Current State Chart (**ALT+VGC**)

See Switch to Current State Chart in “Toolbar Icons and Drop-down Lists” on page 415.

History Chart (**ALT+VGH**)

See Switch to History Chart in “Toolbar Icons and Drop-down Lists” on page 415.

Put Message Browser to Browser Pane (**ALT+VGB**)

See “Toolbar Icons and Drop-down Lists” on page 415.

Put Message Browser to Workspace Pane (**ALT+VGB**)

See “Toolbar Icons and Drop-down Lists” on page 415.

Workspace Pane (**ALT+VT**)

Accesses the following workspace pane pop-up menu items. For descriptions of these options, see “Workspace Pane Pop-up Menu Items” on page 438.

- Workspace Properties (**ALT+VTW**)
- Delete Workspace (**ALT+VTD**)
- New Workspace (**ALT+VTN**)
- Move Selected Window To (**ALT+VTM**)

Detach Window (**ALT+VD**)

Detaches the selected window from the main Java GUI window and places it on the center of the screen. For an overview of detached windows, see “Detached Windows” on page 86.

Attach Window (**ALT+VC**)

In detached message browsers only. Attaches the detached window to the currently selected workspace. For an overview of detached windows, see “Detached Windows” on page 86.

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 “Object Pane” on page 42.

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 “Object Pane” on page 42.

Refresh (**ALT+VR**)

Refreshes the status of nodes, message groups, message charts, and services (if Service Navigator is installed).

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 tools assigned to you by your HPOM administrator.

Start Customized... (**ALT+AC**)

Opens the Start Customized Tool wizard. For descriptions of options in this wizard, see “Start Customized Tool Wizard” on page 518.

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 “Filter Messages Dialog Box” on page 469. For an overview of the filtered active message browser, see “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 “Filter Messages Dialog Box” on page 469. For an overview of the filtered history message browser, see “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 “Filter Messages Dialog Box” on page 469. For an overview of the

filtered pending messages browser,
see “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 321.

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 “Filter Messages Dialog Box” on page 469.

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 “Toolbar Icons and Drop-down Lists” on page 415.

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.

Message View Filter... (**ALT+AFO**)

Opens the Message View Filter dialog box, where you can create, save, and load message view filters.

For descriptions of options in the Message View Filter dialog box, see “Message View Filter Dialog Box” on page 489. For an overview of message view filters, see “Setting Up Message View Filters” on page 189.

Remove Message View Filter (**ALT+AFE**)

Removes a message view filter from a message browser.

See “To Remove Filters from Message Browser Columns” on page 314 for more information about removing message view filters.

Messages (**ALT+AM**)

Enables you to stop or start actions, unacknowledge messages, unbuffer messages, change message properties, own or disown 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 264.

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 266.

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 238.

Properties (**ALT+AMR**)

Opens the Message Properties dialog box. For descriptions of options in this dialog box, see “Message Properties Dialog Box” on page 482.

Own (**ALT+AMO**)

Owns the selected message. For details, see “To Own a Message” on page 236.

Disown (**ALT+AMD**)

Disowns the selected message. For details, see “To Disown a Message” on page 237.

Instructions (**ALT+AMI**)

Opens the Instructions tab of the Message Properties dialog box. For descriptions of options in this tab, see “Message Properties: Instructions Tab” on page 487.

Annotations (**ALT+AMN**)

Opens the Annotations tab of the Message Properties dialog box. For descriptions of options in this tab, see “Message Properties: Annotations Tab” on page 487.

Modify (**ALT+AMM**)

Opens the Modify Message Attributes dialog box. For descriptions of options in this dialog box, see “Modify Message Attributes Dialog Box” on page 494.

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 “Filter Messages Dialog Box” on page 469.

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 HPOM Messages and Application Output” on page 258.

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 “Object Pane” on page 42.

Acknowledge All in Current View (**ALT+AMC**)

Acknowledges all messages in the selected message browser. For details, see “Acknowledging Messages” on page 263.

Acknowledge All Messages (**ALT+AMK**)

Acknowledges all messages in all browsers.

Update Current Workspace (**ALT+AMW**)

Updates the URL tool associated with the selected message.

Works only if the workspace supports Microsoft Internet Explorer ActiveX controls.

Services (**ALT+AV**)

If you are using HP Operations Service Navigator, the following additional options are available in the Services submenu of the HPOM Actions menu. These options supplement those menu bar options that come with the standard HPOM product.

Properties... (**ALT+AVR**)

Opens the Service Properties dialog box. For an overview of this dialog box, see “Service Properties Dialog Box” on page 510.

Show Graph (**ALT+AVG**)

Opens a service graph of the selected service. For details, see “Service Graphs, Submaps, and Custom Service Maps” on page 345.

Show Submap (**ALT+AVB**)

Opens a submap of the subservices of the selected service. For details, see “Service Graphs, Submaps, and Custom Service Maps” on page 345.

Show in Custom Map (**ALT+AVT**)

Opens a custom map of the selected service. For details, see “Service Graphs, Submaps, and Custom Service Maps” on page 345.

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 “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 “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 365.

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 366.

Select Node in Object Pane (**ALT+AVN**)

Highlights the selected node in the object pane. For an overview of the object pane, see “Object Pane” on page 42

Select Service in Object Pane (**ALT+AVV**)

Highlights the selected service in the object pane. For an overview of the object pane, see “Object Pane” on page 42.

Find in Service Views... (**SHIFT+F10+VVF**)

Opens the Service Views dialog box. For an overview of this dialog box, see “Service Views Dialog Box” on page 513.

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 tools assigned to you by your HPOM administrator.

Start Customized... (**ALT+AVC**)

Opens the Start Customized Tool wizard. For descriptions of options in this wizard, see “Start Customized Tool Wizard” on page 518.

URL Shortcuts (**ALT+AU**)

Enables you to add, start, delete, and modify URL shortcuts. For details, see “Shortcut Bar Pop-up Menu Items” on page 421.

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.

The `Window` menu may contain a list of window titles if windows are detached from the main Java GUI window. Select an item in this list to bring the detached window to the front of the screen.

Help Menu

The Help menu (**ALT+H**) in the menu bar has the following options:

Contents (**ALT+HC**)

Displays the contents of the HPOM 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 Operations Support:

<http://support.openview.hp.com/support.jsp?FromPROD=ito>

About (**ALT+HA**)

Displays information about the installed HPOM version.

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.



Detach Window

Detaches the selected window from the main Java GUI window and places it on the center of the screen.



Update Current Workspace

Updates the current workspace. Works only if the workspace supports Microsoft Internet Explorer ActiveX controls.



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.



Show/Hide Horizontal Scroll Bar

In detached message browsers only. Shows or hides the horizontal scroll bar in detached message browsers.

□ 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 “Message Properties Dialog Box” on page 482).



Refresh Message Browser

Refreshes the Java GUI. Same as selecting View: Refresh from the menu bar (see “View Menu” on page 398).



Own Selected Objects

Owens the selected message(s).



Disown Selected Objects

Disowns the selected message(s).



Show Message Instructions

Opens the Instructions tab of the Message Properties dialog box (see “Message Properties: Instructions Tab” on page 487).



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 “Message Properties: Annotations Tab” on page 487).



Open Message View Filter Dialog Box

Opens the Message View Filter dialog box (see “Message View Filter Dialog Box” on page 489).

**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 “Service Properties Dialog Box” on page 510).

**Show Root Cause Services**

Shows the services that caused the problem.

**Show Impacted Services**

Shows the services affected by the problem.

**Collapse Service Graph Level**

Collapses the Service level in the object tree and the service graph in the workspace pane.

**Expand Service Graph 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.

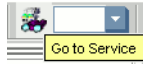
**Service Graph Layout Customization**

Switches between customized and auto service layout.

**Switch between Different Views**

Switches between service map view and table view.

The Service Toolbar component includes also the following drop-down lists:



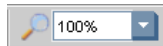
Go to Service drop-down list

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 “Go to Service” on page 78 for more information.



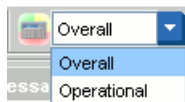
Zoom drop-down list

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 “Toolbar” on page 78.

Types of Pop-up Menu Items

This section describes pop-up menus for each of the four major areas of the Java GUI:

❑ **Toolbar**

For descriptions of pop-up menus items in each area of the toolbar, see “Toolbar Pop-up Menu Items” on page 420.

❑ **Shortcut Bar**

For descriptions of pop-up menus items in each area of the shortcut bar, see “Shortcut Bar Pop-up Menu Items” on page 421.

❑ **Object Pane**

For descriptions of pop-up menus items in each area of the shortcut bar, see “Object Pane Pop-up Menu Items” on page 428.

❑ **Workspace Pane**

For descriptions of pop-up menus items in each area of the shortcut bar, see “Workspace Pane Pop-up Menu Items” on page 438.

❑ **Browser Pane**

For descriptions of pop-up menus items in each area of the shortcut bar, see “Browser Pane Pop-up Menu Items” on page 446.

For an overview of pop-up menus, see “Pop-up Menus” on page 80.

NOTE

If Service Navigator is installed, additional services pop-up menu options are available in the shortcut bar, object pane, and workspace pane.

Toolbar Pop-up Menu Items

The toolbar pop-up menu contains a list of toolbar components. Selecting a component shows or hides the component in the main toolbar. For descriptions of icons that belong to these components, see “Toolbar Icons and Drop-down Lists” on page 415.

The pop-up menu on the toolbar has the following options:

Message Browser Toolbar (right-click+**B**)

If checked, all icons belonging to this toolbar component are visible on the toolbar.

Message Toolbar (right-click+**M**)

If checked, all icons belonging to this toolbar component are visible on the toolbar.

Service Toolbar (right-click+**S**)

If checked, all icons belonging to this toolbar component are visible on the toolbar.

Shortcut Bar Pop-up Menu Items

The selection of pop-up 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 pop-up menus in each area of the shortcut bar:

❑ **Shortcut Groups**

Pop-up menus on each shortcut group. For details, see “Shortcut Bar: Shortcut Group Menus” on page 422.

❑ **Nodes**

Pop-up menus in the `Nodes` area. For details, see “Shortcut Bar: Nodes Menu” on page 423.

❑ **Services**

If Service Navigator is installed, pop-up menus in the `Services` area. For details, see “Shortcut Bar: Services Menu” on page 424.

❑ **Filter Settings**

Pop-up menus in the `Filter Settings` area. For details, see “Shortcut Bar: Filter Settings Menu” on page 426.

❑ **URL Shortcuts**

Pop-up menus in the `URL Shortcuts` area. For details, see “Shortcut Bar: URL Shortcuts Menu” on page 427.

For an overview of the pop-up menu in the shortcut bar, see “Shortcut Bar Pop-up Menu” on page 81. For a description of the shortcut bar, see “Shortcut Bar” on page 40.

NOTE

If Service Navigator is installed, additional services pop-up menu options are available in the shortcut bar, object pane, and workspace pane.

Shortcut Bar: Shortcut Group Menus

The pop-up 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 “Add New URL Shortcut Dialog Box” on page 461.

Modify Current Group (right-click+**M**)

Opens the Modify Group dialog box. For descriptions of options in the Modify Group dialog box, see “Modify Group Dialog Box” on page 493.

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 pop-up menu.

Shortcut Bar: Nodes Menu

The pop-up 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 “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 “Filtered History Message Browser” on page 71.

Start (right-click+S)

Enables you to choose and start tools available for the selected node.

Start Customized... (right-click+C)

Starts the Start Customized Tool wizard. For details, see “Start Customized Tool Wizard” on page 518.

Modify Shortcut (right-click+M)

Opens the Modify Shortcut dialog box. For descriptions of options in the Modify Shortcut dialog box, see “Modify Shortcut Dialog Box” on page 496.

Remove Shortcut (right-click+R)

Deletes the selected shortcut from the shortcut bar but not from the object pane.

Shortcut Bar: Services Menu

If you are using HP Operations Service Navigator, the following additional options are available in the *Services* pop-up menus in the shortcut bar. These options supplement those pop-up menu options that come with the standard HPOM product.

Properties... (right-click+**R**)

Opens Service Properties dialog box. For an overview of this dialog box, see “Service Properties Dialog Box” on page 510.

Show Graph (right-click+**G**)

Opens a service graph of the selected service. For details, see “Service Graphs, Submaps, and Custom Service Maps” on page 345.

Show Submap (right-click+**B**)

Opens a submap of the subservices of the selected service. For details, see “Service Graphs, Submaps, and Custom Service Maps” on page 345.

Show in Custom Map (right-click+**M**)

Opens a custom map of the selected service. For details, see “Service Graphs, Submaps, and Custom Service Maps” on page 345.

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 “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 “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 365.

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 366.

Select Node in Object Pane (right-click+N)

Highlights the selected node in the object pane. For an overview of the object tree, see “Object Pane” on page 42

Find in Service Views... (right-click+F)

Opens the Service Views dialog box. For an overview of this dialog box, see “Service Views Dialog Box” on page 513.

Start (right-click+S)

Enables you to choose and start tools available for the selected node.

Start Customized... (right-click+C)

Starts the Start Customized Tool wizard. For details, see “Start Customized Tool Wizard” on page 518.

Modify Shortcut (right-click+M)

Opens the Modify Shortcut dialog box. For details, see “Modify Shortcut Dialog Box” on page 496.

Remove Shortcut (right-click+R)

Deletes selected shortcut from the shortcut bar but not from the object pane.

Shortcut Bar: Filter Settings Menu

If Personal Filter Settings for HPOM operators or Global Filter Settings for HPOM administrators is selected, the pop-up menu in the Filter Settings area of the shortcut bar has the following options:

Add New Filter (right-click+F)

This option is available for operators only in the Personal Filter Settings and for administrators only in the Global Filter Settings. Opens the Filter Messages dialog box, where you can create a new filter. For an overview of this dialog box, see “Filter Messages Dialog Box” on page 469.

Modify Shortcut (right-click+M)

Opens the Modify Shortcut dialog box. For details, see “Modify Shortcut Dialog Box” on page 496.

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 pop-up 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 “Filter Messages Dialog Box” on page 469.

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 “Modify Shortcut Dialog Box” on page 496.

Remove Shortcut (right-click+**R**)

Deletes the selected shortcut from the shortcut bar but not from the object pane.

Shortcut Bar: URL Shortcuts Menu

If the `URL Shortcuts` group is selected, the pop-up menu contains shortcut group options. For details, see “Shortcut Bar: Shortcut Group Menus” on page 422.

If a particular URL shortcut is selected, the pop-up menu in the `URL Shortcuts` area of the shortcut bar has the following options:

Start URL (right-click+**S**)

Starts tools 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 “Modify URL Shortcut Dialog Box” on page 497.

Remove URL Shortcut (right-click+**R**)

Deletes selected shortcut from the shortcut bar but not from the object pane.

Object Pane Pop-up Menu Items

This section describes the distinct pop-up menus in each area of the object bar:

❑ Global Options

Options that are available in every pop-up menu in the object pane. For details, see “Object Pane: Global Options” on page 429.

❑ Nodes

Pop-up menus in the `Nodes` area. For details, see “Object Pane: Nodes Menu” on page 430.

❑ Message Groups

Pop-up menus in the `Message Groups` area. For details, see “Object Pane: Message Groups Menu” on page 431.

❑ Tools

Pop-up menus in the `Tools` area. For details, see “Object Pane: Tools Menu” on page 431.

❑ Services

If Service Navigator is installed, pop-up menus in the `Services` area. For details, see “Object Pane: Services Menu” on page 432.

❑ Filter Settings

Pop-up menus in the `Filter Settings` area. For details, see “Object Pane: Filter Settings Menu” on page 434.

❑ URL Shortcuts

Pop-up menus in the `URL Shortcuts` area. For details, see “Object Pane: URL Shortcuts Menu” on page 437.

For an overview of the pop-up menu in the object pane, see “Object Pane Pop-up Menu” on page 82. For a description of the object pane, see “Object Pane” on page 42.

NOTE

If Service Navigator is installed, additional services pop-up menu options are available in the shortcut bar, object pane, and workspace pane.

Object Pane: Global Options

Every pop-up 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 112. For descriptions of options in the Find dialog box, see “Find Dialog Box” on page 476.

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 “Object Pane” on page 42.

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 “Object Pane” on page 42.

Object Pane: Nodes Menu

The pop-up 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 “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 “Filtered History Message Browser” on page 71.

Start (**SHIFT+F10+S**)

Starts tools on the selected node.

Start Customized... (**SHIFT+F10+C**)

Starts the Start Customized Tool wizard. For details, see “Start Customized Tool Wizard” on page 518.

NOTE

For descriptions of global options that are available in all pop-up menus in the object pane, see “Object Pane: Global Options” on page 429.

Object Pane: Message Groups Menu

The pop-up 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 “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 “Filtered History Message Browser” on page 71.

NOTE

For descriptions of global options that are available in all pop-up menus in the object pane, see “Object Pane: Global Options” on page 429.

Object Pane: Tools Menu

The pop-up menu in the Tools area of the object pane has the following options:

Start (**SHIFT+F10+S**)

If tool is selected, starts the tool.

Start Customized... (**SHIFT+F10+C**)

If a tool is selected, starts the Start Customized Tool wizard. For details, see “Start Customized Tool Wizard” on page 518.

NOTE

For descriptions of global options that are available in all pop-up menus in the object pane, see “Object Pane: Global Options” on page 429.

Object Pane: Services Menu

If you are using HP Operations Service Navigator, the following additional options are available in the *Services* pop-up menu in the object pane. These options supplement the HPOM pop-up menu options.

Properties... (**SHIFT+F10+R**)

Opens Service Properties dialog box. For an overview of this dialog box, see “Service Properties Dialog Box” on page 510.

Show Graph (**SHIFT+F10+G**)

Opens a service graph of the selected service. For details, see “Service Graphs, Submaps, and Custom Service Maps” on page 345.

Show Submap (**SHIFT+F10+B**)

Opens a submap of the subservices of the selected service. For details, see “Service Graphs, Submaps, and Custom Service Maps” on page 345.

Show in Custom Map (**SHIFT+F10+T**)

Opens a custom map of the selected service. For details, see “Service Graphs, Submaps, and Custom Service Maps” on page 345.

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 “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 “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 365.

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 366.

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 “Service Views Dialog Box” on page 513.

Start (**SHIFT+F10+S**)

Enables you to select and start available tools.

Start Customized... (**SHIFT+F10+C**)

Starts the Start Customized Tool wizard. For details, see “Start Customized Tool Wizard” on page 518.

NOTE

For descriptions of global options that are available in all pop-up menus in the object pane, see “Object Pane: Global Options” on page 429.

Object Pane: Filter Settings Menu

The pop-up menu in the Filter Settings area of the object pane has different options depending on your current selection.

Filter Settings: Global and Personal Filter Settings Menu

NOTE

For descriptions of global options that are available in all pop-up menus in the object pane, see “Object Pane: Global Options” on page 429.

❑ Global and personal filter settings

If you select Personal Filter Settings (for HPOM operators) or Global Filter Settings (for HPOM administrators), the pop-up menu in the Filter Settings area of the object pane has the following options:

Add New Filter (**SHIFT+F10+F**)

This option is available for operators only in the Personal Filter Settings and for administrators only in the Global Filter Settings. Opens the Filter Messages dialog box, where you can create a new filter. For an overview of this dialog box, see “Filter Messages Dialog Box” on page 469.

After you save global or personal filters, they are automatically available as subgroups of the Filter Settings group.

❑ Saved global and personal filters

If a particular filter item is selected, the pop-up menu in the Filter Settings area of the object pane has the following options:

Open (**SHIFT+F10+O**)

Opens a saved filtered active (**SHIFT+F10+OA**), history (**SHIFT+F10+OH**), or pending (**SHIFT+F10+OP**) message browser.

Modify Filter (**SHIFT+F10+F**)

Opens the Filter Messages dialog box, where you can modify the selected filter. For details, see “Filter Messages Dialog Box” on page 469.

Delete (**SHIFT+F10+D**)

Deletes the selected message browser filter from HPOM.

Filter Settings: Message View Filters Menu

NOTE

For descriptions of global options that are available in all pop-up menus in the object pane, see “Object Pane: Global Options” on page 429.

❑ Global and personal message view filters

If you select Personal Message View Filters (for HPOM operators) or Global Message View Filters (for HPOM administrators), the pop-up menu in the Message View Filters area of the object pane has the following options:

Add New (**SHIFT+F10+D**)

This option is available for operators only in the Personal Message View Filter and for administrators only in the Global Message View Filter. Opens the Message View Filter dialog box, where you can create a new message view filter. For an overview of this dialog box, see “Message View Filter Dialog Box” on page 489.

After you save global (for HPOM administrators only) or personal message view filters (for HPOM operators only), they are automatically available as subgroups of the Message View Filters group.

❑ Saved global and personal message view filters

If a particular filter item is selected, the pop-up menu in the Message View Filters area of the object pane has the following options:

Open for All Active Messages (**SHIFT+F10+O**)

Opens an all active messages browser with the selected message view filter applied. This may take a while, depending on the number of messages to be loaded.

Modify (**SHIFT+F10+F**)

Opens the Message View Filter dialog box, where you can modify the selected message view filter. For details, see “Message View Filter Dialog Box” on page 489.

Rename (**SHIFT+F10+R**)

Opens the Rename Message View Filter dialog box, where you can type a new name for the selected message view filter. For details, see “Rename Message View Filter Dialog Box” on page 506.

Delete (**SHIFT+F10+D**)

Deletes the selected message view filter from HPOM.

Object Pane: URL Shortcuts Menu

If the URL Shortcuts group is selected, the pop-up 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 “Add New URL Shortcut Dialog Box” on page 461.

NOTE

For descriptions of global options that are available in all pop-up menus in the object pane, see “Object Pane: Global Options” on page 429.

If a particular URL shortcut is selected, the pop-up menu in the URL Shortcuts area of the object pane has the following options:

Start URL (right-click+S)

Starts tools 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 “Modify URL Shortcut Dialog Box” on page 497.

Workspace Pane Pop-up Menu Items

This section describes the distinct pop-up menus in each area of the workspace pane:

❑ **All Workspace Tabs**

Pop-up menus on each tab in the workspace pane. For details, see “Workspace Tab Menus” on page 439.

❑ **Charts**

Pop-up menus on current state charts and history charts in the workspace pane. For details, see “Workspace Pane: Charts Menu” on page 440.

❑ **Services**

If Service Navigator is installed, pop-up menus in the Services workspace. For details, see “Workspace Pane: Services Menu” on page 442.

❑ **URLs**

Pop-up menus on web pages in the internal web browser in the workspace pane. For details, see “Workspace Pane: URL Menu” on page 445.

For an overview of the pop-up menu in the workspace pane, see “Workspace Pane Pop-up Menu” on page 83. For a description of the Workspace Pane, see “Workspace Pane” on page 53.

NOTE

If Service Navigator is installed, additional services pop-up menu options are available in the shortcut bar, object pane, and workspace pane.

Workspace Tab Menus

Each tab of the workspace pane has a pop-up 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 “Workspace Properties Dialog Box” on page 517.

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 “Workspace Properties Dialog Box” on page 517.

Delete Workspace (**SHIFT+F10+D**)

Removes the current workspace. A pop-up 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).

Workspace Pane: Charts Menu

The pop-up 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 pop-up 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 “Enter Data Storage Duration Dialog Box” on page 468.

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 “Enter Current View Interval Dialog Box” on page 467.

Zoom Interval

Opens the Enter Zoom Interval dialog box, where you enter date and time ranges for the chart. For details, see “Enter Zoom Interval Dialog Box” on page 468.

Workspace Pane: Services Menu

If you are using HP Operations Service Navigator, and you right-click an empty area of the Services workspace, the workspace tab pop-up menu is displayed. For descriptions of options in this pop-up menu, see “Workspace Tab Menus” on page 439.

If you right-click an item in the Services workspace, the following additional options are available. These options supplement the HPOM pop-up menu options.

Properties... (right-click+**R**)

Opens Service Properties dialog box. For an overview of this dialog box, see “Service Properties Dialog Box” on page 510.

Show Graph (right-click+**G**)

Opens a service graph of the selected service. For details, see “Service Graphs, Submaps, and Custom Service Maps” on page 345.

Show Submap (right-click+**B**)

Opens a submap of the subservices of the selected service. For details, see “Service Graphs, Submaps, and Custom Service Maps” on page 345.

Show in Custom Map (right-click+**T**)

Opens a custom map of the selected service. For details, see “Service Graphs, Submaps, and Custom Service Maps” on page 345.

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 “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 “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 365.

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 366.

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 “Object Pane” on page 42.

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 “Service Views Dialog Box” on page 513.

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.

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 tools on the selected shortcut.

Start Customized... (right-click+C)

Starts the Start Customized Tool wizard. For details, see “Start Customized Tool Wizard” on page 518.

Workspace Pane: URL Menu

The pop-up menu on web pages in the internal 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 “*Web Browser Properties Dialog Box*” on page 516.

NOTE

The pop-up menu on web pages opened in Microsoft Internet Explorer in an ActiveX workspace has Internet Explorer options.

Browser Pane Pop-up Menu Items

This section describes the distinct pop-up menus in each area of the browser pane:

❑ **Browser Tab**

Pop-up menus on each tab in the browser pane. For details, see “Browser Pane: Browser Tab Menu” on page 447. By default, the `All Active Messages` tab appears first in the browser pane.

❑ **Message Browser**

Pop-up menus in each message browser in the browser pane. For details, see “Browser Pane: Message Browser Menu” on page 448. These menus are also available in each message browser that is moved to the workspace pane. For descriptions of pop-up menu items in the workspace pane, see “Workspace Pane Pop-up Menu Items” on page 438.

❑ **Message Browser Headline**

Pop-up menus on each column header in the message browser in the browser pane. For details, see “Browser Pane: Message Browser Headline Menu” on page 452. These menus are also available in each message browser that is moved to the workspace pane. For descriptions of pop-up menu items in the workspace pane, see “Workspace Pane Pop-up Menu Items” on page 438.

❑ **Charts**

Pop-up menus on current state charts and history charts in the workspace pane. For details, see “Browser Pane: Charts Menu” on page 455.

NOTE

For an overview of the pop-up menu in the Browser Pane, see “Browser Pane Pop-up Menu” on page 85. For a description of the browser pane, see “Browser Pane” on page 62.

Browser Pane: Browser Tab Menu

Each tab of the browser pane has a pop-up 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 “Browser Pane Tab Properties Dialog Box” on page 462.

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.

Browser Pane: Message Browser Menu

The pop-up 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 263.

Properties (**SHIFT+F10+R**)

Opens the Message Properties dialog box. For descriptions of options in this dialog box, see “Message Properties Dialog Box” on page 482.

Own (**SHIFT+F10+O**)

Owns the selected message. For details, see “To Own a Message” on page 236.

Disown (**SHIFT+F10+D**)

Disowns the selected message. For details, see “To Disown a Message” on page 237.

Instructions (**SHIFT+F10+I**)

Opens the Instructions tab of the Message Properties dialog box. For descriptions of options in this tab, see “Message Properties: Instructions Tab” on page 487.

Annotations (**SHIFT+F10+N**)

Opens the Annotations tab of the Message Properties dialog box. For descriptions of options in this tab, see “Message Properties: Annotations Tab” on page 487.

Modify (**SHIFT+F10+M**)

Opens the Modify Annotations dialog box. For descriptions of options in this dialog box, see “Modify Group Dialog Box” on page 493.

Create Active Filter On Message (**SHIFT+F10+F**)

Opens the Filter Messages dialog box. For descriptions of options in this dialog box, see “Filter Messages Dialog Box” on page 469.

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 HPOM Messages and Application Output” on page 258.

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 “Browser Pane” on page 62.

Start (**SHIFT+F10+S**)

Starts tool on selected message:

Start Customized... (**SHIFT+F10+C**)

Opens the Start Customized Tool wizard. For descriptions of options in this wizard, see “Start Customized Tool Wizard” on page 518

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 “Object Pane” on page 42.

Show Graph(s) (**SHIFT+F10+VG**)

Opens one or more service graphs of the selected service. For details, see “Service Graphs, Submaps, and Custom Service Maps” on page 345.

Show Submap(s) (**SHIFT+F10+VB**)

Opens one or more submaps of the subservices of the selected service. For details, see “Service Graphs, Submaps, and Custom Service Maps” on page 345.

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 366.

Find in Service Views... (**SHIFT+F10+VF**)

Opens the Service Views dialog box.
For an overview of this dialog box, see
“Service Views Dialog Box” on
page 513.

Browser Pane: Message Browser Headline Menu

The pop-up 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 “Customize Message Browser Columns Window” on page 465. For an overview of custom message attributes, see “Custom Message Attributes” on page 127.

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.

Message View Filter... (right-click+O)

Offers you the following choices:

All (right-click+OA)

Removes the filter criteria from the selected message browser column.

Custom... (right-click+OC)

Opens the Message View Filter dialog box, where you can create, save, and load message view filters.

For descriptions of options in the Message View Filter dialog box, see “Message View Filter Dialog Box” on page 489. For an overview of message view filters, see “Setting Up Message View Filters” on page 189.

<column_value>

Applies a quick message view filter to the selected message browser column. Only messages that match one of the selected values are displayed.

Remove Message View Filter (right-click+**R**)

Removes the message view filter from a message browser.

For more information about removing message view filter, see “To Remove Filters from Message Browser Columns” on page 314.

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 “Toolbar Icons and Drop-down Lists” on page 415.

The pop-up 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 pop-up 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 “Enter Data Storage Duration Dialog Box” on page 468.

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 “Enter Current View Interval Dialog Box” on page 467.

Zoom Interval

Opens the Enter Zoom Interval dialog box, where you enter date and time ranges for the chart. For details, see “Enter Zoom Interval Dialog Box” on page 468.

Types of Dialog Boxes

This section describes dialog boxes option throughout the Java GUI:

- ❑ **Add Annotations**
See “Add Annotation Dialog Box” on page 460.
- ❑ **Add New Group**
See “Add New Group Dialog Box” on page 460.
- ❑ **Add New URL Shortcut**
See “Add New URL Shortcut Dialog Box” on page 461.
- ❑ **Browser Pane Tab Properties Dialog Box**
See “Browser Pane Tab Properties Dialog Box” on page 462.
- ❑ **Browser Settings Dialog Box**
See “Browser Settings Dialog Box” on page 463.
- ❑ **Change Operator Password**
See “Change Operator Password Dialog Box” on page 464.
- ❑ **Customize Message Browser Columns**
See “Customize Message Browser Columns Window” on page 465.
- ❑ **Date and Time**
See “Date and Time Dialog Box” on page 467.
- ❑ **Enter Current View Interval**
See “Enter Current View Interval Dialog Box” on page 467.
- ❑ **Enter Data Storage Duration**
See “Enter Data Storage Duration Dialog Box” on page 468.
- ❑ **Enter Zoom Interval**
See “Enter Zoom Interval Dialog Box” on page 468.
- ❑ **Filter Messages**
See “Filter Messages Dialog Box” on page 469.

- ❑ **Find**
See “Find Dialog Box” on page 476.
- ❑ **Flags**
See “Flags Dialog Box” on page 480.
- ❑ **Load Message View Filters**
See “Load Message View Filter Dialog Box” on page 481.
- ❑ **Message Properties**
See “Message Properties Dialog Box” on page 482.
- ❑ **Message View Filters**
See “Message View Filter Dialog Box” on page 489.
- ❑ **Modify Annotation**
See “Modify Annotation Dialog Box” on page 493.
- ❑ **Modify Group**
See “Modify Group Dialog Box” on page 493.
- ❑ **Modify Message Attributes**
See “Modify Message Attributes Dialog Box” on page 494.
- ❑ **Modify Shortcut**
See “Modify Shortcut Dialog Box” on page 496.
- ❑ **Modify URL Shortcut**
See “Modify URL Shortcut Dialog Box” on page 497.
- ❑ **Preferences**
See “Preferences Dialog Box” on page 498.
- ❑ **Rename Browser Settings**
See “Rename Browser Settings Dialog Box” on page 506.
- ❑ **Rename Message View Filter**
See “Rename Message View Filter Dialog Box” on page 506.
- ❑ **Save Browser Filter Settings**
See “Save Browser Filter Settings Dialog Box” on page 507.

- ❑ **Save Message View Filters**
See “Save Message View Filter Dialog Box” on page 507.
- ❑ **Send Message to Operators**
See “Send Message to Operator(s) Dialog Box” on page 508.
- ❑ **Service Properties**
See “Service Properties Dialog Box” on page 510.
- ❑ **Service Views**
See “Service Views Dialog Box” on page 513.
- ❑ **Watermark Advanced Settings**
See “Watermark Advanced Settings Dialog Box” on page 514.
- ❑ **Web Browser Properties**
See “Web Browser Properties Dialog Box” on page 516.
- ❑ **Workspace Properties**
See “Workspace Properties Dialog Box” on page 517.

NOTE

If Service Navigator is installed, the Service Properties dialog box is available in HPOM. For details, see “Service Properties Dialog Box” on page 510.

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 “Message Properties Dialog Box” on page 482.

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.

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 pop-up menu. For details, see “To Add a Shortcut Group” on page 282.

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.

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 pop-up menu. For details, see “To Add a New Shortcut” on page 281.

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 “Message-related Variables” on page 536.

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.

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 pop-up menu. For details, see “Browser Pane: Browser Tab Menu” on page 447.

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.

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 “Filter Messages Dialog Box” on page 469.

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 “Rename Browser Settings Dialog Box” on page 506.

[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.

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 HPOM operator password.

Old Password

Your current HPOM 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.

Customize Message Browser Columns Window

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 pop-up 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 “Message Fields” on page 525.

For descriptions of options in the Message Properties dialog box, see “Message Properties Dialog Box” on page 482.

The Customize Message Browser Columns dialog box contains the following tabs:

General

For details, see “Customize Message Browser Columns: General Tab” on page 466.

Custom

For details, see “Customize Message Browser Columns: Custom Tab” on page 466.

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.

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 “Message Fields” on page 525.

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.

Date and Time Dialog Box

The `Date` and `Time` dialog box opens when a date or time-related column is selected in the `Message View Filter` dialog box and you click . Use this dialog box to help you create filter criteria for date and time-related columns.

The `Date` and `Time` dialog box contains the following options:

`Time`

`Time`. The format depends on the regional settings selected on the Java GUI client system.

`Date`

`Date`. The format depends on the regional settings selected on the Java GUI client system.

[OK]

Saves changes and closes the dialog box.

[Cancel]

Closes the dialog box without saving changes.

Enter Current View Interval Dialog Box

The `Enter Current View Interval` dialog box opens when you select the `Settings: Current History Chart` from the pop-up menu on a history chart in the workspace pane. For details, see “Workspace Pane: Charts Menu” on page 440.

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.

Enter Data Storage Duration Dialog Box

The Enter Data Storage Duration dialog box opens when you select the Settings -> Data Storage Duration from the pop-up menu on a history chart in the workspace pane. For details, see “Workspace Pane: Charts Menu” on page 440.

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.

Enter Zoom Interval Dialog Box

The Enter Zoom Interval dialog box opens when you select the Settings -> Zoom Interval from the pop-up menu on a history chart in the workspace pane. For details, see “Workspace Pane: Charts Menu” on page 440.

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.

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 “Filter Messages: General Tab” on page 471.

❑ **Symbols and Object**

For details, see “Filter Messages: Symbols and Objects Tab” on page 473.

❑ **Pending Details**

For details, see “Filter Messages: Pending Details Tab” on page 474.

❑ **Filter Summary**

For details, see “Filter Messages: Filter Summary Tab” on page 475.

NOTE

Every tab on the `Filter Messages` dialog box shares a number of options. For details, see “Filter Messages Dialog Box: Global Options” on page 470.

To find out how to access the `Filter Messages` dialog box, see the following procedures:

- ❑ “To View Active Messages” on page 222
- ❑ “To View History Messages” on page 222
- ❑ “To View Pending Messages” on page 224
- ❑ “To Save the Browser Filter Settings” on page 298

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 “`Save Browser Filter Settings Dialog Box`” on page 507.

`[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 “`Browser Settings Dialog Box`” on page 463.

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 pop-up menu in that area of the object pane, the `[OK]`, `[Apply]`, and `[Use Saved Settings]` buttons are grayed out.

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 HPOM Java GUI is running on a system with a timezone setting different from the setting on the HPOM 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 HPOM management server. See also “ito_op.bat Options” on page 558.

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.

- *Control characters*

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

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

- *Maximum of 254 characters*

The message text pattern is limited to 254 characters.

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:

- Node
- Tool
- Msg Group
- Object
- Service
- CMA

The second combination box includes any custom message attributes that are available.

With Pattern

If selected, enables using text patterns in the custom message attributes.

Name

The syntax of the pattern in the Name field is the same as in the With Message Text Pattern field. The same limitations apply.

[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.

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 224.

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.”

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 “Filter Messages: General Tab” on page 471.

- ❑ **Symbols and Objects**

For details, see “Filter Messages: Symbols and Objects Tab” on page 473.

- ❑ **Pending Details** (pending message filters only)

For details, see “Filter Messages: Pending Details Tab” on page 474.

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 “Find: Search Buttons” on page 477.

- ❑ **Basic Search Options**

For details, see “Find: Basic Search Options” on page 478.

- ❑ **Advanced Search Options**

For details, see “Find: Advanced Search Options” on page 479.

For an overview of the search function, see “Searching the Object Pane” on page 112. To find out how to use the search function, see “To Search the Object Pane” on page 218.

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 “Find: Basic Search Options” on page 478 and “Find: Advanced Search Options” on page 479.

[Cancel]

Closes the dialog box without saving changes.

[Advanced>>]

Opens the advanced search area of the dialog box. For advanced search options, see “Find: Advanced Search Options” on page 479.

[Advanced<<]

Closes the advanced search area of the dialog box. For basic search options, see “Find: Basic Search Options” on page 478.

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 tool 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.

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.

Tools

If checked, searches tools 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.

Flags Dialog Box

The `Flags` dialog box opens when you select the `Flags` column in the `Message View Filter` dialog box and, and then click . Use this dialog box to help you create filter criteria for the `Flags` column. For more information about message flags, see “Message Flags” on page 530.

The question mark (?) represents any value. The hyphen (-) means that the flag is not set.

The `Flags` dialog box contains the following options:

State

Current ownership status of a message. Possible values: ? - O M X R N

Unmatched

Information about a message being classified by HPOM as not matching any filter. Possible values: ? - X

Instructions

Availability of instructions. Possible values: ? - X

Automatic action

Availability and current status of automatic actions. Possible values: ? - X S F R

Operator-initiated action

Availability and current status of operator-initiated actions. Possible values: ? - X S F R

Annotations

Availability of annotations. Possible values: ? - X

[OK]

Saves changes and closes the dialog box.

[Cancel]

Closes the dialog box without saving changes.

Load Message View Filter Dialog Box

The Load Message View Filter dialog box opens when you click [Load...] in the Message View Filter dialog box. Use this dialog box to load a saved message view filter into the Message View Filter dialog box.

The Load Message View Filter dialog box contains the following options:

Filters

List of saved message view filters, sorted by name.

Global

Indicates that the filter is defined by the HPOM administrator. Global filters are available to all users.

Personal

Indicates that the filter is defined by an HPOM operator for personal use only. Personal Filters are only available for operators, administrators cannot load this filters.

[Rename...]

Opens the Rename Message View Filter dialog box. For more information, see “Rename Message View Filter Dialog Box” on page 506.

[Delete]

Deletes the selected saved message view filter from HPOM.

[OK]

Saves changes and closes the dialog box.

[Cancel]

Closes the dialog box without saving changes.

Message Properties Dialog Box

The Message Properties dialog box opens when you right-click and message and select Properties from the pop-up 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 “Message Properties: General Tab” on page 485.

❑ **Message Text**

For details, see “Message Properties: Message Text Tab” on page 485.

❑ **Original Message**

For details, see “Message Properties: Original Message Tab” on page 485.

❑ **Actions**

For details, see “Message Properties: Actions Tab” on page 486.

❑ **Instructions**

For details, see “Message Properties: Instructions Tab” on page 487.

❑ **Annotations**

For details, see “Message Properties: Annotations Tab” on page 487.

❑ **Custom Attributes**

For details, see “Message Properties: Custom Attributes Tab” on page 488.

❑ **Mapped Services**

For details, see “Mapped Services Tab” on page 488.

NOTE

Every tab in the Message Properties dialog box shares a number of fields and buttons. For details, see “Message Properties: Global Options” on page 484.

For an overview of the Message Properties dialog box, see the following sections:

- ❑ “Messages” on page 66
- ❑ “Examining Message Attributes” on page 123
- ❑ “Modifying Message Attributes” on page 125

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.

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 “Message Fields” on page 525.

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 “Modify Message Attributes Dialog Box” on page 494.

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.

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).

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 HPOM and displayed in the message browser have instructions available on request.

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 “Add Annotation Dialog Box” on page 460.

[Modify]

Accesses the Modify Annotation dialog box, where you can edit the current annotation. For details, see “Modify Group Dialog Box” on page 493.

[Delete]

Deletes the current annotation.

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 “Custom Message Attributes” on page 127.

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 HPOM administrator.

This tab is only available if the HPOM administrator uses Service Configuration for Service Navigator to configure Service Navigator.

Message View Filter Dialog Box

You can open the Message View Filter dialog box in the following ways:

- ❑ **Message browser headline pop-up menu**
Select Message View Filter: Custom... from the pop-up menu on the message browser headline.
- ❑ **Object pane filter settings pop-up menu**
Select Add New... or Modify... from the pop-up menu on the filter settings group in the object pane.
- ❑ **Main menu**
Actions: Filtering -> Message View Filter... from the main menu.
- ❑ **Toolbar icon**



Click the Open Message View Filter Dialog box toolbar icon.

The Message View Filter dialog box lets you create, save, and load message view filters. When you close the Message View Filter dialog box, the filter is applied to the current message browser. Message view filters let you temporarily hide messages from view so that you can concentrate on a subset of messages.

The Message View Filter dialog box contains the following tabs:

- ❑ **Simple View**
For details, see “Message View Filter Dialog Box: Simple View Tab” on page 490.
- ❑ **Advanced View**
For details, see “Message View Filter Dialog Box: Advanced View Tab” on page 491.
- ❑ **Text View**
For details, see “Message View Filter Dialog Box: Text View Tab” on page 493.

Message View Filter Dialog Box: Global Options

Every tab on the Message View Filter dialog box contains the following buttons:

[OK]

Applies the message view filter, and closes the dialog box.

[Apply]

Applies the message view filter, but keeps the dialog box open.

[Cancel]

Closes the dialog box without applying the message view filter.

Message View Filter Dialog Box: Simple View Tab

The Simple View tab of the Message View Filter dialog box has the following options:

[Load...]

Opens the Load Message View Filter dialog box. For more information, see “Load Message View Filter Dialog Box” on page 481.

[Save...]

Opens the Save Message View Filter dialog box. For more information, see “Save Message View Filter Dialog Box” on page 507.

[Add]


Adds a criterion to the list of criteria. New criteria are appended to the end of the list.

[Delete]

Deletes the selected criterion from the list of criteria.

Column

Name of the message browser column to be filtered.

NOT	Negates the criterion.
Operator	Determines the operation to be performed on the values.
Value	Value or pattern to be matched.
	Opens the Date and Time or the Flags dialog box, depending on the specified column. For more information, See “Date and Time Dialog Box” on page 467 and “Flags Dialog Box” on page 480.

Message View Filter Dialog Box: Advanced View Tab

The Advanced View tab of the Message View Filter dialog box has the following options:

[Load...]	Opens the Load Message View Filter dialog box. For more information, see “Load Message View Filter Dialog Box” on page 481.
[Save...]	Opens the Save Message View Filter dialog box. For more information, see “Save Message View Filter Dialog Box” on page 507.
[New Criterion]	Adds a new criterion to the filter.
[Delete]	Deletes a criterion or rule from the filter. When you delete a rule, all elements of the rule are also deleted.
[New Rule]	Adds a new rule to the filter.

[Remove Rule]

Removes a rule from the filter. If the rule contains any elements, they are inserted at the next higher level.

[Move Up]

Moves the selected criterion or rule to the next higher level.

[Move Down]

Moves the selected criterion or rule to the next lower level.

If a *criterion* is selected, the lower half of the Message View Filter dialog box displays the following options:

Column

Name of the message browser column to be filtered.

NOT

Negates the criterion if selected.

Operator

Determines the operation to be performed on the values.

Value

Value or pattern to be matched.



Opens the Date and Time or the Flags dialog box, depending on the specified column. For more information, see “Date and Time Dialog Box” on page 467 and “Flags Dialog Box” on page 480.

If a *rule* is selected, the lower half of the Message View Filter dialog box displays the following options:

Operator

Logical AND or OR.

NOT

Negates the rule.

Message View Filter Dialog Box: Text View Tab

The `Text View` tab of the `Message View Filter` dialog box has the following options:

`Edit Message View Filter Definition`

Editable text area where you can type the definition of the message view filter in plain text format.

Message view filters use the syntax described in “Saving Message View Filters” on page 201.

[Check]

Validates the filter and reports possible errors.

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 “Message Properties Dialog Box” on page 482.

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.

Modify Group Dialog Box

The `Modify Group` dialog box opens when you select `Modify Current Group` from a shortcut group pop-up 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.

Modify Message Attributes Dialog Box

The `Modify Message Attributes` dialog box opens when you right-click a message, then select `Modify` from the pop-up 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 125.

The `Modify Message Attributes` dialog box contains following options:

Node

Node associated with the message.

Application

Tool 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.

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 pop-up menu. For details, see “To Modify a Shortcut” on page 281.

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.

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 pop-up menu. For details, see “To Modify a Shortcut” on page 281.

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.

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 “Preferences: General Tab” on page 499.

For an image of the General tab, see Figure 1-79 on page 179.

❑ **Web Browser**

For details, see “Preferences: Web Browser Tab” on page 501.

For an image of the Web Browser tab, see Figure 1-25 on page 74

❑ **Events**

For details, see “Preferences: Events Tab” on page 502.

❑ **Services**

For details, see “Preferences: Services Tab” on page 503.

To find out how to use the Preferences dialog box, see the following procedures:

- ❑ “To Customize the Size of Shortcut Bar Icons” on page 283
- ❑ “To Change Your Integrated Web Browser” on page 286
- ❑ “Changing the Number of Messages Displayed” on page 321
- ❑ “To Customize the Refresh Interval” on page 273
- ❑ “To Customize the Look and Feel of the Java GUI” on page 276
- ❑ “To Customize the Color Preferences for the Message Browser” on page 323
- ❑ “To Configure Message Event Notification” on page 290
- ❑ “To Customize the Font Size” on page 291

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 tools will be launched.

Look and Feel

Enables you to choose between different interface styles:

- Metal
- Motif
- HP One Voice (default look)
- Windows (only on Windows)
- Aqua (only on Mac OS)

Colored Message Lines

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.**

Show Communications Status dialog

**Enables (default) or disables the HPOM Communications
Status dialog.**

Help Page URL

**Enables you to change the location of the HPOM online
documentation.**

Tailored Set of Tools

**Enables you to include only tools related to the selected
message in the pop-up menus.**

Filtered History Messages Time Period

**Enables you to a define time period in which the
filtered history messages are loaded.**

Preferences: Web Browser Tab

The Web Browser tab on the Preferences dialog box has the following options:

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.

Use 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.

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 tool, which you can select by clicking [Browse...], then selecting the tool 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.

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).

Show Service Label in Messages

Allows you to display the label of a service in messages in the message browser. If the service label is not loaded into Java UI when using Service Load on Demand functionality, the column displays no text.

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 HPOM 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 HPOM 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.

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 “Browser Settings Dialog Box” on page 463.

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.

Rename Message View Filter Dialog Box

The Rename Message View Filter dialog box opens when you click [Rename...] in the Save Message View Filter or the Load Message View Filter dialog box. Use this dialog box to specify a new name for an already saved message view filter.

The Rename Message View Filter dialog box contains the following options:

Rename Message View Filter

New name for the message view filter.

[OK]

Saves changes and closes the dialog box.

[Cancel]

Closes the dialog box without saving changes.

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 “Filter Messages Dialog Box” on page 469.

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.

Save Message View Filter Dialog Box

The Save Message View Filter dialog box opens when you click [Save...] in the Message View Filter dialog box. Use this dialog box to save a message view filter under a name so that you can reuse it in the future.

The Save Message View Filter dialog box contains the following options:

Filters

List of currently saved message view filters, sorted by name.

Global

Indicates that the filter is defined by the HPOM administrator. Global filters are available to all users but can only be modified, and saved by the HPOM administrator.

Personal

Indicates that the filter is defined by an HPOM operator for personal use only. Operators can save only personal filters, and administrators cannot save personal filters.

[Rename...]

Opens the Rename Message View Filter dialog box. For more information, see “Rename Message View Filter Dialog Box” on page 506.

[Delete]

Deletes the selected saved message view filter from HPOM.

Name

Name of the message view filter.

[OK]

Saves changes and closes the dialog box.

[Cancel]

Closes the dialog box without saving changes.

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 HPOM 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.

Service Properties Dialog Box

If HP Operations 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 pop-up menu. For find out how to use this dialog box, see “To View Service Details” on page 360.

NOTE

The fields of the Service Properties dialog box may be empty if the HPOM administrator has not defined any values in the service configuration file. For descriptions of standard HPOM menu bar options, see “Types of Menu Bar Items” on page 394.

The Service Properties dialog box contains the following tabs:

❑ **General**

For details, see “Service Properties: General Tab” on page 511.

❑ **Actions**

For details, see “Service Properties: Actions Tab” on page 511.

❑ **Attributes**

For details, see “Service Properties: Attributes Tab” on page 511.

❑ **Status Info**

For details, see “Service Properties: Status Info Tab” on page 512.

❑ **Service Mappings**

For details, see “Service Properties: Service Mappings Tab” on page 512.

Every tab in the Service Properties dialog box has the following button:

[Close]

Closes the dialog box without saving changes.

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 Operations 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.

Service Properties: Actions Tab

The Actions tab of Services Properties dialog box displays the actions assigned to the selected service or subservice.

Service Properties: Attributes Tab

The Attributes tab of Services Properties dialog box displays the attributes assigned for the service.

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.

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 HPOM administrator uses Service Configuration for Service Navigator to configure Service Navigator.

Service Views Dialog Box

If HP Operations 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 pop-up menu. For find out how to use this dialog box, see “Finding a Service in Multiple Service Hierarchies” on page 362.

NOTE

The Service Views dialog box is only relevant for you if your administrator uses HP Operations 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.

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 pop-up 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 HPOM 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.

Web Browser Properties Dialog Box

The Web Browser Properties dialog box opens when you right-click a web page in an internal web browser in the workspace pane, then select Properties from the pop-up menu. The Web Browser Properties dialog box looks different, depending on the type of web browser you have configured (for example, internal, Microsoft Internet Explorer, or Mozilla). If you use Internet Explorer, the Internet Explorer web browser properties dialog box is used.

If you are using an internal 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.

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 pop-up menu. For details, see “Customizing Workspace Pane Workspaces” on page 284.

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 “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 internal web browser. Using AWT prevents applets from running outside the internal 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.

Start Customized Tool Wizard

The Start Customized Tool wizard enables you to change the preconfigured startup attributes of an tool (for example, parameters, username, and password), and specify the nodes on which you want to start the tool.

NOTE

To find out how to use the Start Customized Tool wizard, see “To Customize the Startup Attributes of a Tool” on page 252.

The Start Customized Tool wizard has the following buttons.

[<Back]

Moves to the previous step.

[Next>]

Moves to the next step.

[Finish]

Closes the wizard and starts the tool.

[Cancel]

Closes the wizard without starting the tool.

The Start Customized Tool wizard contains three steps, each with its own options:

1. Step 1 of 3: Select a Tool

Contains a tool menu tree from which you choose the tool you want to execute.

2. Step 2 of 3: Select the Nodes Where You Want to Run the Tool

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 Tool

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 tool will be executed.

Presentation

Read-only field indicates how the tool output will be displayed:

- No window
- Output
- Input/Output

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 “Message Browser” on page 64.

To find out how to investigate problems with the message browser, see “Investigating Problems with the Message Browser” on page 226.

To find out how to customize message browser columns, see “Changing the Layout of Browser Windows” on page 319 and “Customize Message Browser Columns Window” on page 465.

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 523).

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 523.

Time Received

Date and time the problem occurred.

Node

On which node the problem occurred.

Message Browser Headline

Tool	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 “Message Colors” on page 524.

❑ **Message Fields**

Attributes summarized in the message headline in the message browser. For details, see “Message Fields” on page 525.

❑ **Message Flags**

Information about help instructions, automatic actions, and operator-initiated actions that may be associated with the message. For details, see “Message Flags” on page 530.







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 HPOM 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.

Table B-2

Levels of Severity

Severity	Icon	Description
Critical		Condition affecting a service or node has occurred. Immediate corrective action is needed.
Major		Problem severity is high. Normal use of the affected object is likely to be impeded.
Minor		Problem severity is relatively low. Normal use of the affected object is not likely to be impeded.
Warning		Potential or impending service-affecting fault has occurred. Take action to diagnose and correct the problem.
Normal		Message output is as expected. A process might be starting, completing, or displaying status information.
Unknown		Severity level was not defined in the policy running on the managed node for the event that generated the message.

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 “Message Browser” on page 64. For a detailed description of message flags, see “Message Flags” on page 530.

To customize message fields, use the Customize Browser Columns dialog box. For details, see “Changing the Layout of Browser Windows” on page 319 and “Customize Message Browser Columns Window” on page 465.

NOTE

When copying one or more messages using **CTRL+C** and **CTRL+V** commands, message fields are separated with tabs. This makes possible organizing messages into Excel spreadsheets, where the each field of each message is a separate column in the row.

HPOM 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

Tool

Name of the tool related to the selected message.

Default column label: Tool

Dup.

See No. of Duplicates.

Flags

Flags associated with the message. For more information about message flags, see “Message Flags” on page 530.

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 HPOM APIs.

Default column label: Message No.

Message Text

Complete text of the selected message.

Default column label: Message Text

Message Type

Attribute used by HPOM to divide a set of messages into more manageable subgroups. The message type is defined by the HPOM 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 HPOM 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

Service Label

Label of the service(s) associated with the message.

Default column label: Service Label

Source

Part of an tool 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 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 HPOM Java GUI is running on a system with timezone setting different from the setting on the HP Operations 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 HP Operations management server. See also “ito_op.bat Options” on page 558.

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 “Message Fields” on page 525.

HPOM 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.

Types of HPOM Variables

This section describes the following message variables:

❑ Standard Variables

Variables that can be used in most broadcast and tool text entry fields. For details, see “Standard Variables” on page 532.

❑ Message-related Variables

Variables beginning with `OPC_MSG`. For details, see “Message-related Variables” on page 536.

Standard Variables

The following variables can only be used in tools 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 HPOM.

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 tool 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 tool is executed. The names are separated by spaces.

`$OPC_GUI_CLIENT`

Executes the tool 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 HPOM 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 HPOM 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 HP Operations 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 tool 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 tool is executed. The names are separated by spaces.

`$OPC_USER`

Returns the name of the HPOM user who is currently logged in on the management server.

Sample output:

```
opc_admin
```

Message-related Variables

This section describes message-related variables:

- ❑ “Parameters for Message-related Variables” on page 536
- ❑ “Examples of Message-related Variables” on page 547

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 tool 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.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:

09/16/09 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 duplicate node names for multiple messages from the same node.

Sample output:

kernighan.c.com richie.c.com richie.c.com

`$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_LABEL`

Returns the service label that is associated with the message. This can be for example for service name `node3_disk` the service label `Disk 3`.

Sample output:

Disk 3

If there is no service label configured, this variable returns an empty string.

`$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 tool or component that generated the message.

Sample output:

Message : opcmmsg (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 a tool, 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 a tool 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 a tool, you would use the following:

```
$OPC_MSG.ANNOTATIONS[2]
```

❑ **Updating Duplicated Severity**

When suppressing or counting duplicate messages, the severity and the text of the message that first appears in the browser is retained. When the new incoming message has a different severity or message text, these new values are displayed instead of the previous data.

To update the severity of the original message, enter the following:

```
ovconfchg -ovrg server -ns opc -set \  
OPC_UPDATE_DUPLICATED_SEVERITY LAST_MESSAGE
```

❑ **Updating Duplicated Message Text**

To update the text of a original message, enter the following:

```
ovconfchg -ovrg server -ns opc -set \  
OPC_UPDATE_DUPLICATED_MSGTEXT LAST_MESSAGE
```

itooopbrw File

HPOM administrators can use the `itooopbrw` file to customize the attributes of the current message browser.

NOTE

If a message view filter is applied to a message browser when the browser layout is saved, the message view filter definition is also saved in the `itooopbrw` file. For more information about the syntax used in message view filters, see “Syntax for Message View Filters” on page 195.

This section explains the following:

❑ **Syntax**

Exact syntax used in the `itooopbrw` file. For details, see “Syntax for the `itooopbrw` File” on page 551.

❑ **Parameters**

Descriptions of parameter used in the `itooopbrw` file. For details, see “Parameters for the `itooopbrw` File” on page 551.

CAUTION

This method should be used by experienced HPOM administrators only.

Syntax for the itopbrw File

The itopbrw file uses the following syntax:

```

VERSION "VERSION STRING"
[ACTIVE | HISTORY | PENDING | NAME:"<NAME>"
  {"<COLUMN_NAME>" <WIDTH> ["COLUMN_LABEL"]}
  {[ALIGN "<COLUMN_NAME>" LEFT | RIGHT | CENTER]}
  {[FILTER
  [SORT "<COLUMN_NAME>" ASCEND | DESCEND]
  [WIN_WIDTH <WINW>]
  [WIN_HEIGHT <WINH>]
]
]

```

Parameters for the itopbrw File

The itopbrw file uses the following parameters:

ACTIVE	Values for the Active message browser filter.
ALIGN	Keyword identifying the alignment information for the specified column.
ASCEND	Direction of sorting: from beginning to end (top to bottom).
CENTER	Direction of alignment: center.
COLUMN_LABEL	Label of the message browser column.

<COLUMN_NAME>

Message attribute or column ID key. Use the exact custom message attribute ID for custom message attribute columns. Enclose column names that contain spaces in quotation marks (“”).

NOTE

Some of the following message attributes have more than one possible matching ID. This ensures compatibility with itooopbrw file syntax used in earlier versions of HPOM.

Reserved words for general message attributes are:

Acknowledged By

Name of the operator who acknowledges the message.

Application | APPLICATION_COL

Name of the application (tool) related to the message.

Flags | FLAGS_COL

Message flags associated with the message (SUIAONE).

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 HPOM APIs.

Message Text	MSG_TEXT_COL	Complete text of the message.
Message Type		Attribute used by HPOM to divide a set of messages into more manageable subgroups. The message type is defined by the HPOM 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.
Service Label		Label of the service associated with the message.
Severity	SEVERITY_COL	Severity of the message.
Source		Part of an application (tool) 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 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 message browser filter.

LEFT

Direction of alignment: left.

NAME	Keyword.
<NAME>	Name of the filter. Use backslashes (\) to escape quotation marks (\") and backslashes (\\).
PENDING	Values for the Pending message browser filter.
RIGHT	Direction of alignment: right.
SORT	Keyword identifying the sorting information for the specified column.
VERSION	Keyword for the version of the itooibrw syntax.
VERSION_STRING	Version number of the itooibrw syntax.
<WIDTH>	Integer value representing the column width in pixels.
WIN_HEIGHT	Vertical dimension of the message browser window.
WIN_WIDTH	Horizontal dimension of the message browser window.
<WINH>	Integer value representing the height of the message browser window in pixels.
<WINW>	Integer value representing the width of the message browser window in pixels.

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, the following evaluation sequence is taking place:

1. Internal system default values are evaluated and considered first.
2. Startup parameters set in `itooopc` resource file are evaluated. They are considered *instead* of default options.
3. Environment variables are evaluated, and considered *instead* of parameters set as stated above in this list.
4. The command line options passed with the `ito_op` (`ito_op.bat` on Windows) startup script are evaluated and considered *instead* of all parameters set as stated above in this list.

Table B-3 shows the options evaluated by the Java GUI in the startup scripts:

Table B-3 Startup Script Options Evaluated by the Java GUI

Option	Format	Default	Description
<code>apisid</code>	<string>	<code>OV_JGUI_API</code>	Sets a session ID for the particular Java GUI instance at its startup.
<code>bbc.http:proxy</code>	<string>	""	Configures a proxy server for HTTPS-based communication.
<code>colored_message_lines</code>	yes no	no	Decides whether whole messages or just the severity column are colored in the message browser.
<code>def_browser</code>	<filename>	""	Path to the web browser on a local host.

Table B-3 Startup Script Options Evaluated by the Java GUI (Continued)

Option	Format	Default	Description
def_look_and_feel	<string>	Windows: com.sun.java.s wing.plaf.moti f.Motif LookAndFeel	Defines the appearance of the Java GUI.
initial_node	<string>	<localhost>	Hostname of the HPOM management server to which the Java GUI will connect.
locale	<lang_territory>		Presets the locale name.
max_limited_messages	<int>	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	<string>	""	Password of the HPOM operator used for login.
refresh_interval	<int> (seconds)	30	Sequence of time after which the message browser will be refreshed.
server	<string>	<localhost>	Hostname of the HPOM management server to which the Java GUI will connect.
title_suffix	<string>	""	Displays the string next to the title in the main window.
trace	true false	false	Enables the appearance of tracing messages in the terminal.
user	<string>	""	HPOM operator name used for login.

ito_op.bat Options

Time Zone Specification

Java GUI displays time-related information in the local time zone of the client. If the Java GUI and the HP Operations management server are located in the different time zones, you can set the Java GUI to use the time zone of the management server by adding the appropriate text for the preferred time zone in the `ito_op.bat` file.

For example, to use the time zone `Australia/Sydney`, add the text `-Duser.timezone=Australia/Sydney` to the `ito_op.bat` file (example extract):

```
:: Starting JavaGUI
for %%p in (true TRUE on ON yes YES) do if "%%p"=="%TRACE%" echo on
for %%p in (true TRUE on ON yes YES) do if "%%p"=="%PLUGIN%" goto
:PLUGIN
%START% .\j2re1.4.2\bin\%JAVA% -Duser.timezone=Australia/Sydney
-Xmx128m com.hp.ov.it.ui.OvEmbApplet initial_node=%ITOSERVER%
user=%USER% passwd=%PASSWD% trace=%TRACE% display=%DISPLAY%
locale=%LOCALE% max_limited_messages=%MAX_LIMITED_MESSAGES%
refresh_interval=%REFRESH_INTERVAL% apiport=%APIPORT%
apisid=%APISID% https=%HTTPS% %BBCPARAM%
goto END
```

Valid time zones are listed in the directory `<JRE_HOME>\lib\zi`, for example `GMT`, `Asia/Singapore`, or `Europe/Warsaw`. If you specify an invalid time zone, `GMT` is used.

Java GUI Layout Configuration

You can configure the file name and the location for loading and saving the Java GUI layout as a command line option, for example:

```
ito_op.bat -config=<path/filename>
```

Java Console Version for the Client Verification

You can verify the Java Console version by running:

```
ito_op.bat -version
```

itooprc Resource File

The Java GUI resource file `itooprc` is used to store operator preferences.

The `itooprc` 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 `itooprc` file. Each defined option must be listed in a separate line and followed by its parameter.

NOTE

The `itooprc` file should be edited by experienced administrators or operators only.

Table B-4 on page 559 describes the options that can be added in the `itooprc` file with their parameters.

Table B-4 **itooprc 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, HP One Voice, Windows, or Aqua.

Table B-4 itoopec Options and Parameters (Continued)

Option	Format	Description
default_browser	<path_to_browser>	Path to the web browser on a local host.
global_settings_poll_interval	<number>	Determines how frequently the Java GUI checks for changes to the global property files. Default is five minutes.
initial_node	<hostname/ip>	Hostname of the HPOM 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.
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.

Table B-4 itopr Options and Parameters (Continued)

Option	Format	Description
nosec	on off true false yes no	Starts the SSL Secure Java GUI in standard mode without SSL functionality.
passwd	<password>	Password of the HPOM 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.
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.

Table B-4 **itooprc Options and Parameters (Continued)**

Option	Format	Description
show_at_severity	0 1 2 3 4 5	<p>Defines the severity of the message for which event notification takes place:</p> <ul style="list-style-type: none"> 0 = Unknown 1 = Normal 2 = Warning 3 = Minor 4 = Major 5 = Critical
show_svc_label_in_msgs	on off true false yes no	<p>Enables the service label column in the message browser. If you update manually, you should do this before startup.</p>

Table B-4 itooprc Options and Parameters (Continued)

Option	Format	Description
show_comm_status_dlg	yes no	<p>Java GUI clients check for changes to the global property files in the shared location. If a change is detected, the HPOM Communication Status dialog box displays a message, which informs the operator of the changes and requests a restart of the Java GUI.</p> <p>This parameter enables or disables the HPOM Communication Status dialog box from displaying. Default value is yes.</p> <p>This is useful if you want to disable this behavior in an environment with many clients logged in with the same user name at the same time. This way, when one of these clients reloads the Java GUI configuration, the HPOM Communication Status dialog boxes are refrained from disturbing all the other clients.</p>
subproduct	<subproduct_string>	For HP internal use only.
tailored_applications_start	on off true false yes no	Enables you to include only tools related to the selected message in the pop-up menus.

Table B-4 itooprc Options and Parameters (Continued)

Option	Format	Description
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.
user	<username>	HPOM 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 internal web browser provided with the Java GUI. • <i>Manual</i> Custom selection of web browser. See the which_browser option.

Table B-4 itooprc Options and Parameters (Continued)

Option	Format	Description
web_browser_html_appl_result	true false	<i>Internal</i> true= Enables the HTML output of the application. false= Disables the HTML output of the application.
which_browser	1 2	Type of web browser to use: 1 = ActiveX Internet Explorer 2 = Internal web browser

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 “opacta.” 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. *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 HPOM 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; HP application; HP service; *HPOM application*; *HPOM internal application*.

application defaults Defaults, such as color or font, that can be changed by accessing the X Windows application defaults file. *See also* manpage *opc(1)*.

application registration file *See* ARF.

ARF application registration file. File explaining how an application integrates with HPOM. 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.

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 Java GUI operators, send these commands from the Tools tree in the Object Pane.

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.

configuration management adapter Also known as “opcbbcdist.” Configuration management adapter between the HP Operations management server and the HTTPS agents that creates instrumentation from existing actions, commands, and monitors, and switches `nodeinfo` settings into the XPL format used on HTTPS nodes.

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 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 HPOM, including remote logon, 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. If the administrator grants

operators customized start-up rights, the operators can modify the list from the Java GUI. *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.

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.

external nodes Nodes located outside the HPOM domain. These nodes, which include all kinds of nodes (that is, not just IP nodes), have only some of the functionality of normal HPOM nodes. No HP Operations agent runs on these nodes. *See also* node group.

F

filtered message browser Java GUI message browser 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 Java GUI 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.

HP application HP application that has been integrated with the HPOM. *See also* application; HP service; *HPOM application*; *HPOM internal application*.

HP service Script, process, or command that has been integrated into HPOM from HP Software by using the `opcservice` command-line tool. Unlike applications, services cannot be invoked from symbols. Services are either invoked automatically or manually from the menu bar. Services can be represented by symbols, or as part of a hierarchy under a group symbol. *See also* application; HP application; *HPOM application*; *HPOM internal application*.

HTTPS-based Java GUI Solution for providing a secure communication between Java GUI and the HP Operations 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 HP 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.

J

Java GUI Java graphical user interface. *See also* object pane.

L

license password A unique character array that contains information about one or more licenses for a licensed object. Passwords are added to the license password repository to install licenses (LTUs).

license key A license key contains information about the licensed object and the number of licenses (LTUs) on the key. The HP Operations management server and HP operations agent are examples of licensed objects.

license to use (LTU) An LTU is a license that has been acquired by the customer and is used by product components that require licensing.

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.

log file encapsulator Also known as “opcle.” Process residing on the managed nodes that uses the log file template to scan one or more applications or system log files 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.

log file messages Messages that are generated from application or service log files. The administrator sets up log file 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 log files are read by the log file encapsulator. The log file 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 HPOM. The HP Operations 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 HPOM 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 Java GUI 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 by using the Java GUI 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 “opcmgsa.” 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 HPOM.

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 HPOM 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 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 HPOM. 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 “opcmsgm.” 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 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 HPOM. 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 HPOM. *See also* template.

message sources Sources for messages managed by HPOM. HPOM manages messages from various sources, including log files, SNMP traps, threshold monitors, HPOM message command interface and API (`opcmsg (1 | 3)`), HPOM monitor command interface and API (`opcmon (1 | 3)`), and event correlation services. To handle messages from each of these sources, the HPOM

administrator sets up templates consisting of message defaults, message conditions, and suppress conditions. *See also* log file messages; managed nodes.

message target rules Conditions for the managed node that indicate to which management server specific messages must 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 HPOM.

message unacknowledgement Moving a message from the history database to the Java GUI 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 HPOM administrator.

See also threshold monitoring.

monitored object Objects such as system parameters, database status, and spooling information that are periodically read by HPOM.

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 logons and actions.

N

netop network operator. One of three predefined HPOM users. The operator manages network management capabilities only. *See also* `opc_op`; operators.

NNM Network Node Manager. Comprehensive network management solution. *See also* ARF.

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

HPOM environment. These hierarchies differ only in how their nodes are organized. The hierarchies are assigned to HPOM users, and represent the managed nodes for which these users are responsible. The default hierarchy in HPOM is the node bank.

notification message Read-only message forwarded to a target management server by HPOM. 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 HPOM, this service includes colors and severity levels configured for messages displayed in the Java GUI message browser. HPOM can also forward messages to external services (for example, beepers, paging services, and so on).

O

object Resource and associated functionality managed by HPOM (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_adm HPOM administrator. One of three predefined HPOM users. This is the default administrator in HPOM. *See also* `opc_op`; HPOM administrator; user name.

OPC_NODES Reserved variable that enables you to retrieve a list of nodes selected in an operator managed node or in an administrator node bank or node group bank. The hostnames of the nodes are passed to the HPOM application.

opc_op HPOM operator. One of three predefined HPOM users. The operator controls system management functions only. The operator does not manage network activities. The operator can access some UNIX tools (for example, Processes, Disk Space, and Print Status). *See also* netop; opc_adm; operators; user name.

opcacta *See action agent.*

opcactm *See action manager.*

opcbbcdist *See configuration management adapter.*

opcctla *See control agent.*

opcple *See log file 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 HPOM monitor agent (opcmona).

opcmsg (1 | 3) Command and API used by applications and scripts to pass HPOM message texts and attributes to the HPOM 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.

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 HPOM users responsible for monitoring and responding to messages from the set of nodes and message groups assigned to them by the HPOM administrator. These users perform tasks from the Java GUI message browser and the object pane. The three preconfigured operator is opc_op. *See also* opc_op; user profile.

ovcd *See OV Control.*

OV Control Also known as “ovcd.” Process on the management server that starts and stops all other manager processes, and checks that all manager processes are running.

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 HPOM 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 HPOM. *See also* unmatched message.

pending message Message that arrives on the HP Operations management server outside defined service hours or during a scheduled outage. This messages resides in the Java GUI 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. HPOM provides only a generic interface to the terminal. *See also* remote logon; 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 HP Operations 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 `primmgr` file. If this file does not exist, the HPOM Installation Manager acts as the server responsible for HP Operations agents, and HPOM extracts the file name by using the `ovconfchg` configuration tool for HTTPS-based managed nodes. *See also* backup manager; HPOM Installation Manager.

process Execution of a program file. In HPOM, these program file executions include integrated applications and scripts, management server processes, agent processes, and trouble ticket services.

property sheet Pop-up window that organizes task steps into options you access by clicking 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 HP Operations agent software.

remote logon 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 HPOM administrator can print HPOM summaries or integrate summaries that are not included with HPOM.

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).

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* manpage for the command *opcragt(1M)*.

service *See* HP 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 HPOM nodes are passed to HPOM 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 HPOM environment at any moment in time or over a specified period of time. These reports are generated with the HP Service Reporter.

session Time during which you are logged on to HPOM. You start (or stop) an HPOM session when you log on to (or log out of) HPOM.

severity Level assigned by the HPOM 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 HPOM. The HPOM 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.

start-up 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 HPOM administrator.

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 HPOM 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 log files, `opcmsg(1)` and `opcmsg(3)`, monitored objects, and SNMP traps. *See also* message source template; template groups; time template.

template groups Logical group of templates sharing common characteristics. 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. HPOM 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 HPOM application and has no relation to the operating system. A valid HPOM user name and password is required to enter the HPOM GUI. HPOM assigns the unique identifiers `opc_admin` and `opc_op` to the HPOM

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_admin`; `opc_op`; password.

user profile Profile that defines the configuration of a virtual HPOM user. The configuration of real HPOM users can be derived from one or more predefined profiles. *See also* operators; HPOM 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. HPOM lets you connect to a such a remote terminal with a preconfigured or customized user name and password. *See also* remote logon; physical terminal.

HPOM administrator Administrator responsible for installing and configuring HPOM software, setting and maintaining operating policies, maintaining non-HPOM software, and configuring operator workspaces and scripts. The administrator can access all functions of the HPOM 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; user profile.

HPOM application Application that has been integrated into HPOM. *See also* application; HP application; HP service; *HPOM internal application*.

HPOM internal application Application of the type Broadcast or Virtual Terminal. *See also* application; HP application; HP service; *HPOM application*.

HPOM Installation Manager

Management server from which the HP Operations 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.

HPOM operators *See operators*.

HPOM 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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