



HP Operations Manager i

Software Version: 10.00

OMi User Guide

Document Release Date: January 2015
Software Release Date: January 2015

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Contents

- Part I: Introduction 9
 - Chapter 1: Navigating and Using OMi 11
 - Chapter 2: Logging into OMi 12
 - Chapter 3: My Account 16
 - Chapter 4: User Engagement 17
 - Chapter 5: Events 23
 - Event Priority 24
 - Event Correlation 26
 - Event History 27
 - Chapter 6: Event Browser 30
 - Configuring the Event Browser 47
 - Filtering by Views and View-Based Authorization 48
 - Assigning an Event to a User or User Group 49
 - Relating Events Manually 51
 - Creating Correlation Rules from Manually-Related Events 52
 - Launching Operations Orchestration Run Books 57
 - Viewing Closed Events 58
 - Exporting Event Data 60
 - Event Details 62
 - General 62
 - Additional Info 66
 - Source Info 68
 - Actions 69
 - Annotations 71
 - Custom Attributes 73
 - Related Events 75
 - History 77
 - Resolver Hints 79
 - Instructions 80
 - Forwarding 81
 - Event Filters 84
 - Filtering Methods 85
 - How to Filter Events by Views 87
 - How to Filter Events by Configuration Items 87

How to View and Apply Event Filters	88
How to Define Simple Event Filters	89
How to Define Advanced Event Filters	90
How to Share Event Filters	92
Filter Manager User Interface	93
Select an Event Filter and Manage Event Filters Dialog Boxes	93
Simple Filter Configuration Dialog Box	94
Advanced Filter Configuration Dialog Box	98
Edit Expression Dialog Boxes for Advanced Filters	104
Operators Used in Filter Configuration Dialog Boxes	109
Troubleshooting and Limitations	112
Event Closing and Archiving Tools	112
opr-archive-events Command-Line Interface	113
opr-close-events Command-Line Interface	115
Chapter 7: Health	119
Event Type Indicators	119
Health Indicators	120
HI-Based KPI Calculations	122
Annotation Tool	125
Changes and Incidents Component	129
Custom Image Component	133
Geographical Map Component	137
Health Indicator Component	145
Health Top View Component	152
Hierarchy Component	155
Neighborhood Map Component	167
Top View Component	172
Topology Map Component	178
View Explorer Component	185
Watch List Component	189
Chapter 8: Actions	193
Chapter 9: Tools	197
Chapter 10: Views	201
Chapter 10: My Workspace	203
Chapter 11: Monitoring Your Environment With My Workspace	204
Predefined Pages	205
Available Components	207
My Workspace User Interface	212

My Workspace	212
Page Gallery Dialog Box	216
Component Gallery Dialog Box	217
New/Edit Component Dialog Box	219
Wiring Dialog Box	221
Chapter 12: How to Set Up My Workspace	223
User Permissions in Workspaces	225
How to Configure Page Layout – Use-Case Scenario	225
How to Create an External Component	229
How to Create a Component Using a Dynamic URL – Use-Case Scenario	230
How to Set Up Wiring Between Components	231
How to Modify Page and Component Categories	232
How to Modify the Maximum Number of Pages	233
Troubleshooting My Workspace	234
My Workspace pages and components are missing	234
Part III: Dashboards	235
Chapter 13: Monitoring Dashboards	237
Chapter 14: 360° View	245
Chapter 15: KPI Over Time Dashboard	246
Chapter 16: Return On Investment Dashboard	251
Part IV: Operations Console	257
Chapter 17: Event Perspective	258
Chapter 18: Health Perspective	259
Chapter 19: Performance Graphing Overview	261
Types of Graphs	263
Baseline Graphs	264
Overview of Graphs	264
Data Sources	264
Metrics	265
Managing Graphs - Workflow	266
Drawing Graphs in My Workspace	266
Drawing Graphs from OMi	266
Drawing Graphs from Performance Perspective	268
Designing Graphs	269
Editing Graphs	270
Deleting Graphs	271

Performance Graphing User Interface	271
Performance Perspective Graphical User Interface	272
Options for Drawn Graphs	275
DrillDown to Process	278
Using Table Highlights	279
Using Table Filters	280
Selecting Metrics	281
Table Graph Window	282
Graph Export Dialog Box	283
Graph Design	284
Graph Attributes Tab	284
Metric List Tab	288
Select Metrics Window	288
Metric Properties Window	289
Special Attributes Tab	293
Save Graphs Dialog Box	296
Graph Attributes - List and Description	297
Date Range Panel	300
Troubleshooting and Limitations	302
Chapter 19: OMi Health Status	305
Send Documentation Feedback	308

Part I: Introduction

OMi users use the Workspaces area to monitor the environment, manage events, and solve problems. OMi provides default pages in the Dashboards and Operations Console workspaces for these purposes. However, administrators may also provide specially designed pages for use by their operators. Alternatively, users may have been given permissions to create their own pages in My Workspace.

The different designs of the pages in Workspaces present information in different ways. The kind of information that you can see within these pages is determined by the user roles that the administrator assigns to you. For example, the operator Dave can see his assigned events, plus other events that he is allowed to see, in a cross-domain view. For example, he is responsible for maintaining the enterprise email server, but he might be able to see events that are assigned to another operator.

Learn More

About Workspaces

The Workspaces area is divided into the following main sections:

- **My Workspace.** My Workspace enables you and your administrators to view default pages from OMi, and to create new pages containing OMi components and also external components. Each page is displayed as a tab within My Workspace. For details, see ["My Workspace" on page 212](#).
- **Dashboards.** Dashboards give you an overview of the health of the environment in graphical form. The data updates in real time so that you are always presented with the most recent information. OMi provides the following dashboards by default:
 - **Monitoring Dashboard.** (Formerly known as Event Dashboard.) Monitoring Dashboards provide an at-a-glance overview of the events from the environment you are monitoring. Monitoring Dashboards enable you to quickly assess the health of the environment and to identify areas that require your attention. For details, see ["Monitoring Dashboards" on page 237](#).
 - **360°.** This page provides a high-level overview of the status of CIs in a selected view. The page displays a hierarchy of CIs in a view, the KPIs assigned to each CI, and their KPI statuses. For details, see ["360° View" on page 245](#).
 - **KPI Over Time.** The KPI Over Time dashboard enables you to view the status or the value of selected KPIs and CIs over time. The report also lets you choose from a number of layouts to monitor statuses and values at a glance. For details, see ["KPI Over Time Dashboard" on page 246](#).
 - **ROI Dashboard.** (Return on Investment.) The ROI Dashboard displays the proportion of events received by OMi that have been automatically handled against those that required intervention

by operators. The higher the proportion of automatically handled events, the greater the contribution OMi is making to the management of your infrastructure. If the cost of manually handling a typical event is known, this value can be entered into OMi, based on which, the total cost saving achieved through OMi can be displayed. These statistics can be displayed for any specified time period within which OMi has been monitoring your IT environment. For details, see ["Return On Investment Dashboard" on page 251](#).

- **Operations Console.** The Operations Console workspace is where operators perform their daily tasks. OMi provides three predefined so-called perspectives as examples for ideal operations workspaces:
 - **Event Perspective.** The Event Perspective page displays event-related information in separate panes. For details, see ["Event Perspective" on page 258](#).
 - **Health Perspective.** The Health Perspective page displays topological information and health indicators related to the selected event. This display enables you to simultaneously see events from different perspectives and helps you to better understand complex relationships and dependencies. For details, see ["Health Perspective" on page 259](#).
 - **Performance Perspective.** The Performance Perspective page enables you to draw graphs from templates. You can also draw ad hoc graphs by selecting the required metrics for a selected CI. For details, see ["Performance Graphing Overview" on page 261](#).

Chapter 1: Navigating and Using OMi

OMi runs in a web browser and uses the web browser's navigation features. For example, you can use the web browser's back and forward buttons, the web browser's bookmarks, history, refresh, full screen, and print features.

Each OMi UI has a dedicated URL, which you can bookmark for quicker access to individual UIs.


Learn More

Title and Menu Bars

The title bar displays a logo, the name of the Operations Manager i product, and menus.

The submenus in the **Workspaces** and **Administration** menus can be expanded and collapsed. OMi remembers the expand and collapse states of each submenu so that you can return to them more easily.

You can use the **search for menu items** field to search the menus for a specific item. OMi suggests matching menu items as you type.

The  user menu displays the name of the currently logged in user. You can access all user-specific areas using this menu, for example, account or password information. You can also log out of OMi using the user menu.

The **Help** menu takes you to the OMi Online Help and to additional resources in the Internet. You can also look up the OMi version from this menu.

Breadcrumbs

Breadcrumbs enable you to keep track of your location within OMi. They provide links back to each page you navigated through to get to the current page.

You can view previous pages within a multi-level context by clicking one of the links in the breadcrumb.

Chapter 2: Logging into OMi

This section provides instructions for logging into OMi.

Learn More

Accessing OMi

You can access OMi using a supported web browser from any computer with a network connection to the OMi servers.

The level of access granted to a user depends on the user's permissions. For more information, see the OMi Administration Guide.

By default, OMi is configured with Lightweight Single Sign-On (LW-SSO). For more information, see the OMi Administration Guide.

Requirements

For details on browser requirements, as well as minimum requirements to view OMi, see the OMi Support Matrix.

Tasks

This section includes:

- ["How to Log Into OMi" below](#)
- ["How to Log Out of OMi" on the next page](#)

How to Log Into OMi

1. In a browser, enter the following URL:

```
http://<server_name>.<domain_name>/omi
```

where

<server_name> and *<domain_name>* represent the Fully Qualified Domain Name (FQDN) of the OMi server (for example, `http://server1.domain1.ext/omi`). If there are multiple servers, or if OMi is deployed in a distributed architecture, specify the load balancer or gateway server URL, as required.

2. Enter your login name and password. Initial access can be gained using the administrator user name ("admin") and password.

Caution: We recommend that the system superuser change this password upon first login to prevent unauthorized entry. For details on changing the user password, see ["My Account" on page 16](#). The login name cannot be changed.


Note: The password is configured in the final step of the configuration wizard or in the Config server utility which can be run separately from the installation.

After you log in, your login name appears at the top right of the page, under the top menu bar.

Note: If Lightweight Single Sign-On (LW-SSO) is disabled, you do not need to add the `.<domain_name>` syntax in the login URL. For information on LW-SSO, see the OMi Administration Guide.

How to Log Out of OMi

When you complete your session, it is recommended that you log out to prevent unauthorized entry.

Click **Logout** on the  user menu

Tips and Troubleshooting

Login Troubleshooting

To resolve login issues, reference the possible login failure causes in the following table using the error number shown in the error alert dialog box. For additional troubleshooting information, refer to the [Self-Solve Knowledge Search](#).

Error No.	Problem/Possible Cause(s)	Solution(s)
LI001	<p>OMi failed to connect to the application server running on the gateway server. This may be due to:</p> <ul style="list-style-type: none"> • The application server being down. • Problems with the OMi service. • The port required by the application server being used by another application. 	<p>Solution 1: Close all applications on the gateway server machine and restart the machine.</p> <p>Solution 2: Ensure that there are no other running applications on the gateway server machine that use this port (for example, applications that run from the Startup directory, another instance of the application server, an MSDE or Microsoft SQL Server, or any other process).</p>
LI002	<p>The application server running on the gateway server is not responding or is not installed correctly.</p>	<p>Restart OMi.</p>
LI003	<p>The management database is corrupted (for example, if a user record was accidentally deleted from the database).</p>	<p>Try logging in as a different user, or ask the OMi administrator to create a new user for you.</p>
LI004	<p>The connection between the Tomcat servlet engine and the application server failed due to a Remote Method Invocation (RMI) exception. This may be due to problems in RMI calls to the application server.</p>	<p>Ensure that none of the application server ports are in use by another process. Also, ensure that the RMI ports are bound.</p> <p>For details on ports, see the OMi Administration Guide.</p>


Error No.	Problem/Possible Cause(s)	Solution(s)
LI005	<p>The OMi login fails or hangs. This may be due to:</p> <ul style="list-style-type: none"> • An inability to connect to the management database. • The current user does not have access rights to a profile. • Authentication strategy has not been set/configured correctly. 	<p>Ensure that the connection to the management database is healthy:</p> <ol style="list-style-type: none"> 1. In the web browser, type http://localhost:29000/jmx-console/index.html to connect to the JMX console. 2. Click the link System > JMX MBeans > Topaz > Topaz:service=Connection Pool Information. 3. Locate java.lang.String showConfigurationSummary() and click Invoke. 4. In Active configurations in the Connection Factory, find the appropriate row for the management database. 5. Verify that columns Active Connection and/or Idle Connection have a value greater than 0 for the management database. 6. If there is a problem with the connection to the database, verify that the database machine is up and running. If required, rerun the Setup and Database Configuration utility. <p>Solution 3: Ensure that the user has appropriate permissions to access OMi. For details on roles and permissions, see the OMi Administration Guide.</p> <p>Solution 4: Verify that an authentication strategy has been configured correctly. For details on authentication strategies, see the OMi Administration Guide.</p>

Chapter 3: My Account

The My Account dialog box enables individual users to change their name and time zone. In addition, users can provide their email address.

The changes made here are also applied to user's configuration in Users, Groups and Roles. For details, see the OMi Administration Guide.

To access:

Click **My Account** on the  user menu.

Tasks

How to Update My Account Information

1. In the **Name** field, type a new display name.
2. *Optional.* Enter your **Email** address. OMi currently does not use this email address.
3. Select the **Time Zone** according to your location. The time zone affects the format that the event browser uses to display date and time of events (for example, Time Received or Time Created). See also "[Event Browser](#)" on page 30.
4. Click **Apply** to save your changes.

Chapter 4: User Engagement

Using gaming technology, User Engagement adds fascination to your work and recognizes your achievements as you learn to use OMi and become progressively more knowledgeable.

All normal User Engagement participants (OMi users without User Engagement administration rights) can access their Timeline, Experts, and Achievements pages from the User Engagement page in the Workspaces area.

To access:

Click **User Engagement** on the  user menu

Learn More

This section includes:

- ["Experts" below](#)
- ["Achievements" on the next page](#)
- ["Timeline" on the next page](#)
- ["Participant Details page" on page 19](#)
- ["Privacy and Notifications" on page 20](#)

Experts

To access:

Click **User Engagement** on the  user menu

Select **Experts** from the User Engagement page or the User Engagement Experts component.

A participant can see the Experts Board only if he opts to participate in expert boards in the Privacy settings page for the current participant.

The experts boards make it easy for you to identify and contact the individuals in your organization with the most experience of the various OMi domains. The User Engagement experts page displays the overall most experienced individuals and those for a selected category. You can drill down into each category and see the complete list of participants taking part in the Expert Boards.

- **Overall Experts.** Displays the most experienced users by combining the points earned across all activities.

Activities may be included in more than one category but points earned for an activity are only counted once for the Overall Experts board. The top three overall experts are displayed and the ranking of the current user is added to the list. If you are in the top five, all top-five participants are displayed in the list. You can drill down into the Overall Experts Board and view the complete list of participants and the points that they have collected. Participants may share their email addresses, making it easier for other participants to contact experts and increase collaboration between peers.

For details on how to participate in User Engagement, Expert Boards and share your email address, see "[Privacy and Notifications](#)" on page 20.

- **Category Experts.** Displays the most experienced users for each category.

Each expert board highlights the top three experts in each category and also displays the ranking of the current user. If you are in the top five, all top-five participants are displayed in the list. You can drill down into each expert board and view the complete list of participants and the points that they have collected. Participants may share their email addresses, making it easier for other participants to contact experts in the various categories and increase collaboration between peers.

Achievements

To access:

Click **User Engagement** on the  user menu

Select **Achievements** from the User Engagement Dashboard page or from the User Engagement Achievements component.

The Achievements page displays an overview of all running achievements grouped by categories. Disabled and paused achievements are not shown. Each category is displayed with a progress bar.

The assigned achievements help you to focus on and explore the OMi features that are most relevant to you at the moment in more detail. This is a personal achievements list that only the owner has access to. It is not shared with anyone else. You can also see your completed assignment history in "[Timeline](#)" [below](#).

Timeline

To access:

Click **User Engagement** on the  user menu

Select **Timeline** from the User Engagement page or the User Engagement Timeline component.

The Timeline page is used to show the history of a user's Achievements. The Timeline provides a personal overview of User Engagement participation and is not shared.

with anyone else.

The diary is divided into the following views:

- **Today**

Shows your latest achievements.

- **Yesterday**

Shows the summary of your achievements for the previous day.

- **Last Week/Last 7 Days**

Shows the summary of your achievements and progress for the 7 day period up to the day before yesterday.

- **Last Month**

Shows the summary of your achievements and progress for the previous calendar month.

- **This Year**

Shows the summary of your achievements and progress for the current calendar year.


- **Last Year**

Shows the summary of your achievements and progress for the previous calendar year.

Participant Details page

To access:

Click **User Engagement** on the  user menu

Click the  button or your avatar image.

The Participant Settings page specifies your login name, avatar name, and email address.

You can change your avatar from this page.

- **Change Password** displays the Change Password dialog box where you can change your user account password if the user account was created in User Engagement.

The Change Password dialog box is displayed when the user is logged on to User Engagement stand-alone UI (which is typically used for administrative purposes only) not using OMi's lightweight

single sign-on. It is also not displayed in the User Engagement integrated into OMi UIs. The password that you can change is the one for User Engagement and not OMi.

- **Upload Avatar.** Displays the Upload Avatar dialog box where you can change your avatar image. If you would like to participate anonymously, you can choose any image to represent yourself.
- **Remove Avatar.** Displays the Confirmation dialog box where you can delete your avatar image. Only displayed if an avatar image is uploaded for the participant.
- **Login.** Your unique account name used to log on to the User Engagement user interface. This the same login as for OMi and cannot be edited.
- **Avatar Name.** Your avatar name, displayed in User Engagement and used to represent you. If you would like to participate anonymously, you can choose any name to represent yourself.
- **Email.** Your email address is helpful for administration information, for example, to help reset forgotten passwords, and is also used in the Experts Boards if you choose to make it visible.

Privacy and Notifications

To access:

Click **User Engagement** on the  user menu

Click the  button.

The use of all User Engagement features is entirely voluntary and allows for a high level of individual control. You can at anytime choose to participate in User Engagement achievements and Experts Boards and configure your account appropriately. If you do not want to participate or do not want to make your email address visible to other participants, you can disable any of these options from the Privacy and Notifications page. For detailed information about Experts Boards, see ["Experts" on page 17](#) and the User Engagement section of the the OMi Administration Guide.

Notifications are used to give you timely, positive feedback of your achievement, for example, after creating your first tool. As you become more experienced and your achievements are from a higher level, becoming progressively more involved, notifications will be received less often, but will display your greater achievements.

Tasks

This section includes:

- ["How to Display the Complete Experts List" on the next page](#)
- ["How to View Achievements for a Category" on the next page](#)

- ["How to Search for Achievements" below](#)
- ["How to Upload an Avatar" below](#)
- ["How to Change Your Password" below](#)

How to Display the Complete Experts List

To display the complete list of experts (overall or for a category), click the **More** link associated with the category you are interested in.

The complete list of experts is displayed in a pop-up window, including individual scores and email addresses (where available).

How to View Achievements for a Category

To view all running achievements for a category, click the category title for which you want to view all available achievements.

Your currently active achievements associated with the category are displayed, including achievements that you have completed, in a dropdown box.

How to Search for Achievements

To search for achievements, enter a text string that is contained in the title of the achievement in the **Search** field.

The search field filters the achievements to only display achievements which include the specified string. Click **✕** to clear the filter.

All achievements containing the specified string are found. If the category is selected, the filtered achievements are displayed.

How to Upload an Avatar

1. Click **Upload Avatar**.
2. Browse to the location of the avatar file that you want to upload and select the file. Optimal image size is 150 x 150 pixels.

How to Change Your Password

The Change Password dialog box is displayed when the user is logged on to User Engagement not using OMi's lightweight single sign-on. It is also not displayed in the User Engagement integrated into OMi UIs. The password that you can change is the one for User Engagement and not OMi.

1. Click **Change Password**.
2. Enter your existing password.
3. Enter a new password and confirm.

Chapter 5: Events

Events report important occurrences in the managed environment, and are generated by source managers. These are forwarded to OMi and are assigned to operators for resolution.

Learn More

This section includes:

- ["Event Sources" below](#)
- ["Event Synchronization" below](#)
- ["Notifications" on the next page](#)

Event Sources

Events originating from many different sources can be processed, for example:

- HP Software applications:
 - HP Operations Manager for UNIX (HPOM for UNIX)
 - HP Operations Manager for Windows (HPOM for Windows)
 - HP Network Node Manager i (NNMi)
 - HP SiteScope
 - HP Systems Insight Manager
- Third-party management software, normally used to monitor specific environments or special needs not monitored by other solution components:
 - Microsoft Systems Center Operations Manager, Active Directory, Exchange
 - BlackBerry Enterprise Server
 - SAP

Alerts, for example, from CI Status Alerts and Event Based Alerts, can also generate events in OMi.

Event Synchronization

Event synchronization enables bidirectional communication between managers, for example, OMi and HPOM. Updates and modifications to events can be exchanged. For example, changes of ownership

or modifications to the severity status of an event are synchronized between servers. All events forwarded from HPOM servers are treated as allowing read and write. Any changes made to these events result in a back synchronization to the originating HPOM server.

Closing, Deleting, and Archiving Events

HPOM events are not updated when using the `opr-close-events` tool and the `opr-archive-eventstool` to close, delete, and archive events. The events in HPOM remain unaffected.

Likewise, events in OMi are not affected when using the `omwmsgutil` tool (HPOM for Windows) and `opcack` and `opchistdown` tools (HPOM for UNIX or Linux) to close, delete, and archive events in HPOM.

All these tools operate directly on their respective databases and the changes do not go through the workflow process, resulting in the loss of synchronization between OMi and HPOM.

If you use these tools to close, delete, and archive events from one system (for example, OMi), you must make the equivalent changes with the appropriate tools on the other system (for example, HPOM).

Notifications

Notifications are Emails, SMSs, and Pager messages that OMi can send on receipt of events with predefined characteristics.

For example, if critical events for the most important business-relevant services are received by OMi during any weekend period, the engineer responsible for these services is immediately informed by an email, SMS, or pager message, or any combination of these.

Event Priority

Event priorities can be automatically calculated from the business model and the event's severity. Event priority is assigned one of the following values: Lowest, Low, Medium, High, or Highest.

Learn More

Event Priority Calculation

The event priority calculation is executed in the event pipeline on new events. It also can be started manually on multiple events from the console context menu.

Input parameters for the calculation are:

- Severity of the event
- Business criticality of the related CI (if available)

Note: If no CI is related to the selected event, the priority is None.

The business impact is provided by the Business Impact Service (BIS) and the severity is an attribute of the event.

The calculation of priority is based on the relationship in the following table.

Impact	Event Severity					
	Unknown	Normal	Warning	Minor	Major	Critical
NoImpact	<i>Lowest</i>	<i>Lowest</i>	<i>Low</i>	<i>Low</i>	<i>Medium</i>	<i>Medium</i>
Low	<i>Lowest</i>	<i>Lowest</i>	<i>Low</i>	<i>Low</i>	<i>Medium</i>	<i>Medium</i>
MediumLow	<i>Low</i>	<i>Low</i>	<i>Low</i>	<i>Medium</i>	<i>Medium</i>	<i>High</i>
Medium	<i>Medium</i>	<i>Low</i>	<i>Medium</i>	<i>Medium</i>	<i>High</i>	<i>High</i>
MediumHigh	<i>High</i>	<i>Medium</i>	<i>Medium</i>	<i>High</i>	<i>High</i>	<i>Highest</i>
High	<i>Highest</i>	<i>Medium</i>	<i>High</i>	<i>High</i>	<i>Highest</i>	<i>Highest</i>

Calculated Priority in Event Forwarding

In event forwarding, the calculated priority is forwarded to the receiving application. If the CI related to the event is configured in the receiving application, the event priority is recalculated by each receiving application. If the CI related to the event is not configured in the receiving application, the event priority contained within the forwarded event is used.

Tasks


This section includes:

- ["How to Set Priorities Manually" below](#)
- ["How to Recalculate Event Priorities" on the next page](#)

How to Set Priorities Manually

This task describes how to manually change the automatically-assigned priority of an event.

1. Open the Event Browser to display the list of known events:
 - Workspaces > Operations Console > <select a perspective>**
2. In the Event Browser, select the event for which you want to change the priority value.

3. Open the Event Details pane.
4. Select the required priority from the Priority list.
5. Click  **Save**.

How to Recalculate Event Priorities

This task describes how to manually recalculate the priorities for selected events in the Event Browser. This may be necessary when Business Criticality values changed in the underlying business model, and you want these changes reflected in your active events.

1. Open the Event Browser to display the list of known events:
Workspaces > Operations Console > <select a perspective>
2. In the Event Browser, select the events for which you want to recalculate the priority.
3. Right-click one of these events and select **Recalculate Priority** from the context menu.

The priority value for the selected events is updated.

Event Correlation

Event Correlation is used to automatically identify and display the real cause of problems. Events that are only symptoms of the cause event can be filtered out using the Top Level Items filter, resulting in a clearer overview of the actual problems that need to be solved. Event correlation relies on defining relationships between correlation rules, ETIs and ETI-values associated to events, and CIs and relations between these CIs.

The topology-based event correlation process works as follows:

- Checks whether a relationship exists between the events being correlated.
- Monitors the CIs and ETI values assigned to events being correlated.
- Determines relationship between two events by checking if there is a relationship in the topology database between the CIs to which the events are related.

The correlation result is displayed in the Event Browser with an icon in the **C** column to indicate that it is the result of a correlation process.

 — Event is the *cause* of another event

 — Event is the *cause* of one event and a *symptom* of another event

 — Event is a *symptom* of another event

Note: You might not be authorized to open the Correlation Rules manager. For more information about user authorization, see the OMi Administration Guide.

Events related as a result of correlation with the selected Event are displayed in the Related Events tab. The selected event can also be a symptom event and you can also see its cause in the Related Events tab.

If a better correlation is achieved and the correlation rule responsible for the new correlation possesses a higher weighting than the rule that generated the existing correlation, the new correlation replaces the existing one.

All possible correlation results are recorded and displayed in the Potential Causes sub-tab located in the Related Events tab. It shows the possible cause events, together with a reference to the correlation rule that generated the correlation. Additional information, such as the rule weight factor, and the time when the event was received, are also displayed. Operators can inspect all possible causes for a symptom event, better understand the matching correlation rules, and, if they have the appropriate permissions, manually change the cause of that event to any one of the available alternatives when investigating a problem.

For details about correlated events, related events, and potential causes, see ["Related Events" on page 75](#).

For more information about the icons used in the Event Browser, see ["Event Browser" on page 30](#). For more information about setting up correlation rules, see the OMi Administration Guide.

Event History

Event history is a log of information about who or which component has changed values of an OMi event. This feature enables an operator to see how event attribute values changed during the life of an event, for example, the sequence of severity changes. Event history information is available in a separate tab in the Event Details pane and can be viewed by any user with access to that event.

Learn More

This section includes:

- ["Event History Creation" below](#)
- ["Event History Characteristics" on the next page](#)

Event History Creation

An event history entry is created for the following cases:

- User changes an attribute of an event using the Event Browser.
- An external user or application changes event attributes using the Northbound Interface.

- HPOM or another OMi instance synchronizes an attribute change to OMi.
- Duplicate suppression changes an existing event.
- Automatic closing of related events.
- Control is transferred, canceled, or returned.
- Server is added to the event forwarding list.

An event history entry is not created in the following cases:

- A pipeline step (for example, CI resolution, or ETI resolution) changes an event which is not marked as received because it is still being processed by the pipeline.
- Events which are modified by the opr-close-events.bat tool.

Event History Characteristics

The following list summarizes the main technical characteristics of event history information:

- User cannot modify existing history information.
- Closing, deleting, and archiving events deletes history, but history is included as part of the XML output produced by the opr-archive-events tool.
- There is no limit to the number of history entries per event.

History is created if one or more of the following properties of an event are modified:

- Cause (cause/symptom relationship)
- Duplicate Count (Can be enabled and disabled in the Operations Management Infrastructure Settings under Duplicate Events Suppression Settings > Generate history lines for Duplicate Event Suppression).
- Correlation Rule
- Description
- Severity
- HPOM user
- AssignedGroup
- Custom Attributes
- Time Received

- Title
- Lifecycle state
- Priority
- Assigned User

In addition, changes to event annotations are also tracked as changes in the event history.

Tasks

Related Tasks

- ["Viewing Closed Events" on page 58](#)


Chapter 6: Event Browser

The Event Browser displays an overview of the active events that exist in the IT environment you are monitoring. The details include, for example:

- Date and time when the event occurred.
- Host system (node) where the event occurred.
- Application that caused the event.
- Severity of the event.
- The user responsible for solving the problem that caused the event, if assigned.

The information displayed by default is a small selection of the total information available about an event.

All changes you make to the Event Browser layout are automatically saved to your user account. The next time you log on, the Event Browser displays the latest events in accordance with the way you configured the Event Browser. For example, when you relogin, the last selected view and Event Browser tab are selected and reopened.

Selecting an event in the Event Browser displays the event's properties in the details pane, as long as the details pane is not hidden (toggle Details pane using the  button). The details pane contains tabs that enable you to view and modify some aspects of the selected event (for example, event properties, annotations, custom attributes, instruction text, and priority).

To access:

Workspaces > Operations Console > <select a perspective>

Learn More

This section includes:

- ["Severity Assigned to Events" on the next page](#)
- ["Filters" on the next page](#)
- ["Lifecycle Management" on the next page](#)
- ["Date Formats" on page 32](#)

Severity Assigned to Events

Each event can be assigned a severity to show the importance of the underlying problem. The values are: critical, major, minor, warning, normal, and unknown. The Event Browser indicates an event's severity with an icon.


Note: The Items bar at the bottom of the Event Browser indicates the number of active events by severity. An active event is one that is open and being worked on.

Filters

Filtering by events. Filtering the Event Browser content helps you to focus on the most useful information. For example, you can filter the events displayed according to severity, assigned user, event category, or lifecycle state. The Active Event Filter is displayed in the filter selection field.

You can configure new filters or modify existing filters to change, increase, or decrease the information displayed. For details, see ["Event Filters" on page 84](#).

Note: The Event Browser cannot display unresolved and closed events at the same time. To view closed events, see ["Viewing Closed Events" on page 58](#).

Filtering by views or CIs. When you select a configuration item in the CI Tree, OMi automatically applies a filter to the Event Browser so that only those events are displayed that are related to the selected configuration item. The active view or configuration item filter is indicated in the filter list enabled using the **(View/CI) filter**  button. For details, see ["Filtering by Views and View-Based Authorization" on page 48](#).

Lifecycle Management



Note: It is not possible to edit an event with the state `Closed`, except for adding annotations and custom attributes. To edit a closed event, you must first reopen it.

The Event Browser enables you to display and track the position of an event in a defined lifecycle. A lifecycle is a complete series of predefined states that summarizes the event's life. The lifecycle states are as follows:

- **Open:** Event is identified for investigation of the problems that caused the event. It is either not assigned to a user or assigned but not yet being worked on.
- **In Progress:** Assigned user has started working on the investigation of the event's underlying problems. The name of the assigned user appears in the User column.
- **Resolved:** Investigation into the selected event's underlying problem is found and fixed.
- **Closed:** Event is removed from the list of active events displayed in the Event Browser.

Note: Lifecycle states are linked to authorizations granted to users. For example, the user to whom an event is assigned can change the assigned event's state from `Open` to `In Progress` and `Resolved` but not to `Closed`. Only users with higher authority can assign events to other users or change the event lifecycle state from `Resolved` to `Closed`.

Although the lifecycle states occur in a consecutive manner, you can set an event's lifecycle state at any time. For example, you can assign an event to an alternative user, or reopen an investigation by changing the event state from `Closed` to `In Progress`.

Note: You can change the lifecycle state of an event by selecting the event and selecting the appropriate button (for example, the `Open`  or `Work On`  button).

Date Formats

The date formats displayed in the Event Browser correspond to the language setting in the web browser. For example, if your browser is set to `en-IN` (English India), the date is displayed using the Indian date/month/year format, for example `17/7/13`.

The following date formats are currently supported:

`de` - German

`en` - English

`en-GB` - English United Kingdom

`en-IN` - English India

`en-US` - English United States

`en-CA` - English Canada

`es` - Spanish

`fr` - French

`ja` - Japanese

`ko` - Korean

`ru` - Russian

`zh-CN` - Chinese China

`zh-HK` - Traditional Chinese Hong Kong

`zh-SG` - Simplified Chinese Singapur

If no preferred language is specified, `en-US` is used.

Note: For base languages that are supported without any specific regional options, such as

German or French, the date format is always taken from the base language even if you have selected a regional setting in your web browser.

For example, if you have selected fr-BE for the regional setting in your web browser, the date format is taken from the fr setting.

UI Reference

This section includes:






- ["Event Browser Icons, Buttons, and Context Menus" below](#)
- ["Event Browser Labels" on page 41](#)
- ["Closed Events Browser" on page 45](#)







Event Browser Icons, Buttons, and Context Menus



Some options and tools displayed in context menus require you to be logged on as a user with the authorization to start the selected tool.

Context menu items in the Event Browser are disabled or removed completely if the user does not have permission to perform certain operations (for example, **Work On**, or **Close**) or run certain actions (for example, Automatic Actions or Operator Actions).






The Performance Graph context menu items are removed completely if no metrics data is available for the selected CI. This is determined by the value of the CI's **Monitored By** attribute and the Performance Graphing infrastructure setting **Context Menu Check**.






UI Element (A-Z)	Description
	Reopen: Sets the lifecycle status for the selected events to Open. The events can now be assigned to users for investigation and resolution.
	Work On: Sets the lifecycle status for the selected events to In Progress, indicating that the underlying problems of the events are under investigation.
	Resolve: Sets the lifecycle status for the selected events to Resolved.
	Close: Sets the lifecycle status for the selected events to Closed.
	Assign To: Opens the Event Assignment dialog box, enabling you to assign the selected events to a specific user or user group.


UI Element (A-Z)	Description
	<p>Relate Events: Opens the Relate Events dialog box, enabling you to manually relate the selected events by assigning one event as a cause event. All other events become symptom events.</p> <p>Manually related events can also be used as the basis for automatically generating a correlation rule. For details, see "Relating Events Manually" on page 51 and "Creating Correlation Rules from Manually-Related Events" on page 52.</p>
	<p>Show Events Assigned to Me: Displays all events assigned to the current user in the Event Browser. Any applied filters and views are deactivated. Repeated selection toggles between displaying the events assigned to the current user and displaying the events filtered by the last selected filter and view.</p> <p>When Show Events Assigned to Me is selected, a confirmation of the selected mode is displayed in the information bar.</p>
	<p>Browser Options: Opens the Browser Options dialog box for the current Event Browser tab. You can modify and set display options (for example, to hide or display columns, or change the order in which the data appears, play sound on receipt of an event).</p>
	<p>Export Event List: Opens the Export Event List dialog box for the current Event Browser where you can specify which event attributes you want to export to the external file.</p>
	<p>Show/Hide Event Details Pane: Toggles between the Event browser view with and without the Event details pane. You can also open the event details for an event in a pop-up window using the Show > Event Details context menu item or double-click the event.</p>
	<p>Refresh: Synchronizes the event data displayed in the user interface with the latest information available in the database on the server and forces a complete refresh.</p> <p>For information on setting the automatic update interval, see the OMi Administration Guide.</p>

UI Element (A-Z)	Description
	<p>Show/Hide Closed Events: Displays the Closed Events Browser Configuration window used to specify the time period for the closed events to be displayed in the Closed Events Browser. Select OK and the Events Browser displays the closed events related to the related CI of a current event over a selected time period opens.</p> <p>Click the Hide Closed Events  button to return to the Event Browser.</p> <p>When Show Closed Events is selected, a confirmation of the selected mode is displayed in the information bar, complete with the start and end times for the displayed closed events and the creation time of the Closed Event list.</p>
<p><No Filter></p>	<p>Opens the View Selector from which you can select one of the available Views. If you have appropriate permissions, the selected view can be deselected by selecting <No Filter>.</p> <p>You can also configure users and groups so that they can see only the events filtered by views associated with that user or group. You can also allow users or groups to deselect the selected view and display all events.</p> <p>On the first load of the Event Browser no view is selected. The selected view is restored when the Event Browser instance is reopened.</p> <p>The five most recent selections are displayed at the top of the list.</p> <div data-bbox="464 1098 1369 1241" style="background-color: #f0f0f0; padding: 5px;"> <p>Note: The Event Browser View Selector is disabled in locked Event Browser pages so that only events associated with a preselected view are displayed.</p> </div> <div data-bbox="464 1266 1369 1339" style="background-color: #f0f0f0; padding: 5px;"> <p>Tip: Can be combined with the Search Events feature.</p> </div>

UI Element (A-Z)	Description
<p>...Browse Views</p>	<p>Opens the Browse Views dialog box, enabling you to select the view that you want to apply. The contents displayed in the Event Browser are limited to the CIs selected by the view.</p> <p>If you have the appropriate permissions, you can also clear the view filter. Users without this permission can only see events that are related to CIs that are contained in the selected view. For details see the OMi Administration Guide.</p> <p>Note: If you do not have permission to clear views, when you first attempt to open an Event Browser, the "Select a View" message is displayed and the Closed Events Browser button is also disabled.</p> <p>When you select a view from the view drop down list (or if a view selection is triggered externally, for example, from the View Explorer, the Event Browser is displayed and the Closed Events Browser button is enabled.</p> <p>Note: The Browse Views button is disabled in locked Event Browser pages so that only events associated with a preselected view are displayed.</p> <p>From the Browse Views dialog box, you can also open the Modeling Studio and from which you can manage views.</p> <p>For more information about views, "Views" on page 201.</p>
<p><Select an event filter></p>	<p>Opens the Event Filter Selector from which you can select one of the available event filters. The selected filter can be deselected by selecting <No Filter>.</p> <p>The five most recent selections are displayed at the top of the list.</p> <p>Tip: Can be combined with the Search Events feature.</p>
<p>...Manage Event Filters</p>	<p>Opens the Select an Event Filter dialog box, enabling you to select the event filter that you want to apply.</p> <p>From the Select an Event Filter dialog box, you can also open the Create New Event Filter dialog box to create an event filter, test, edit or delete an existing event filter.</p> <p>For more information about the event filters, see "Event Filters" on page 84.</p>
<p><Search Events></p>	<p>Entered text string is used to search the text displayed in the Event Browser and display only the events containing the specified string. Clearing the field displays all events again.</p> <p>If you are also filtering by CIs, selecting a different CI clears the search field.</p>

UI Element (A-Z)	Description
Add Annotation	Opens the Create New Annotation dialog box for all selected events. The annotation is associated with all selected events on saving.
Close and Reset Health Indicator	Sets the lifecycle status for the selected events to C1osed and resets the associated HI value to the default value for the selected events and on all symptom events of the selected events that are not already closed.
Configure > Event Type Indicators	Opens the Indicators manager in a new window. You need the appropriate authorization to access the Indicators manager and other Administration features.
Configure > Integration Policies	Opens the Policy Management UI in a new window.
Configure > Performance Graphs	If available, opens the graph Design Wizard in a new window. This wizard enables you to design a graph and specify its attributes and save it as a template for later use.
Configure > Tools	Opens the Tools manager in a new window. You need the appropriate authorization to access the Tools manager and other Administration features.
Configure > View Mappings	Opens the View Mappings manager in a new window. You need the appropriate authorization to access Administration features.
Items	<p>Indicates the number of events by severity and assignment to individual users or user groups. The valid severities are critical, major, minor, warning, normal, and unknown.</p> <p>The number of events displayed as a total of the number of available events before filtering is also displayed along with the number of selected events in brackets. For example, 25 of 40 (3) means that there are 40 possible events available for the current user of which 25 are displayed in the Event Browser (15 have been removed by filtering). 3 events are selected in the Event Browser.</p> <p>The following icons indicate event severity status:</p> <ul style="list-style-type: none">  — Critical  — Major  — Minor  — Warning  — Normal









UI Element (A-Z)	Description
	<p> — Unknown</p> <p>Note: You can also configure the Event Browser to apply a background color to the event that represents the severity of the event. For details, see "Configuring the Event Browser" on page 47.</p> <p>Usually, this is the same as the severity status of the original event, for example as received from HPOM.</p> <p>Selecting a severity icon results in filtering out all other events and displays only the events with the selected severity. The filter is cleared by clicking the icon again.</p> <p>The following icons indicate the event assignment status:</p> <p> — Event assigned to logged-on user</p> <p> — Event assigned to one of the groups that the logged-on user is a member of.</p> <p> — Events assigned to other users</p> <p> — Event assignment not known</p> <p>Depending on the settings selected in the active filter, some items are displayed with a value of 0, for example, because they are excluded by a filter.</p>
Launch > Custom Actions	Opens the Custom Actions menu from which you can select a custom action from a list of those configured for the CI type associated with the selected event.
Launch > Run Books	Opens the Run Books menu from which you can select a Run Book from a list of those configured for the CI type associated with the selected event.
Launch > Tools	Opens the Tools menu from which you can select a tool from a list of those configured for the CI type associated with the selected event.
Recalculate Priority	<p>Manually recalculates the priorities for selected events in the Event Browser.</p> <p>If the Business Criticality was changed for one or more CIs related to events in the Event Browser, a recalculation assigns new priority values for these events.</p>





UI Element (A-Z)	Description
Select All	<p>Selects all events displayed in the Event Browser.</p> <div style="border: 1px solid gray; padding: 5px; background-color: #f0f0f0;"> <p>Note: You can copy the details of any selected events to the clipboard using the key combination CTRL + C. Use CTRL + V to paste to the target location. The information available in the Event Browser is copied in the order that it is displayed. If expected information is missing, check that the associated column is configured to be displayed in the Event Browser.</p> </div>
Show > Application Summary Report	<p>If available, the Application Summary report is displayed for the selected event created by BPM.</p>
Show > BPM Performance Analysis Report	<p>If available, the BPM Performance Analysis report is displayed for the selected event created by BPM.</p>
Show > BPM Triage Report	<p>If available, the BPM Triage report is displayed for the selected event created by BPM.</p>
Show > Business Service Impact For Related CI	<p>Opens a new window and displays the Business Service Impact for CI associated with the selected event.</p>
Show > Changes For Related CI	<p>Displays information about the most recent changes to the CI related to the selected event.</p> <p>Data can also be displayed for the child CIs which have an Impact relationship with the selected CI. If you clear the Show data for child CIs check box, data is only shown for the selected CI.</p> <p>By default, actual changes and incidents are shown for the past week. The requests for change area shows the changes planned during the previous week, and those that are planned for the coming week.</p>
Show > Closed Events (Related CI)	<p>Displays the Closed Events Browser with closed events that are associated with the CI related to the selected event.</p> <p>Click the Hide Closed Events  button to return to the Event Browser.</p>
Show > Event Details	<p>Opens the event details for an event in a pop-up window and displays all available information about the event.</p>

UI Element (A-Z)	Description
Show > Event in Source Manager	Opens the event in the source manager user interface connected using the BSM Connector.
Show > External Details	Opens the event in the external application that is responsible for managing the event.
Show > Filtered Browser (Node)	Displays only events that concern the Node CI to which the selected event is related.
Show > Filtered Browser (Related CI)	Displays events that concern the selected configuration item only.
Show > Performance Graphs (CI)	If available, displays performance graphs for the selected CI in a new window.
Show > Performance Graphs (Neighborhood)	If available, displays performance graphs for the selected CI and the neighborhood CIs in a new window.
Show > RUM Event Summary Report	If available, the RUM Event Summary report is displayed for the selected event created by RUM.
Show > RUM Performance Analysis Report	If available, the RUM Performance Analysis report is displayed for the selected event created by RUM.
Show > RUM Triage Report	If available, the RUM Triage report is displayed for the selected event created by RUM.
Show > Source Manager Policies	Opens the event in the Policy Management BSM Connector user interface.
Show > Related Events	Opens the Related Events tab of the Event Details dialog box which indicates the relationship of the selected event to other events. The information displayed is the same as that available in the event details pane.
Transfer Control to	Forwards the selected event to a configured external manager application. Used when the operator is not able to solve the problem and needs to escalate the issue, for example, create a Service Manager incident. The external manager can be configured to return an incident ID to OMi as forwarding information.







Event Browser Labels





The following table lists the columns that are included in the Event Browser pane. For a short explanation of the column content, check the tooltip.

UI Element (A-Z)	Description
A	<p>Automatic Action: Indicates if an automatic action is attached to the event and describes its status using the following icons:</p> <ul style="list-style-type: none">  — Not run automatic action available for event  — Automatic action is running  — Automatic action executed successfully  — Automatic action failed to execute successfully
C	<p>Correlation: Indicates if the event has any related events that are hidden as a result of a correlation. The following icons indicate the event's position in a chain of events:</p> <ul style="list-style-type: none">  — Event is a <i>cause</i> in a correlation  — Event is a <i>cause</i> in one correlation and a <i>symptom</i> in another  — Event is a <i>symptom</i> in a correlation <p>For details about correlated events, see "Related Events" on page 75.</p>
D	<p>Duplicate Count: Indicates how many duplicate events exist (for example, 2 or 3).</p>
I	<p>Instructions: Indicates if the event contains any Instructions.</p> <p>Instructions are configured in the policy that generates the event and might include, for example, details describing automatic and operator-initiated actions, or manual steps to follow for problem resolution.</p>
N	<p>Annotations: Indicates if the event contains any annotations. Annotations are comments or observations relating to the associated (or a similar) event. The following icon indicates the presence of annotations:</p> <ul style="list-style-type: none">  — Event has annotations <p>For more information about annotations, see "Annotations" on page 71.</p>
O	<p>Owned in HPOM: Indicates whether the event is owned by a user in HPOM (Y). If the event is owned by an HPOM user, the user name is displayed with the prefix OM:, for example, OM:Database Operator in the User field (Event Browser and General tab).</p>

UI Element (A-Z)	Description
R	Received in Downtime: Event received from a CI during a time period when the CI was in downtime (scheduled to not be available).
T	Control Transferred: Indicates if the responsibility for the associated event was transferred to an external manager.
U	<p>User Action: Indicates if a user action is attached to the event and describes its status using the following icons:</p> <p> — Not run user action available for event</p> <p> — User action is running</p> <p> — User action executed successfully</p> <p> — User action failed to execute successfully</p>
Application	Application: Application that caused the event to occur.
Category	Category: Name of the logical group to which the event belongs (for example, Database, Security, or Network). An event category is similar in concept to a message group in HPOM.
CI Hint	CI Hint: Information that helps to resolve the related CI, for example, Service name in HPOM event.
CI Type	CI Type: Configuration item type associated with the event.
Company	Company: A default custom attribute that is configured in the Available Custom Attributes infrastructure setting (in Administration > Setup and Maintenance > Infrastructure Settings > Applications > Operations Management - Custom Attribute Settings). For details, see the OMi Administration Guide.
Core ID	Core ID: Host system where the event occurred.
Customer	Customer: A default custom attribute that is configured in the Available Custom Attributes infrastructure setting (in Administration > Setup and Maintenance > Infrastructure Settings > Applications > Operations Management - Custom Attribute Settings). For details, see the OMi Administration Guide.
Description	Description: Optional information about the event in addition to the event's original title and the text captured from the event source.


UI Element (A-Z)	Description
ETI	<p>Event Type Indicator: Display name of the event type indicator (ETI) reported by the selected event and the current value, (for example, <code>Web application state: Slow</code>).</p> <p><code>WebAppState</code> is the name of the event type indicator. The corresponding label is <code>Web application state</code>, which is shown in the General tab. The level of the current ETI value is <code>Slow</code>.</p> <p>If event type indicators are assigned (see the Source Info tab) but are not being resolved (event type indicator field in General tab is empty), the configuration must be corrected.</p>
Event Age	<p>Event Age: Displays the time elapsed since the event was created. The event age is updated when the data in the Event Browser is automatically synchronized with the database every minute or when the Event Browser is manually refreshed.</p>
External ID	<p>External ID: ID of the event assigned by the external manager.</p>
Group	<p>Assigned Group: Name of the group to which the selected event is assigned.</p>
ID	<p>ID: ID of the event. Same as the ID of the message in HPOM if it is forwarded to OMi.</p>
Manager	<p>Manager: A default custom attribute that is configured in the Available Custom Attributes infrastructure setting (in Administration > Setup and Maintenance > Infrastructure Settings > Applications > Operations Management - Custom Attribute Settings). For details, see the OMi Administration Guide.</p>
Node	<p>Node: Host system where the event occurred. The link opens the CI Properties dialog box of the CI.</p>
Node Hint	<p>Node Hint: Information used to identify node CI. For example, the hostname in HPOM used to find host in the RTSM:</p> <ul style="list-style-type: none"> • DNS name of the originating server. • Node ID of the originating server.
Object	<p>Object: Device such as a computer, printer, or modem.</p>
Originating Server	<p>Originating Server: Management server that initially forwarded the original event along the chain of servers configured in a flexible management environment.</p>
Prio	<p>Priority: Priority assigned to the selected event (for example, <code>Low</code>, <code>Medium</code>, or <code>High</code>).</p>

UI Element (A-Z)	Description
Region	Region: A default custom attribute that is configured in the Available Custom Attributes infrastructure setting (in Administration > Setup and Maintenance > Infrastructure Settings > Applications > Operations Management - Custom Attribute Settings). For details, see the OMi Administration Guide.
Related CI	Name of the impaired configuration item where the event occurred. If the Related CI includes a subcomponent, it is displayed as follows: Related CI: Subcomponent. For example, Server1: CPU1.
Related CI Hint	Related CI Hint: Event information used to identify the CI related to the event.
Sending Server	Sending Server: Last server in the HPOM flexible management chain that forwarded the event to OMi.
Sev	<p>Severity: Severity assigned to the selected event. Usually, this is the same as the severity status of the original event, for example, received from HPOM. The following icons indicate event severity status:</p> <ul style="list-style-type: none">  — Critical  — Major  — Minor  — Warning  — Normal  — Unknown <p>Note: You can also configure the Event Browser to apply a background color to the event that represents the severity of the event. For details, see "Configuring the Event Browser" on page 47.</p>
Solution	Solution: Text field used to document solutions to help operators solve the problem indicated by the event.
Source CI	Source CI: Node where the monitoring agent or probe is running that generated the selected event.
Source CI Hint	Source CI Hint: Information used to identify the source CI.

UI Element (A-Z)	Description
State	<p>Lifecycle State: Point in the event lifecycle that the selected event has reached:</p> <ul style="list-style-type: none">  — Open  — In Progress  — Resolved  — Closed <p>To change an event's lifecycle status, select the event, and select one of the status buttons above the event list or use the context menu options. User authorizations control the permissions to change lifecycle states.</p>
Subcategory	<p>Subcategory: Name of the logical subgroup (category) to which the event belongs (for example, Oracle (database), Accounts (security), or Routers (network)).</p>
Time Created	<p>Time Created: Date and time when the event was created.</p>
Time Received	<p>Time Received: Date and time when the event was received.</p>
Time State Changed	<p>Time Lifecycle State Changed: Date and time when the last lifecycle state change took place.</p>
Title	<p>Title: Brief summary of the event.</p>
Type	<p>Type: Type of message in HPOM. String used to organize different types of events within an event category or subcategory.</p>
User	<p>Assigned User: Name of the network user who is responsible for solving the event's underlying problem. For example, if the event is owned by an OMi user, the user name is displayed. If the event is owned by an HPOM user, the user name is displayed with the prefix OM: , for example, OM:Database Operator.</p>

Closed Events Browser

You can view closed events history over a specified time period, either for all closed events of for a selected CI. From the Closed Events Browser, you can change the lifecycle state of any displayed events. For details, see ["Event Perspective" on page 258](#). All Event Browser actions relevant to closed events can be accessed from the Closed Events Browser.

To access	Workspaces > Operations Console > <select a perspective> Then click the Show Closed Events  button.
Important information	The maximum number of events that can be displayed in the Closed Events Browser can be configured in the Settings Manager. For details, see the OMi Administration Guide.
Relevant tasks	For more information about viewing closed events, see " Viewing Closed Events " on page 58 .

Note: Reopened events are automatically removed from the Closed Events Browser window. However, events that are closed after the opening of the Closed Events Browser are not automatically added to the current Closed Events Browser window. A refresh is required. The timestamp when the snapshot was taken is displayed in the Closed Events Browser window. Only one Closed Events Browser can be opened at a time by each user.

Troubleshooting

Event Browser does not Reconnect After Lost Server Connection is Restored

If the connection to the server is lost, the Event Browser automatically retries the connection 10 times with an interval of 5 seconds. If the connection cannot be restored automatically, a manual option is provided. If the manual option is also not successful, open an alternative OMi UI and then return to the Event Browser, for example:

Workspaces > Operations Console > <select a perspective>

Event Browser Status Bar Summary is Incorrect

If the Event Browser is in purge mode and a message storm is currently being experienced, the Event Browser status bar may show a summary such as "*Items: 32000 of 30000*".

The second number is the total number of events that you are allowed to see. This number is calculated on the server and always reflects the correct number, whether in purge mode or not.

The first number is the number of events that are currently in the browser. This number can be higher than the real total number of events because the Event Browser is fully loaded adding new events during the event storm and has not removed the purged events.

Shortly after the event storm is over, the displayed values should be aligned again.

HPOM for Windows User Names are Truncated When Messages are Forwarded

By default HPOM for Windows has the `OM for UNIX compatibility mode enabled (true)` in the Server-based Flexible Management configuration. This leads to the truncating of the user names.

Change the OM for UNIX compatibility mode setting to false in the Server-based Flexible Management namespace in the Generic Server Configuration tab.

Configuring the Event Browser

You can configure the Event Browser to display only the details that you are interested in. For example, you can add and remove columns, customize additional tabs, and configure filters to change and improve the way in which data displays.

All changes you make to the Event Browser layout are automatically saved to your user account. The next time you log on, the Event Browser displays the latest events in accordance with the way you configured the Event Browser. For example, the last selected view is selected and reopened.

To access:


Click  **Browser Options** in the Event Browser.

Tasks




This section includes:

- ["How to Configure the Event Browser" below](#)
- ["How to Add Custom Attributes as Columns" on the next page](#)

How to Configure the Event Browser

1. On the **Columns** tab, select the columns to display in the Event Browser and click the add  button to include them in the **Display these columns** box.

For a description of the available columns, see ["Event Browser Labels" on page 41](#).

2. Select from the **Display these columns** box any columns that you do not want to display and click the remove  button.
3. Select column names and rearrange their display positions by use of the  and  buttons.

The first column item in the list is displayed as the first column in the Event Browser. Subsequent column items are placed progressively to the right in the order of their appearance in the Display these columns list.

Alternatively, to select the default columns for display in the Event Browser, click **Reset to defaults**.

4. *Optional:* On the **Other** tab, configure any of the following additional options:

- **Play sound notification for new events.** Enables sound notification for new events. Overrides the global `Sound Notification for New Events` setting in the Infrastructure Settings Manager.
- **Include child CIs in CI filter.** Enables filtering events by the selected CI and any of its child CIs.
- **Color event background in accordance with the event's severity.** Applies a colored background that represents the severity of the event to the event in the Event Browser. Event background coloring includes the following options:
 - **All events.** All events displayed in the Event Browser are colored in accordance with the severity of the event.
 - **Only events assigned to current user.** Events assigned to the active user are colored in accordance with the severity of the event. All other events are identified with the default light background.
 - **Only unassigned events.** Events not assigned to the current user are displayed in the Event Browser are colored in accordance with the severity of the event. Events assigned to the active user are identified with a light pink colored background. Events assigned to any other users are identified with a light yellow colored background.

5. Click **OK**.

How to Add Custom Attributes as Columns

You can add custom attributes as columns by defining them under the corresponding infrastructure settings:

Administration > Setup and Maintenance > Infrastructure Settings

Select **Operations Management > Custom Attributes Settings**.

Custom attributes defined there can then be selected as a column in the Event Browser.

Filtering by Views and View-Based Authorization

You can limit the set of events displayed in the Event Browser using views. By selecting one of the available views from the View Selector, you display a subset of the available events filtered to include only the events with related CIs included in the view. The View Selector displays only views for which you have permissions.

On the first load of the Event Browser no view is selected. However, if you have selected a view, it is reapplied when you reopen this Event Browser instance. The setting is independently stored for each Event Browser instance.

Tip: Use the **Show Events Assigned to Me**  icon to display all events assigned to the

current user in the Event Browser. Any applied filters and views are deactivated. Repeated selection toggles between displaying the events assigned to the current user and displaying the events filtered by the last selected filter and view.

For more information about views, see ["Views" on page 201](#).

View Permissions

- **Assigning views to roles.** It is possible to limit which views a user is allowed to use. By restricting access to specified views for a role, it is also possible to control which events a user is allowed to see.

For details see the OMi Administration Guide.

- **Permission to clear view filter.** A permission in the `Operations Console > Event Browser` resource can be set to allow the user to clear the view filter and see all events. Users without this permission will only be able to see events that are related to CIs that are contained in the selected view.

For details see the OMi Administration Guide.

- **Locked views.** It is possible to disable the View Selector in the Event Browser by configuring a My Workspace Event Browser page with a preselected view. The user will only be able to see the events associated with the preselected view.

For details see the OMi Administration Guide.

Assigning an Event to a User or User Group

The Event Browser shows you to which user and group an event is assigned for investigation and resolution. If the event is not yet assigned, you can assign it from the General tab in the Event Details pane.

You can restrict user access to events on the basis of event categories. For example, some users can be restricted to view and work on events belonging to the category `Database` only. Other users are given access to events that belong to the category `System` only.

Learn More

Event Categories

Event categories are logical groups of events with some similarities (for example, belonging to the same problem area). Event categories help simplify the process of deciding to which user or user group an event type should be assigned for investigation.

The Event Browser displays the category to which a selected event belongs (for example, Storage, Database (DB), System, or WebApp (Web Application)).

Note: To display the contents of the Event Browser according to event category, include Category as an Event Browser column option and then select the Category column header to sort alphabetically.

Assignment of Events to Users


You can also configure rules to automatically assign incoming events to available user groups. Automatic assigning of events to user groups responsible for solving these events significantly improves the efficiency of event management. Each event is assigned to an appropriate user group as soon as it is received. All operators in a user group are permitted to work on those events assigned to that user group. For detailed information, see the OMi Administration Guide.

Note: To display the contents of the Event Browser according to the user assigned to the event, select the User or Group column header. To define users and user groups, choose the following menu option:


Administration > Users > Users, Groups, and Roles

Tasks

How to Assign an Event to a User or User Group

1. Open the Event Browser to display the list of known events:
Workspaces > Operations Console > <select a perspective>
2. From the Event Browser pane, select the event that you want to assign to a user.
3. Open the Event Assignment dialog box in one of the following ways:
 - In the Event Browser pane, click the **Assign To**  button.
 - Right-click the event and select **Assign To** from the context menu.
4. In the Assigned Group box, use the menu to select the user group to which you want to assign the selected event (for example, **Database Experts** or **Application Server Operators**).
5. In the Assigned User box, use the menu to select the user to whom you want to assign the selected event.

The users displayed in the menu are filtered according to the user group selected in the previous step.

Note: Alternatively, in the **General** tab of the Event Details pane, select the user and group from the Assigned Group and the Assigned User boxes and click the **Save**  button.

6. Click **OK**.

Relating Events Manually

You manually relate selected events in the Event Browser by assigning one event as a cause event. All other related events become symptom events.

To access:

In the Event Browser, select the events that you want to relate, right-click one of these events, and select **Relate Events** from the context menu.

Tasks

How to Manually Relate an Event

1. In the Event Browser, select the events that you want to relate.
2. Right-click one of these events and select **Relate Events** from the context menu. The Relate Events dialog box opens.
3. Select one of the events as the cause event. All other events are symptoms of the selected cause event.

Check if the event has any related events that are hidden as a result of a correlation rule. The following icons indicate the event's position in a chain of events:

 — Event is a *cause* in a correlation rule

 — Event is a *cause* in one correlation rule and a *symptom* in another

 — Event is a *symptom* in a correlation rule

For details about correlated events, see "[Related Events](#)" on page 75.

4. *Optional:* Manually related events can also be used as the basis for automatically generating a correlation rule. If you also want to create a correlation rule based on the current relationship, select the check box **Open correlation rule wizard**. For details about creating a correlation rule using the Correlation Rule Generator, see "[Creating Correlation Rules from Manually-Related](#)

[Events" on the next page.](#)

5. Click **OK**.

Creating Correlation Rules from Manually-Related Events

Manually-related events can also be used as the basis for creating new or enhancing existing correlation rules. From the Event Browser, you need to identify related events, select a cause event, relate them manually, and choose to create a correlation rule to reflect this relationship.

The Correlation Rule Generator wizard requires that the events being used to generate a new rule include a Related CI.

Note: If related ETIs and their values are not available, you can define indicator mapping rules to set indicator states (see the OMi Administration Guide), and create a correlation rule for this case. You must also modify and redeploy the event forwarding policy that created the event in HPOM to provide a suitable ETI and value for this type of event. Next time such an event is received, an ETI is included, and the associated correlation rule is triggered.

For more information about correlation rules, see the OMi Administration Guide.

To access:

In the Event Browser, select the events that you want to relate, right-click one of these events, and select **Relate Events** from the context menu. Select one of the events as the cause event and then select **Open correlation rule wizard**.

Tasks

How to Create Correlation Rules from Manually-Related Events


1. Open the Event Browser to display the list of known events:

Workspaces > Operations Console > <select a perspective>

2. In the Event Browser, select the events that you want to relate. You can select a maximum of 10 events.
3. Right-click one of these events and select **Relate Events** from the context menu.

The **Relate Events** dialog box opens.

4. Select one of the events as the cause event. All other events are symptoms of the selected cause event.

5. Select **Open correlation rule wizard** and click **OK**. The **Correlation Rule Generator** dialog box opens.
6. Click  **Use as Cause**. All rules with the selected cause are displayed.
7. From the **Select Events for Creating or Enhancing a Correlation Rule** section, select additional events that are to be included in the correlation rule.

The list of possible rules that can be enhanced is dependent on the CI Type of the cause event selected.

8. Click **Create** to create a correlation rule based on the specified cause and symptom events, or select an existing correlation rule and click **Enhance**.

The **Rule Properties** page opens.

9. Specify the properties for a new correlation rule or make the appropriate changes to the existing correlation rule.
10. *Optional:* If you want the correlation rule to be enabled immediately, click **Active**.
11. *Optional:* Select an alternative time window for this correlation rule. This defines time period used to correlate events with an existing event. An event received after the time period is past is not be correlated with the original event. An alternative time window overrides the global default set in the Infrastructure Settings Manager page for Operations Management. For details, see the OMi Administration Guide.
12. Click **Next**. The **Rule Details** page opens.
13. *Optional:* You can select nodes from a graph and can add additional ETIs to the rule.
14. Click **Finish** to create the new correlation rule or modify the existing one.





UI Reference

This section includes:

- ["Selected Events / Select Rules Page" below](#)
- ["Rule Properties Page" on the next page](#)
- ["Rule Details Page" on page 55](#)

Selected Events / Select Rules Page

The Correlation Rule Generator dialog box displays the UI elements listed in the following table.

UI Element (A-Z)	Description
	Use as Cause: Selects the event to be used as the cause event.
	Open Event Details: Opens the event details for the selected event in a pop-up window.
	Select All Events: Selects all events in the Select Events pane.
	Unselect All Event: Clears all events in the Select Events pane.
Create	Enables the creation of a new correlation rule based on the selected events.
CI Type	Configuration item type associated with the event.
Description	Brief description of the correlation rule.
Enhance	If valid, enables the selection of an existing correlation rule to be modified.
Event Title	Title of the selected event.
Include	Enables you to select or clear events from the available list.
Indicator	Indicator associated with the event.
Indicator State	State of the indicator associated with the event.
Name	<p>Internal name of the selected correlation rule.</p> <p>Automatically generated from the Display Name value. The first character must be a letter (A-Z, a-z) or an underscore (_). All other characters can be a letter (A-Z, a-z), a number (0-9), or an underscore (_). Can be manually overwritten.</p> <p>Note: May be disabled for certain locales (for example ja_JP, zh_CN, ko_KR).</p>
Selected Events for Creating or Enhancing	Events that you selected to be the symptoms of the cause event on which the correlation rule is based.
Use as Cause	Event that you selected to be the cause event on which the correlation rule is to be based.



Rule Properties Page








The Rule Properties page displays the UI elements listed in the following table.



UI Element (A-Z)	Description
Active	Used to enable or disable the rule during runtime. By default it is disabled.
Description	Brief description of the correlation rule.
Display Name	Display name of the selected correlation rule used in the graphical user interface.
Name	<p>Internal name of the selected correlation rule.</p> <p>Automatically generated from the Display Name value. The first character must be a letter (A-Z, a-z) or an underscore (_). All other characters can be a letter (A-Z, a-z), a number (0-9), or an underscore (_). Can be manually overwritten.</p> <p>Note: May be disabled for certain locales (for example ja_JP, zh_CN, ko_KR).</p>
Time Window	<p>Specifies a specific time period for the selected correlation rule. By default it is not enabled and the global value is used. 0 seconds also mean it is not enabled and the global setting is used.</p> <p>The range is from 0 to 9999 seconds.</p>

Rule Details Page

The Rule Details page displays the UI elements listed in the following table.

UI Element (A-Z)	Description
	Binds one or more symptoms to the cause by taking the shortest path. All other bindings are removed.
	Displays details of the selected CI type, including indicators and values.
Rule Topology Pane	
<Dark Blue background>	Symptom CI type.
<Light Blue background>	Not cause or symptom CI type, but CI type is part of rule topology.
<Orange background>	Cause CI type.
<Pink frame>	Selected CI type.

UI Element (A-Z)	Description
<No background color>	CI type is not part of the rule.
	Indicates that the configuration item type has an indicator state that is configured as a symptom in the selected correlation rule.
	Indicates that the configuration item type has an indicator state that is configured as a cause in the selected correlation rule.
	Adds the highlighted link (constraint) to the correlation rule. Adding a link enables the path between the linked objects in the context of the correlation rule, which is a requirement for topology-based event correlation. It does not change the RTSM view model in any way.
	Removes the highlighted link (constraint) from the correlation rule you are editing. The link between the two objects is no longer recognized in the context of the correlation rule, and any rule that relies on this link no longer works. Removing a link from a correlation rule does not change the RTSM view model in any way.
Layout	Selects alternative ways of viewing the Rule Topology diagram. There are three options to choose from: Hierarchical, Circular, and Concentric Radial.
Levels	Selects the depth of topology levels displayed in the Rule Topology diagram.
Zoom	Controls the size of the displayed Rule Topology diagram.
Symptoms and Causes Pane	
	Delete Item: Deletes the selected indicator from the list of indicators included in the correlation rule as either a symptom or a cause.
CI Type	Name of the configuration item type to which the listed indicator is assigned.
Indicator	Name of the indicator referenced in the selected correlation rule.
Indicator State	Name of the indicator state referenced in the selected correlation rule.
Type	Indicates if the indicator is defined as a symptom or a cause in the selected correlation rule.
Indicators Pane	
	Refreshes the contents of the Indicators list. Use if new indicators become available while you are working.
	Group Indicator by Type: Toggles between a list containing all indicators and a list divided into health indicators and event type indicators.

UI Element (A-Z)	Description
	Add as a Cause: Sets the selected indicator state as a cause for the configuration item type selected in the Rule Topology pane.
	Add as a Symptom: Adds the selected indicator state as a symptom for the configuration item type selected in the Rule Topology pane.

Launching Operations Orchestration Run Books

If you are using HP Operations Orchestration (OO) to automate operator tasks for analyzing or fixing problems, these OO Run Books can be mapped to CI Types within OMi.

Learn More

Operations Orchestration Run Books

Run Books can be started from events (shortcut menu). The CIs related to the event define which of the available flows are suitable. When you launch a Run Book from an event, appropriate flow parameters are automatically acquired from the CI or event itself.

Note: When integrating Run Books from OO, you must specify for which CI types each Run Book is valid and define which event attributes can be used as Run Book input parameters.

If a Run Book input parameter is mapped to a CI attribute and an event attribute, the event attribute takes precedence (if launched from events).

Tasks

How to Launch an HP Operations Orchestration Run Book

1. Open the Event Browser to display the list of known events:

Workspaces > Operations Console > <select a perspective>

2. Select the Run Book that you want to run on an event:

Right-click **Launch > Run Books > <select a Run Book>**

The selected Run Book is launched in the context of the event or the CI associated with the selected event.

Note: The context menu item is only visible if the logged-on user has permission to execute Run Books. You can set permissions in Users, Groups, and Roles:

Administration > Users > Users, Groups, and Roles

You can find the relevant categories that apply to Run Books in the Permissions Reference section.

Viewing Closed Events

You can view the history of closed events over a specified time period. This information can help you to derive a better understanding of long-standing problems. From the Closed Events Browser, you can change the lifecycle state of any displayed events, for example, to Open.

To access:

In the Event Browser, click  **Show Closed Events**.

Learn More

Closed Events

The Closed Events Browser shows only a snapshot of closed events available at the time of opening the Closed Events Browser. Reopened events are automatically removed from the Closed Events Browser window. However, events that are closed after the opening of the Closed Events Browser are not automatically added to the current Closed Events Browser window. A refresh is required. The timestamp when the snapshot was taken is displayed in the Closed Events Browser window.

You can create filters to help you identify specific events, for example, to select a particular CI.

Closed events can be manually removed from the database. Use the **opr-archive-events** tool to delete closed events from the database and add them to an archive file. For details, see "[opr-archive-events Command-Line Interface](#)" on page 113.

Closed events can also be archived automatically. For details, see the OMi Administration Guide.

The maximum number of events that can be displayed in the Closed Events Browser can be configured in the Infrastructure Settings manager. For details, see the OMi Administration Guide.

Tasks

This section includes;

- "[How to View All Closed Events](#)" on the next page
- "[How to View the Closed Event History of a CI](#)" on the next page

How to View All Closed Events

1. In the **Closed Events Browser Configuration** window, specify the time period for which you want to display history.

Select a predefined period, and the number of available related closed events is displayed in the Number of events field.

Alternatively, select **Select a custom range**, specify a custom time range, and click **Apply**. The number of available related closed events is displayed in the Number of events field.

2. Click **OK** to display the Closed Events Browser window containing the available events.

How to View the Closed Event History of a CI

In this task, you display a Closed Events Browser window containing all closed events related to the related CI of a current event over a selected time period.

1. Open the Event Browser to display the list of known events:

Workspaces > Operations Console > <select a perspective>

2. Right-click the event for which you want to see the event history and select **Show > Closed Events (Related CI)** from the context menu.

3. In the **Closed Events Browser Configuration** window, specify the time period for which you want to display history.

Select a predefined period, and the number of available related closed events is displayed in the Number of events field.

Alternatively, select **Select a custom range**, specify a custom time range, and click **Apply**. The number of available related closed events is displayed in the Number of events field.

4. Click **OK** to display the Closed Events Browser window containing the available events.

UI Reference

Closed Events Browser Configuration Dialog Box

UI Element	Description
<Closed/Received Date >	Selects whether the Closed Events Browser displays closed events using the time the event was received or when the lifecycle state was changed to closed.

UI Element	Description
<Date Range>	Sets the filter to display events within the selected predefined time period. The available choices are: <ul style="list-style-type: none">• Last hour• Last 24 hours• Last 3 days• Last 7 days• Last 14 days Select a custom range
Start Time	Sets a specific date and time from which point closed events should be selected.
End Time	Sets a specific date and time to which point closed events should be selected.
Number of events in the selected range	Indicates the number of closed events to be displayed for the specified time range. If no closed events can be found, it is not possible to display the Closed Events browser. If too many events are available, reduce the time period in an attempt to focus in more closely on the problem area.

Exporting Event Data

You can export the contents of the Event Browser to an external file. The supported formats include Microsoft Excel and comma-separated value (.csv) lists. It is possible to export the information selected for display in the Event Browser (default), a subset of this information or any combination of available attributes.


Note: Alternatively, you can copy the details of any selected events to the clipboard using the key combination **CTRL + C** . Use **CTRL + V** to paste to the target location. The information available in the Event Browser is copied in the order that it is displayed. If expected information is missing, check that the associated column is configured to be displayed in the Event Browser.

To access:


Click  **Export Events List** in the Event Browser.

Tasks


How to Export the Contents of the Event Browser


1. *Optional:* Filter the event browser to display only the events that you want to export.
2. In the Event Browser, click  **Export Events List**.

The Export Event List dialog box opens.

3. On the **Available columns** tab, select the attribute columns to export and click the add  button to include them in the **Export these columns** box.

Use the add all  button to include all columns in the **Export these columns** box.

4. Select from the **Export these columns** box any columns that you do not want to export and click the remove  button.

Use the remove all  button to remove all columns from the **Export these columns** box.

5. Select column names and rearrange their export order by use of the up  and down  buttons.

The first column item in the list is displayed as the first column in the exported file. Subsequent column items are placed progressively to the right in the order of their appearance in the **Export these columns** list.

Alternatively, to select the default columns for export, click **Reset to defaults**.

6. From the **File format** list, select the format of the export file to be created:

- Comma-separated values (.csv)
- Microsoft Excel 2007 Workbook (.xlsx)
- Microsoft Excel 97-2003 Workbook (.xls)

7. Click **OK**.

8. Enter a name and select a location for the export file and click **Save**.

Note: If you export the contents of the Event Browser with non-ascii characters using the comma separated values (.csv) format and open it directly in Microsoft Excel, the characters may be unreadable.

As the file is UTF-8 encoded, it can be read by Microsoft Excel by using one of the following methods:

- Import the file into Excel with UTF-8 character set:
Data > Import External Data > Import Data
Text Files, 65001 encoding (UTF-8)
- Open the csv-format file with Notepad and save it with UTF-8 encoding.

Event Details

The Event Details pane displays information on the selected event.

This section covers information on the following Event Details pane tabs:

- ["General" below](#)
- ["Additional Info" on page 66](#)
- ["Source Info" on page 68](#)
- ["Actions" on page 69](#)
- ["Annotations" on page 71](#)
- ["Custom Attributes" on page 73](#)
- ["Related Events" on page 75](#)
- ["History" on page 77](#)
- ["Resolver Hints" on page 79](#)
- ["Instructions" on page 80](#)
- ["Forwarding" on page 81](#)

General

The General tab in the Event Details pane displays detailed information about the selected event including its origin, the time at which it was created, and who is responsible for resolving the problem to which it relates. The values for Severity, Lifecycle State, Priority, Assigned Group, and Assigned User can be changed using the associated lists.

Note: If a field is empty, no information exists for the selected item.

To access:

Workspaces > Operations Console > <select a perspective>

In the Event Browser, select the **General** tab.

Learn More

General Event Details

The General tab in the Event Details pane displays the most commonly required information associated with a selected event. General event information includes the following details:

- **Severity:** Indication of the level of the problem assigned to the selected event. Usually, this is the same as the severity status of the original event received from HPOM.
- **Lifecycle State:** Point in the event lifecycle that the selected event has reached (Open, In Progress, Resolved or Closed).
- **Priority:** Importance assigned to the selected event (for example, Low, Medium, or High).
- **Location** in the network where the original problem occurred (read-only).
- **User** who is responsible for solving the problem.
- **Message text** in the Title field. This type of text field also supports URLs and hyperlinks (**Ctrl+click**).

Note: URLs that are part of an event title are rendered in the Event Browser as active links. URLs starting with `http://`, `https://`, `ftp://` and `ftps://` are supported.

If the URL contains special characters, such as `'%` or `'/'`, they are automatically escaped, for example, `'%25'` or `'%2f'`.



This poses a problem if the URL that is inserted contains already escaped characters (`'%2f'`) as these characters are then escaped again (`'%252f'`) making the URL invalid.







If a URL contains escaped characters and should be stored in the event title, it should be included in angle brackets, which prevents it from being escaped again, e.g. :
'<`http://www.google.com/search?q=abc%2fdef`>'








The available information displayed in the General tab summarizes the most important information contained in the original event. A blank field indicates that no information is available. If you know that a particular type of required information is not automatically available, you can use custom attributes to provide this information.

UI Reference

Event Details General Tab

UI Element (A-Z)	Description
	Save: Saves the changed values.
	Undo changes: Discards the changed values.
Assigned Group	Name of the group to which the selected event's assigned user belongs.
Assigned User	Name of the user who is responsible for solving the event's underlying problem. For example, if the event is owned by an OMi user, the user name is displayed. If the event is owned by an HPOM user, the user name is displayed with the prefix OM:, for example, OM:Database Operator.
Category	Name of the logical group to which the event belongs, (for example, Database, Security, or Network). The event category is similar in concept to the HPOM message group.
Control Transferred	Indicates if the responsibility for the associated event is escalated to a higher-level manager.
Duplicate Count	Number of duplicate events associated with the selected event.
Event Type Indicator	<p>Display name of the event type indicator (ETI) used to calculate the status reported by the selected event and the current value, (for example, <code>Web application state:Slow</code>).</p> <p><code>WebAppState</code> is the name of the event type indicator. The corresponding label is <code>Web application state</code>, which is shown in the General tab. The level of the current ETI value is <code>Slow</code>.</p> <p>If event type indicators are assigned (see the Source Info tab) but are not being resolved (event type indicator field in General tab is empty), the configuration must be corrected.</p>
ID	ID of the selected event. The event reports an event that occurred in the operational environment.

UI Element (A-Z)	Description
Lifecycle State	<p>Point in the event lifecycle that the selected event has reached:</p> <p> — Open</p> <p> — In Progress</p> <p> — Resolved</p> <p> — Closed</p> <p>To change an event's lifecycle status, select a lifecycle state from the list and click Save. User authorizations control the permissions to change lifecycle states.</p> <p>The following list shows correlation between the state used in the incoming message and the state used in OMi:</p> <ul style="list-style-type: none"> • Message = acknowledged; Lifecycle state = Resolved • Message = owned; Lifecycle state = In Progress • Message = neither acknowledged nor owned; Lifecycle state = Open
Node	<p>Host system where the event occurred. Use the link or  button to open the CI Properties dialog box of the CI.</p>
Priority	<p>The priority assigned to the selected event (for example, Low, Medium, or High).</p> <p>To change an event's priority, select a priority from the list and click Save.</p>
Related CI	<p>Name of the impaired configuration item where the event occurred. The link opens the CI properties in a pop up window.</p> <p>If the Related CI includes a subcomponent, it is displayed as follows: Related CI [additional info]: Subcomponent. For example, Server1[Windows]: CPU1.</p> <p>Use the link or  button to open the CI Properties dialog box of the CI.</p>

UI Element (A-Z)	Description
Severity	<p>Severity assigned to the selected event. Usually, this is the same as the severity status of the original event received from OMi. The following icons indicate event severity status:</p> <ul style="list-style-type: none">  — Critical  — Major  — Minor  — Warning  — Normal  — Unknown (Cannot change severity to Unknown). <div style="background-color: #f0f0f0; padding: 5px; margin-top: 10px;"> <p>Note: You can also configure the Event Browser to apply a background color to the event that represents the severity of the event. For details, see "Configuring the Event Browser" on page 47.</p> </div>
Source CI	<p>Host system where the monitoring agent or probe is running that generated the selected event.</p> <p>Use the link or  button to open the CI Properties dialog box of the CI.</p>
Subcategory	<p>Name of the logical subgroup (category) to which the event belongs (for example, Oracle (database), Accounts (security), or Routers (network)).</p>
Time Created	<p>Date and time when the selected event was created.</p>
Time State Changed	<p>Date and time when the last lifecycle state change took place.</p>
Time Received	<p>Date and time when the selected event was received.</p>
Title	<p>Brief description of the nature of the selected event.</p>
Type	<p>String used to organize different types of events within an event category or subcategory (for example, users or applications, accounts, and security).</p>

Additional Info

The Additional Info tab in the Event Details pane displays more detailed information about the attributes of the selected event.

To access:

Workspaces > Operations Console > <select a perspective>

In the Event Browser, select the **Additional Info** tab.

Learn More



Additional Info

Additional event information includes the following details:

- Application name
- Object
- Key
- Close events with key
- Suppress deduplication flag
- Received during Downtime flag
- Description of the event
- Solution information for the event

UI Reference

Event Details Additional Info Tab

UI Element (A-Z)	Description
	Save: Saves the changed values.
	Undo changes: Discards the changed values.
Application	Application that caused the event to occur. Unlike the Related CI attribute in OMi, which is a direct relationship to a CI in the RTSM, the application attribute is a simple string-type attributes from HPOM. Examples of Application attributes are Oracle, and OS.

UI Element (A-Z)	Description
Close Events with Key	String used to automatically acknowledge duplicate events.
Description	Optional information about the original event in addition to the event's original title and the text captured from the event source.
Key	Key associated with the original HPOM event. It is an identifier used to identify the message policy. Used for duplicates and for Close Events with Key.
Object	Device such as a computer, printer, or modem. Unlike the Related CI attribute in OMi, which is a direct relationship to a CI in the RTSM, the object attribute is a simple string-type attribute from HPOM. Examples of Object attributes include <code>oraInst, C:, /dev/spool</code> .
Received during Downtime	Indicates whether an event was received from a CI during a time period when the CI was in downtime (scheduled to not be available).
Skip Duplicate Suppression	Indicates whether duplicate suppression is inactive. Stops automatic discarding of new events that are duplicates of the selected event. Attributes can be set to suppress deduplication of events. For details, see the OMi Administration Guide.
Solution	Text field used to document solutions to help operators solve the problem indicated by the event.

Source Info

The Source Info tab of the Event Details pane displays an overview of the information relating to the identification of the source CI of the received event.

To access:

Workspaces > Operations Console > <select a perspective>

In the Event Browser, select the **Source Info** tab.

UI Reference

Event Details Source Info Tab

UI Element (A-Z)	Description
Match Information	Displays details of the policy that the event matched: <ul style="list-style-type: none"> • Policy Name • Policy Type • Condition
Original Event	Displays details of the original event: <ul style="list-style-type: none"> • Original ID — Unique ID assigned to the original HPOM message by the message policy that generated the message. • Original Data — Original event text as captured from HP Operations Agents before being formatted into an HPOM message. <p>Contains information about the original input before being normalized by HP Operations Agent policies into a message. Typically, the information available includes node name, message group, application, object, severity, and message text.</p>
Originating Server	Management server that forwarded the original HPOM event along the chain of servers configured in a flexible management environment: <ul style="list-style-type: none"> • DNS Name of the forwarding management server • IP Address of the forwarding management server
Sending Server	Last server in the HPOM flexible management chain that forwarded the event to OMi: <ul style="list-style-type: none"> • DNS Name of the last HPOM management server • IP Address of the HPOM management server

Actions

Events from HPOM received by OMi may contain event-related actions. The Actions tab in the Event Details pane displays these actions available for an event. There are two types of possible actions: user actions and automatic action.

Click the Start button to run an action. The Stop button stops a running action from completing.

To access:

Workspaces > Operations Console > <select a perspective>

In the Event Browser, select the **Actions** tab.

Learn More

Actions

HP Operations Manager actions can be started manually from any events which have actions associated with them. The actions can be used to help solve the problem that caused the event or inform about the existence of a problem, for example, by a notification.

The Event Browser displays an icon in the A column to indicate that an automatic action is available for the selected event. An icon in the U column indicates that a user action is available for the selected event. For more information about the icons used in the Event Browser, see ["Event Browser" on page 30](#).

Tasks





Related Tasks

- ["How to Run an HPOM Action" on page 195](#)
- ["How to Launch a Custom Action" on page 196](#)

UI Reference

Event Details Actions Tab

UI Element (A-Z)	Description
Action	Action specification summary.
Node	Target system where the action can be run.
Start	Starts the action on the CI associated with the selected event.

UI Element (A-Z)	Description
State	<p>Describes the status of the available action. The following states are used:</p> <ul style="list-style-type: none"> — Available — Running — Succeeded — Failed
Stop	Stops the current action.

Annotations

The Annotations tab in the Event Details pane displays a list of the annotations attached to the selected event. Annotations are comments and observations relating to the event that help the event owner understand what the underlying problems are and how to fix them. Click the Add button to add an annotation to the selected event.

Note: Annotations exceeding 101,298 characters are truncated in the Event Details pane.

To access:

Workspaces > Operations Console > <select a perspective>

In the Event Browser, open the **Annotations** tab.

Learn More

Annotations

An annotation is a free-text attachment to the description of an event used to provide information that may be useful to solve the cause of this event. You can use the Annotations tab in the Event Details pane to add, view, and manage the annotations associated with an event. The annotations text field also supports URLs and hyperlinks (**Ctrl**+click).

The Event Browser displays icons in the annotations column N to indicate that annotations exist for a selected event. For more information about the icons used in the Event Browser, see ["Event Browser" on page 30](#).

Tasks

This section includes:


- ["How to Add an Annotation to an Event" below](#)
- ["How to Add an Annotation to All Selected Events" below](#)

How to Add an Annotation to an Event

1. Open the Event Browser to display the list of known events:

Workspaces > Operations Console > <select a perspective>

2. In the Event Browser, select an event.
3. From the Event Details pane, open the **Annotations** tab.


Click  **Add Annotation** from the Annotations toolbar to open the **Create New Annotation** dialog box.

4. Enter the information text.
5. Click **OK**.

How to Add an Annotation to All Selected Events




1. Open the Event Browser to display the list of known events:

Workspaces > Operations Console > <select a perspective>

2. In the Event Browser, select all the events to which you want to add this annotation.
3. Right-click one of the selected events and click  **Add Annotation** from the Annotations toolbar to open the **Create New Annotation** dialog box.
4. Enter the information text.
5. Click **OK**.

UI Reference

Event Details Annotations Tab

UI Element (A-Z)	Description
	Opens the Add Annotation dialog box. You can add annotation text in the Text field. Click OK to save the annotation.
	Opens the Modify Annotation dialog box. You can edit the annotation text in the Text field. Click OK to save the annotation.
	Opens the Delete Annotation dialog box. Click Yes to delete the annotation.
Text	Content text of the annotation.
Time Created	Date and time when the selected annotation was added to the event.
User	Name of the user who added the selected annotation to the event.

Custom Attributes

The Custom Attribute tab in the Event Details pane displays a list of the attributes that either an administrator or the responsible user manually configured and added to the selected event. Click the Add button to configure a custom attribute and add it to the selected event.

Note: To add or modify custom attributes, you must be logged on as a user with permissions to add, update, and delete custom attributes.

To access:

Workspaces > Operations Console > <select a perspective>

In the Event Browser, select the **Custom Attributes** tab.

Learn More

This section includes:

- ["Custom Attributes" below](#)
- ["HPOM Trouble Ticket and Notification Flags" below](#)

Custom Attributes

Custom attributes are additional information included in the original event forwarded by a monitoring application such as HP Operations Manager (HPOM). For example, you can define custom attributes to attach the location of the problem element or contact details for the team assigned to troubleshoot the problem.

You can use the Custom Attributes tab in the Event Details pane to view and manage the custom attributes available for an event.

You can also add custom attributes as columns to the Event Browser.

HPOM Trouble Ticket and Notification Flags


Policies configured in HPOM can set trouble ticket and notification flags. If these flags are set, the following custom attributes in OMi are generated:

- ForwardToTroubleTicket (value= true)
- NotifyUser (value= true)

Using appropriately configured event filters, events including these custom attributes with value of true can be automatically forwarded to an external manager using Forwarding Rules or notifications sent using Notification Rules.




Tasks

How to Add Custom Attributes to an Event

1. Open the Event Browser to display the list of known events:
Workspaces > Operations Console > <select a perspective>
2. In the Event Browser, select an event.
3. From the Event Details pane, select the **Custom Attributes** tab.
4. Click  **Add Custom Attribute** to open the **Add Custom Attribute** dialog box.
5. Enter the custom attribute name and value.
6. Click **OK**.

UI Reference

Event Details Custom Attributes Tab

UI Element (A-Z)	Description
	Opens the Add Custom Attribute dialog box. You can add a name and value for the custom attribute. Click OK to save the custom attribute.
	Opens the Modify Custom Attribute dialog box. You can edit the custom attribute. Click OK to save the custom attribute.
	Opens the Delete Custom Attribute dialog box. Click Yes to delete the custom attribute.
Name	Name of the selected custom attribute defined for the selected event.
Value	Value assigned to the selected custom attribute.

Related Events

The Related Events tab in the Event Details pane displays an overview of all the events that are related to the event selected in the Event Browser. The way the events are displayed indicates if the event is considered as a symptom or a cause in the correlation process. The event displayed in bold type in the Related Events tab is the event that is selected in the Event Browser pane.

To access:

Workspaces > Operations Console > <select a perspective>

In the Event Browser, select the **Related Events** tab.

Learn More

Related Events

To reduce the problem of duplication and overload when managing information from multiple sources, you can set up topology-based rules. These rules correlate events by distinguishing between symptom and cause events and present a clearer picture of the state of the operational environment that you are monitoring.

Topology-based event correlation uses a combination of specified symptoms and a probable causes to determine the cause of an event, which it then flags in the Event Browser. An icon in the C column of

the Event Browser indicates that the selected event is correlated. For more information about event correlation in general, see ["Event Correlation" on page 26](#).


Tasks

Related Tasks

["Relating Events Manually" on page 51](#)

UI Descriptions


Event Details Related Events Tab

UI Element (A-Z)	Description
	Removes the relationship between events. Useful if you think that OMi correlated the selected event by mistake. The Unrelate action has no effect on the correlation rule that initially established the event relation. If you want to avoid relating the events in future, modify the associated correlation rule.
<Severity>	Severity assigned to the related event. Tip: For a short explanation of the icons used to indicate event severity, check the tooltip.
Assigned User	Name of the user who is responsible for solving the related event's underlying problem.
Correlation Rule	Link to the correlation rule used to create the relationship.
Related CI	Name of the impaired configuration item where the event occurred.
State	Lifecycle state of the event (for example, Open, In Progress, or Resolved).
Time Received	Date and time when the original message associated with the related event was received from OMi.
Title	A plus sign (+) icon in the event text column indicates the presence of correlated events, which the related events tab does not by default display. Use the plus sign (+) or minus sign (-) icons to display or hide correlated events.

Potential Causes Tab

All possible correlation results are recorded and displayed in the Potential Causes tab. It shows the

possible cause events, together with a reference to the correlation rule that generated the correlation. Additional information, such as the rule weight factor, and the time when the related event was received from OMi., are also displayed. Operators can inspect all possible causes for a symptom event, better understand the matching correlation rules, and, if they have the appropriate permissions, manually change the cause of that event to any one of the available alternatives when investigating a problem.

UI Element	Description
	<p>Relate: Replaces the current cause with cause event selected from the Potential Causes list.</p> <p>Useful if you think that OMi correlated the wrong event. The Relate action has no effect on the correlation rules involved. If you want to automatically relate to an alternative cause event in the future, modify the associated correlation rule.</p>
Severity	<p>Severity assigned to the related event.</p> <div style="background-color: #f0f0f0; padding: 5px; margin-top: 10px;"> <p>Tip: For a short explanation of the icons used to indicate event severity, check the tooltip.</p> </div>
Title	<p>Text of the message sent from OMi.</p> <p>Bold text indicates that the event is set as the current cause.</p> <p>If you want to set one of the events in the Potential Causes list as the cause, you can do so manually using the Relate button.</p>
Related CI	Name of the impaired configuration item where the event occurred.
Time Received	Date and time when the original event associated with the related event was received from OMi.
State	Lifecycle state of the event (for example, Open, In Progress, or Resolved).
Assigned User	Name of the user who is responsible for solving the related event's underlying problem.
Correlation Rule	Link to the correlation rule used to create the potential relationship.
Rule Weight	<p>Specifies a weighting for the selected correlation rule. The default value is Normal.</p> <p>A correlation rule with a higher weighting can override an existing cause-symptom relationship previously created by another correlation rule with a lower weighting.</p>

History

Event history is a log of information about who or which component has changed values of an OMi event. This feature enables an operator to see how event attribute values changed during the life of an event, for example, the sequence of severity changes. Event history information is available in a separate tab in the Event Details pane and can be viewed by any user with access to that event.

To access:

Workspaces > Operations Console > <select a perspective>

In the Event Browser, select the **History** tab.

Learn More

History Information


The information available in the History tab includes the following, if an event is manually modified in the event console, or automatically modified by closed related events (closing all existing related events to a new incoming event) or has duplicate events suppressed (retain and update the original event and close newer duplicates):

- The server's timestamp of the modification.
- The old and the new value of the modified attributes.
- Information is also available about the modifier of the event. One of the following types of information is available:
 - User name, if an OMi user has modified the event or if an external user has made the modification.
 - Title line which summarizes a change resulting from automatic closing of related events or an automatic suppression of duplicate events.
 - Integration user name of the HPOM synchronization, if the event is modified by a data synchronization from HPOM.
- For annotations and custom attributes, the executed action, such as delete, or modify, is displayed in the history line entry.

UI Reference

Event Details History Tab

UI Element (A-Z)	Description
Actions	Descriptions of the changes made to the event.
Modification Time	Date and time when the associated change was made to the event.
Modified By	User who made the associated change to the event.

UI Element (A-Z)	Description
<Search field>	Text field used to search for strings within event history. The  button clears the search string and displays all history information.

Resolver Hints

The Resolver Hints tab displays the information relating to the identification of the node, source CI, related CI, and the ETI of the received event.

To access:

Workspaces > Operations Console > <select a perspective>

In the Event Browser, select the **Resolver Hints** tab.

UI Reference

Event Details Resolver Hints Tab

UI Element (A-Z)	Description
ETI Resolution	<p>ETI Resolution Hint: Original string provided by the external manager, for example, in a custom message attribute from HPOM. Can be used to associate the event with an ETI.</p> <p>You must set an attribute in the event which can be mapped to this indicator. To do this, set a custom message attribute called <code>ETIHint</code> in the HPOM policy. Specify a namespace for the CMA that matches the Name of the indicator, for example, <code>CPUload</code>. Specify an instance that matches an indicator state, for example, <code>High</code>. When an event with an <code>ETIHint</code> CMA value of <code>CPUload:High</code> is received, and ETI and values exist, the event attribute <code>Event Type Indicator</code> is set.</p>
Node	<p>Information used to identify the host system in the RTSM associated with the selected event:</p> <ul style="list-style-type: none"> • Node Hint: Hostname used to find a node in the RTSM • DNS Name: DNS name of the originating system • IP Address: IP address of the originating system • Core ID: ID of the originating system

UI Element (A-Z)	Description
Related CI	Name of the impaired configuration item where the event occurred. <ul style="list-style-type: none"> • Related CI Hint: Event information used to identify the CI related to the event • HPOM Service ID: Service ID used to identify the service related to the event
Related CI Resolution Info	Information associated with the selected event: <ul style="list-style-type: none"> • Matched Hints Count: Number of identified hints that matched the selected CI in the RTSM database. This value is presented as a proportion of the number of available identifiers extracted from the event. The available identifiers are displayed in the following sections of the Resolver Hints tab: <ul style="list-style-type: none"> ■ Related CI Hint — includes colon-separated list of CI hints and must include the host identifier. ■ HPOM Service ID — Service ID, in conjunction with object and application, used to identify the service related to the event. ■ ETI Hint — Used to identify the ETI for each CI. If ETI Resolution is successful, the ETI is assumed to be assigned to the CI, and this CI is given a higher match rating. • Status: Provides information about the matches used for related CI resolution. <p>Displays information about the match:</p> <ul style="list-style-type: none"> ■ Success — Confirms a successful match and displays the hint used. ■ Unsuccessful CI resolution — Displays the hint that could not be resolved or indicates that no hint was available to assess. confirms that a match was not possible and indicates the action taken, for example, <code>Fallback to host</code>.
Source CI	Information used to identify the CI in the RTSM that is the source of the event associated with the selected event: <p>Source CI Hint: Description of an OMi event attribute used to find the CI in the RTSM</p>

Instructions

The **Instructions** tab in the Event Details pane displays instruction information designed to help operators handle the associated event.

To access:

Workspaces > Operations Console > <select a perspective>

In the Event Browser, select the **Instructions** tab.

Learn More

Instructions

Instructions are configured in the policy that generates the event. They can describe an automatic action, provide details on how to perform an operator-initiated action, or detail the steps for resolving a problem when a specified type of event is received.

The instruction text can be either entered directly in the **Instruction Text** field in the Policy Editor or generated using external instruction interfaces. To retrieve the instructions generated externally, you need to specify the instruction interface name and the parameter string in the Policy Editor for the associated policy.

The Event Browser dynamically retrieves the instructions when you select the **Instructions** tab.

The instruction output can be plain text or HTML. If the instruction text contains URLs, they are automatically converted into hyperlinks. URLs starting with `http://`, `https://`, `ftp://`, `fttps://`, `telnet://`, and `mailto:` are supported. When you click the hyperlink, a new window opens with the page that was returned by the script. In case of the HTML output, clicking the URL opens a new HTML page containing the instruction text.

Note: If the event originates from an HPOM or another OMi server, you must configure this server as a connected server. For details, see the OMi Administration Guide.

In flexible management environments where events can come from multiple servers, you must connect to the server from which the policy generating the event was deployed, as only this server has the instructions available.


UI Reference

Event Details Instructions Tab

UI Element	Description
Instructions	Instruction text generated for the event. Instructions are configured in the associated policy and are usually designed to help operators handle the associated event.

Forwarding

The Forwarding tab is available for events for which ownership was transferred to an external manager. The information displayed in this tab is dynamically loaded from the external manager when the tab is

opened. To load the latest information available from the external manager, click the  button in the Forwarding tab.

For example, if your organization uses HP Service Manager as a central service desk, you can transfer control of events from the Event Browser to HP Service Manager. This is often the case when the OMi operator is not able to solve the problem and needs to assign the problem to an expert. HP Service Manager creates an incident returns the Incident ID to OMi. This is displayed in the Forwarding tab with additional information about the event available from the external manager.

To access:

Workspaces > Operations Console > <select a perspective>

In the Event Browser, open the **Forwarding** tab.

Learn More

External Target Servers

The external manager server must be specified as a target in the Connected Servers manager.

If there is a problem connecting to the system to which you want to transfer control, the event forward request or event update synchronization request is held in a queue. If the request cannot be delivered to the target server within the specified time, it is automatically deleted from this queue.

To set the Event Forwarding Expiration time period, see the OMi Administration Guide. The default value is 2 hours and the minimum value is 1 hour.

Tasks



How to Transfer Control to an External Manager

1. In the Event Browser, select the events that you want to transfer control to an external manager.
2. Right-click one of these events and from the context menu select:

Transfer Control to > <select a manager>

UI Reference

Event Details Forwarding Tab

UI Element (A-Z)	Description
	Refreshes the contents of the Forwarding tab.
	Deletes the transfer of control request for a pending transfer of control request. If the transfer request is complete, a cancel is no longer possible and the Cancel Transfer of Control is disabled.
Assigned Group	Group assigned to the event by the external manager.
Assigned User	User assigned to the event by the external manager.
External ID	ID assigned to the event by the external manager. The link opens the event in the external application that is responsible for managing the event.
External Server	Node on which the external manager is hosted.
Lifecycle State	Lifecycle state assigned to the event by the external manager.
Priority	Priority assigned to the event by the external manager.
Severity	Severity assigned to the event by the external manager.
Transfer Status	<p>Status of the Transfer Control request. The possible states are:</p> <ul style="list-style-type: none"> • Cancel Requested — For a transfer control request that is still in the queue for processing, a request was made to cancel the transfer of control. • Forwarded — Control of the selected event was transferred to the selected external server. • Queued — Request to transfer control of the selected event is in the queue for processing.
Transfer Forwarding Rule	Forwarding rule used to transfer control of an event to an external application.

UI Element (A-Z)	Description
Transfer Initiated By	User who transferred control of an event to an external application.
Type	<p>Specifies how an event forwarded to a certain server is handled. The options include:</p> <ul style="list-style-type: none">• Notify — Target server receives original events but no further updates• Notify and Update — Target server receives original events and all further updates• Synchronize — Target server receives original events and all further updates and sends back all updates• Synchronize and Transfer Control — Target server receives original events and updates and sends back all updates. Ownership of the event is transferred to the other server. <p>This option is available only if Enable Synchronize and Transfer Control is enabled on the selected connected server.</p> <p>Note: If a Forwarding entry in the forwarding table was received from another server, the forwarding rule states which server sent this entry.</p> <p>For more details, see the OMi Administration Guide.</p>

Event Filters

You can limit the set of events displayed in the Event Browser using filters that you define to display a subset of the available events. For example, you can filter the events displayed according to severity, the assigned user, the event category, or the lifecycle state. You can also display the filtered events in different pages. The Event Browser is dynamically updated. Events that no longer match a relative time filter are removed from the Event Browser and new events that match are added.

The filters you define are available from the Select an Event Filter dialog box or the filter selection drop-down box of the Event Browser. The active filter remains on display in the filter selection drop-down box.

Learn More

Creating Filters

You define and edit filters using the Create New Event Filter dialog box available from the Event Browser. Simple filtering information is grouped under the General, Dates, and Additional Event

Properties tabs. A Simple Filter definition is the combination of all information specified in the three tabs.

You can also use the Advanced Mode for defining more complex filters. An advanced filter definition is specified in the Filter Definition pane using combinations of properties and operators.

Filter Availability

By default, filters for the Event Browser are visible and available only to the user who created them. Users with appropriate OMi administration permissions can share filters, making an existing filter available to all users.

You can create filters for use in the Event Browser, the Closed Events Browser, the Monitoring Dashboard, and many OMi administration areas.

Filters used in administration, for example, in Forwarding Rules or Notifications, are bound to their administration area and are not visible or usable in any other context. You can apply a different filter for each instance of a perspective. Filters defined for the Event Browser are also available in the Closed Events Browser and vice versa. However, the Event Browser cannot display unresolved and closed events at the same time.

When investigating closed events using the Closed Events Browser, you must first specify the time period of interest. Filters can then be applied to the available events.

Filtering Methods

Large IT environments naturally create a large number of events. All active events are displayed in the Event Browser and maintaining a clear overview of the events that require attention becomes increasingly difficult as the number of received events increases.

You can filter the contents of the Event Browser, for example, in the Event and Health Perspectives (or perspective containing an Event Browser and the View Explorer), according to a combination, where available, of the following selections:

- **Views**

Views are used to group configuration items into logical sets. Selecting a view, the Event Browser only displays events that are related to the CIs specified in the selected view.

- **Configuration Items**

Selecting one or more CIs from the CI tree only displays events in the Event Browser that are related to the selected CIs.

- **Configuration Item Collection**

Selecting a CI Collection from the CI tree only displays events in the Event Browser that are related to the CIs that are contained within the selected collection.

- **Event Filters**

Applying an event filter enables you to limit the type of events displayed in the Event Browser by defining rules that filter events according to criteria such as severity, lifecycle state, or assignment (ownership).

In the Event Browser, event filters can be shared so that all users have access to them. To be able to share filters, you must have appropriate permissions. For details, see the OMi Administration Guide. Shared filters are required by Monitoring Dashboard widgets.

- **Quick Filters**

The Event Browser status bar displays a summary of the number of events by severity and assignment to individual users or user groups. Each status bar severity item is also a quick filter that can be selected to display the events that correspond to the selected severity. Multiple items can be selected to display all events with two or more severities.

- **Search**

Events can also be filtered by a search string. Entered text string is used to search the text displayed in the Event Browser and display only the events containing the specified string. Clearing the field displays all events again.

By applying a combination of the available filtering methods, you can display just the most important events that you are responsible for. It is possible to create a view to display a CI tree list tailored to the responsibilities of an operator. Operators can then select a CI from the CI tree and be shown all related events. Alternatively, operators can define filters to, for example, show only events labeled as *Critical* and *Major*. Combining the selection of a CI and applying the same filter displays all events labeled as *Critical* and *Major* for the select CI.

Filter Selection

The contents of the Event Browser pane can be filtered by the selected view or configuration item and by the selected event filter.

The active view or configuration item used to filter the Event Browser content is indicated in the Event Browser title. For example, if a view with the name *Host Resources* is selected, the Event Browser title displays *Event Browser for Host Resources*. The selected view name is also displayed in the Event Browser status bar.

When you open the Event Browser for the first time, no filters are applied. *Select an Event Filter* is displayed in the Event Browser Filter applied list and *No Filter* is displayed in the Event Browser View Selector list. After you select a filter, the name of the active event filter is displayed in the filter selection field. If you want to clear the selected filter, select *No Filter*. The effect of the filter on the Event Browser is cleared, but can be reapplied as required. After you select a view, the name of the active view is displayed in the View Selector field. If you want to clear the selected view, select *No Filter*. The effect of the view on the Event browser is cleared, but can be reapplied as required. Administrators can preselect a view for an Event Browser. In locked Event Browser pages, the View Selector is disabled so that only events associated with a preselected view are displayed.

How to Filter Events by Views

In this task, you learn how to filter the events displayed in the Event Browser according to a view. Only events related to configuration item included in the selected view appear in the Event Browser.

To filter events by views:

1. Start the Event Perspective or Health Perspective:

Workspaces > Operations Console > <select a perspective>

2. Do one of the following:

- In the Browse Views tab of the View Explorer, use the view list to select a view to apply.
- In the Event Browser, select a view from the View Selector. The five most recent selections are displayed at the top of the list.

The events displayed in the Event Browser are limited to events associated with the selected view. The Event Browser title changes to show the view selected.

Note:

- The OMi perspectives are wired so that selecting a view in the Event Browser View Selector disables the CI selected in the View Explorer.
- The Event Browser View Selector is disabled in locked Event Browser pages so that only events associated with a preselected view are displayed.

How to Filter Events by Configuration Items

In this task, you learn how to filter the events displayed in the Event Browser by configuration item. Only events related to the selected configuration item appear in the Event Browser.

To filter events by configuration item:

1. Start a perspective containing an Event Browser and a View Explorer, for example, the Event Perspective or the Health Perspective:

Workspaces > Operations Console > <select a perspective>

In the Browse Views tab of the View Explorer, use the view list to select a view to apply.

2. Select one or more configuration items, CI collections, or a combination of both from the View Explorer pane to use as an event filter.

The Event Browser displays only the events that are related to a CI selected in the View Explorer.

The events displayed in the Event Browser are limited to events associated with the selected CI. The Event browser title changes to show the CI selected.

The selected CIs are displayed in the Event Browser status bar.

Note: The OMi perspectives are wired so that selecting a CI in the View Explorer disables the view selected in the Event Browser View Selector.

How to View and Apply Event Filters

In this task, you learn how to display a list of configured event filters and apply one to the Event Browser.

To view a list of configured event filters:

1. Start a perspective containing an Event Browser and a View Explorer, for example, the Event Perspective or the Health Perspective:

Workspaces > Operations Console > <select a perspective>

Select a filter from the Filter list.

Note: If you have selected a view from the View list, the Event Browser is also filtered by the selected view.

2. From the Event Browser or the Closed Event Browser, open the Select an Event Filter dialog box (...).

The Select an Event Filter dialog box opens containing a list of available event filters.

3. Select the event filter you want to apply.
4. *Optional.* Open the Create New Event Filter dialog box using the **Edit Item**  button and modify the selected filter and click **OK**.
5. Click **OK** to enable the selected event filter.

Enabling a filter updates the contents of the browser immediately.

6. If the selected filter does not display the results you require, redefine the selected event filter or select an alternative event filter.

Note: If you want to clear the selected filter, select **No Filter** from the filter selection boxes (views and filters). Deleting the filter selected in the Event Browser from the list of filters automatically applies no filter to the Event Browser.

How to Define Simple Event Filters

In this task, you learn how to set up a Simple Filter for the Event Browser or the Closed Event Browser using the Create New Event Filter dialog box.

To define an event filter:

1. From the Event Browser or the Closed Event Browser, open the Select an Event Filter dialog box using the **Manage Event Filters (...)** button.

The Select an Event Filter dialog box opens containing a list of available event filters.

2. From the Select an Event Filter dialog box, open the Create New Event Filter dialog box using the **New Item *** button and select **New Simple Filter**.

The Create New Event Filter dialog box opens.

3. Enter a display name and description for the new filter.
4. Use the displayed tabs to configure the new filter (General, Dates, and Additional Event Properties).

In the Create New Event Filter dialog box, if any one of the selected criteria within a frame is true, for example, *Severity* of the event is *Critical*, the event is selected by the filter.

All selections in the frames themselves and the other filter criteria, for example, *Severity* is *Critical* and *Assigned to* is *Me*, must be matched by the event for it to be selected by the filter.

For example, if the severities *Critical* and *Major* are selected within the same pane, events exhibiting either severity are displayed. If the assignment *Not assigned* is also selected from another pane, only events not assigned to a user and exhibiting one of the selected severities are displayed.

Note:

- You must select at least one lifecycle state.
- You can use the matching criteria *matches* and *not matches* to specify a regular expression that the filter compares with the events.

The pattern uses the syntax of the Java regular expressions class `java.util.regex`. For the exact syntax of this class, see the online Java documentation.


Processing filters that contain regular expressions requires higher resources than for filters without them and it is recommended that regular expressions are used only when a simpler alternative is not possible.

5. *Optional:* Select **Convert to Advanced** to switch to the advanced filter definition mode and further tailor your filter. For details, see ["How to Define Advanced Event Filters" below](#).

Note: An Advanced Filter cannot be converted back to a Simple Filter.

6. Select **OK** to save the changes.

The Create New Event Filter dialog box closes and the new event filter is added to the list of filters in the Select an Event Filter dialog box.

7. *Optional:* Select the newly created event filter and click the  **Find Matching Events** button. This opens a new Event Browser window, displaying the results of applying the newly defined filter. If the filter does not display the results you require, redefine the filter.

For details of the Create New Event Filter dialog box, see ["Simple Filter Configuration Dialog Box" on page 94](#).

How to Define Advanced Event Filters

In this task, you learn how to set up an advanced event filter for the Event Browser or the Closed Event Browser using the Create New Event Filter dialog box.

To define an advanced event filter:

1. From the Event Browser or the Closed Event Browser, open the Select an Event Filter dialog box using the **Manage Event Filters (...)** button.

The Select an Event Filter dialog box opens containing a list of available event filters.

2. From the Select an Event Filter dialog box, open the Create New Event Filter dialog box using the **New Item *** button and select **New Advanced Filter**.


The Create New Event Filter dialog box opens.

Note: Alternatively, select **New Simple Filter** and the Use the displayed tabs to make any suitable Simple configurations for the new filter (General, Dates, and Additional Event Properties). These configurations become the starting point for the advanced filter configuration after selecting **Convert to Advanced** and switching to the Advanced Filter definition mode. For details, see ["How to Define Simple Event Filters" on the previous page](#).

3. Enter a display name and description for the new filter.
4. *Optional.* If you started with a Simple Filter, select **Convert to Advanced** to switch to the advanced filter definition mode.

The Advanced Mode enables you to very precisely specify filters using a combination of operators, properties, and expressions.

Note: Advanced Filters cannot be displayed in the Simple Filter view and it is not possible to switch to the Simple Filter view from the Advanced Filter view.

5. Start assembling a filter by dragging properties and operators to the Filter Definition pane, for example, *Description*. Alternatively, select elements or operators and add them to the active filter specification using the **Add**  button.

The Edit Expressions dialog box opens containing an editor specific to the selected property type.

6. There are two basic types of Edit Expressions dialog boxes: string filters and pre-specified filters:

- **Defining a string filter:**

Select a matching criteria for the selected property, for example, *contains* and specify a text string to search for.

You can use the matching criteria *matches* and *not matches* to specify a regular expression that the filter compares with the events.

The pattern uses the syntax of the Java regular expressions class `java.util.regex`. For the exact syntax of this class, see the online Java documentation.

Processing filters that contain regular expressions requires higher resources than for filters without them and it is recommended that regular expressions are used only when a simpler alternative is not possible.

Optional. Select **ignore case** to make the expression case-insensitive.

- **Defining a pre-specified filter:**

Pre-specified filters are used to select attributes which have a known range of values, for example, severities, priorities, lifecycle states, and dates.


Select a matching criteria for the selected property, for example, *equals*, *one of*, *is true*, *before*, *not older than*, and, where appropriate, select one or more of the available options, for example, severity values, priority values, dates and times, or lifecycle states.

7. Select **OK** to close the Edit Expression dialog box.
8. Repeat steps 5 to 7 to specify additional filtering components to the filter specification.

If you want to change an entry, double-click it. The Edit Expression window opens from which you can change the specification of the expression.

9. Select **OK** to save the changes.

The Create New Event Filter dialog box closes and the new event filter is added to the list of filters in the Select an Event Filter dialog box.

10. *Optional.* Select the newly created event filter and click the  **Find Matching Events** button. This opens a new Event Browser window, displaying the results of applying the newly defined filter. If the filter does not display the results you require, redefine the filter.

For details of the Create New Event Filter dialog box, see "[Advanced Filter Configuration Dialog Box](#)" on page 98.

How to Share Event Filters

In this task, you learn how to share an existing event filter.

Note:

In the Event Browser, shared filters are available for all users to apply. Only users with permissions to create shared filters can modify or delete a shared filter. The contents of the list of event filters displayed in the Event Filter selector include all shared filters and the filters created by the current user. Shared filters must be used for the Monitoring Dashboard.

Shared filters can be exported using the Content manager. It is not possible to export private filters.

To share an event filter:

1. Make sure that you have permissions to share filters. This permission can be set under:


Administration > Users > Users, Groups, and Roles

To enable filter sharing, select **Shared Filters** and in the **Operations** tab under **Full Control**, select **Grant**.

2. Select the filter that you want to share from Event Browser:

Workspaces > Operations Console > <select a perspective>

In the Event Browser, open the Select an Event Filter dialog box using the **Manage Event Filters (...)** button. The Select an Event Filter dialog box contains a list of available event filters. Select a filter.

3. Share the filter using the **Share Item**  button.

Note: You cannot revert a shared filter to a private filter. Shared filters can be deleted. However, it is not possible to know which other users are already using it. If you want to retain a shared filter as a private filter, duplicate it before deleting it.

Filter Manager User Interface

The Select an Event Filter and Manage Event Filters dialog boxes display a list of the filters that are configured by the active user for the current browser or manager. You can select a filter from the list of configured event filters and apply it, edit or delete an existing filter, or create and test a new filter.

Further filtering interface elements are described in detail in the following topics:








- ["Select an Event Filter and Manage Event Filters Dialog Boxes" below](#)
- ["Simple Filter Configuration Dialog Box" on the next page](#)
- ["Advanced Filter Configuration Dialog Box" on page 98](#)
- ["Edit Expression Dialog Boxes for Advanced Filters" on page 104](#)
- ["Operators Used in Filter Configuration Dialog Boxes" on page 109](#)

Select an Event Filter and Manage Event Filters Dialog Boxes

To access	Workspaces > Operations Console > <select a perspective> Open the Select an Event Filter dialog box the Manage Event Filters (...) button.
Relevant tasks	To filter events, see: <ul style="list-style-type: none"> • "How to Filter Events by Views" on page 87. • "How to Filter Events by Configuration Items" on page 87. • "How to View and Apply Event Filters" on page 88. • "How to Define Simple Event Filters" on page 89. • "How to Define Advanced Event Filters" on page 90.
See also	For more information about filtering events, see "Filtering Methods" on page 85 and "Event Filters" on page 84.

The Select an Event Filter and Manage Event Filters dialog boxes display the UI elements listed in the following table.

UI Element (A-Z)	Description
	Synchronizes the filter data displayed in the list of available filters with the latest information available in the database.

UI Element (A-Z)	Description
	<p>Opens the selection box from which you can select the type of filter that you want to specify: Simple Filter or Advanced Filter. The Create New Event Filter dialog box opens, from which you can create and define a new event filter.</p> <p>Click OK to save the new filter.</p>
	<p>Creates a copy of the selected filter and opens the Create New Event Filter Configuration dialog box.</p>
	<p>Opens the Edit Event Filter dialog box for the selected event filter from which you can modify the selected event filter.</p> <p>Click OK to save the modifications to the selected event filter.</p>
	<p>Opens the Delete Event Filter dialog box for the selected event filter.</p> <p>Click Yes to delete the selected filter annotation.</p>
	<p>Restore To Default. Reverts a customer-modified factory-predefined filter to the factory default version.</p> <p>This option is not available for rules purely defined by the customer.</p>
	<p>Share Item. <i>Event Browser filters only.</i> Shares the selected event filter for use by all users. Only users with permissions to create shared filters can modify or delete a shared filter. The contents of the list of event filters displayed in the Select an Event Filter include all shared filters and the filters created by the current user.</p>
	<p>Find Matching Events. Displays events that match the selected filter in an Event Browser pop-up window. Useful for testing an event filter before applying it to the Event Browser.</p>

Simple Filter Configuration Dialog Box

The Simple Filter configuration dialog boxes display the attributes that you can use either individually or in combination to filter events before displaying them.

<p>To access</p>	<p>Workspaces > Operations Console > <select a perspective></p> <p>Open the Select an Event Filter dialog box using the Manage Event Filters (...) button.</p>
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Relevant tasks	To filter events, see: <ul style="list-style-type: none"> • "How to Filter Events by Views" on page 87 • "How to Filter Events by Configuration Items" on page 87 • "How to View and Apply Event Filters" on page 88 • "How to Define Simple Event Filters" on page 89 • "How to Define Advanced Event Filters" on page 90 • "How to Share Event Filters" on page 92
See also	For more information about filtering events, see "Filtering Methods" on page 85 and "Event Filters" on page 84 .

For more information about the information displayed in the Filter Configuration tabs, see the following sections:

- ["Common Buttons and Icons" below](#)
- ["General Tab" below](#)
- ["Dates Tab" on the next page](#)
- ["Additional Event Properties Tab" on page 97](#)

Common Buttons and Icons

The Filter Configuration window includes the UI elements listed in the following table.

UI Element	Description
Convert to Advanced	Opens the Advanced Mode used to define more comprehensive filters. For details, see "How to Define Advanced Event Filters" on page 90 . <div style="background-color: #f0f0f0; padding: 5px; margin-top: 10px;"> <p>Note: Advanced filters cannot be displayed in the Simple Filter view.</p> </div>

General Tab

The General tab in the Simple Filter configuration dialog boxes display the UI elements listed in the following table.

UI Element (A-Z)	Description
Assigned To	User or user group to whom the events you want to find are assigned. Multiple assignments can be selected. For example, you can select Assigned To Me and Not Assigned.
Category	Category of event that you want to use as a filter option, for example: DB, Storage, System, or WebApp.
Correlation	Select the desired option to search for all events, only top level events, or only cause events: All events: All events, which includes events correlated as symptoms of other events. All top level events: All events that not classified as symptom of another event. All cause events: All events that are root cause events. They cannot be symptoms of another cause event.
Description	Description of an event as displayed in the contents of the original event's description field.
Lifecycle State	Stage in the problem lifecycle that the events you are looking for have reached, for example: Open, In Progress, Resolved or Closed. Multiple lifecycle states can be selected.
Priority	Searches for events that match the specified priorities, for example: None, Low, or Medium. Multiple priorities can be selected.
Severity	Selects an event severity to use as a filter option. Multiple severities can be selected.
Subcategory	Name of the event subcategory to which the events you are looking for belong.
Title	Title of the events you are looking for.
Type	Type of event you want to display with the filter.

Dates Tab

The Dates tab in the Simple Filter configuration dialog boxes display the UI elements listed in the following table.

UI Element (A-Z)	Description
Absolute Time	Specifies the date and time in absolute (calendar) terms. A time can be specified by entering a calendar date, and time values for hours and minutes.

UI Element (A-Z)	Description
Relative Time	<p>Specifies a point in time used to filter events. Events either before or after the specified time can be selected using operators such as:</p> <ul style="list-style-type: none"> • older than • not older than <p>The time period can be specified in minutes, hours, days, or weeks.</p> <p>Note: The Event Browser is dynamically updated. Events that no longer match a relative time filter are removed from the Event Browser and new events that match are added.</p>
Time Created	Specifies the dates and times between which the events you are searching for occurred.
Time Lifecycle State Changed	Date and time when the last lifecycle state change took place.
Time Received	Specifies the dates and times between which OMi first received notification of the events you are searching for.

Additional Event Properties Tab

The Additional Event Properties tab in the Simple Filter configuration dialog boxes display the UI elements listed in the following table.

UI Element (A-Z)	Description
Application	Selects events linked to the named application.
CI Type	<p>Selects the option to search for events that are related to the specified CI type or are a child of the specified CI type. The dedicated operators for filtering CI types are:</p> <ul style="list-style-type: none"> • equals: Related CI matches a specified CI type • is derived from: Related CI is derived from the specified CI type

UI Element (A-Z)	Description
Custom Attribute	<p>Selects the Custom Attributes editor where you can specify a custom attribute, an operator, and a value for use in filtering.</p> <p>You define a custom attribute filter by specifying the name of the custom attribute in the field on the left, selecting a filter matching criteria from the list, and specifying the value of the custom attribute in the field on the right.</p> <div style="background-color: #f0f0f0; padding: 5px; margin-top: 10px;"> <p>Note: In the Advanced mode, You can add further custom attribute specifications. These can be related using any of the available operators.</p> </div>
Key	Selects events that contain a reference to the named key.
Object	Selects events that are related to a named object, as specified in the original HPOM message.
Original Data	<p>Original event text as captured from HP Operations Agents before being formatted into an HPOM message.</p> <p>Contains information about the original input before being normalized by HP Operations Agent policies into a message. Typically, the information available includes node name, message group, application, object, severity, and message text.</p>
Solution	<p>A text field used to describe the solution steps taken to solve the problem identified by the event.</p> <p>Solution texts can be synchronized with external managers such as Service Manager.</p>

Advanced Filter Configuration Dialog Box

The Advanced filter configuration dialog boxes display the attributes that you can use either individually or in combination to filter events before displaying them.

To access	<p>Workspaces > Operations Console > <select a perspective></p> <p>Open the Select an Event Filter dialog box using the Manage Event Filters (...) button.</p>
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Relevant tasks	To filter events, see: <ul style="list-style-type: none"> • "How to Filter Events by Views" on page 87 • "How to Filter Events by Configuration Items" on page 87 • "How to View and Apply Event Filters" on page 88 • "How to Define Simple Event Filters" on page 89 • "How to Define Advanced Event Filters" on page 90 • "How to Share Event Filters" on page 92
See also	For more information about filtering events, see "Filtering Methods" on page 85 and "Event Filters" on page 84 .

For more information about the information displayed in the Filter Configuration tabs, see the following sections:

- ["Advanced Filter Configuration" below](#)
- ["General Filter Elements" on the next page](#)
- ["Dates Filter Elements" on page 101](#)
- ["Additional Event Properties Filter Elements" on page 102](#)
- ["Advanced Properties Filter Elements" on page 103](#)

Advanced Filter Configuration

The filter matching criteria lists display the UI elements listed in the following table.

UI Element (A-Z)	Description
	Opens the Edit Expression dialog box for the selected event filter element from which you can modify the selected event filter element. Click OK to save the modifications to the selected event filter element.
	Deletes the selected event filter element from the selected event filter specification.
	Toggles between full view and compact view of the filter specification.
	Adds a new element and opens the Expression dialog box for the newly added element.

UI Element (A-Z)	Description
Edit Expression	Dialog boxes used to specify filter component definitions that describes, for example, what values of a selected attribute is included in the filter definition.
Filter Definition	Contains the components chosen to define the filter. Properties are associated with a value and are connected using operators.
Filter Elements	Contains the available operators and properties used to specify an advanced filter. Drag each required property or operator to the filter definition pane and drop it in its logical location in the filter. To edit and delete entries from the filter definition, use the buttons or double-click the expression that you want to change.

General Filter Elements

The General elements in the Advanced Filter configuration dialog boxes display the UI elements listed in the following table.

UI Element (A-Z)	Description
Assigned To	User or user group to whom the events you want to find are assigned. Multiple assignments can be selected. For example, you can select <i>Assigned To Me</i> and <i>Not Assigned</i> .
Category	Category of event that you want to use as a filter option, for example: <i>DB</i> , <i>Storage</i> , <i>System</i> , or <i>WebApp</i> .
Correlation	Select the desired option to search for all events, only top level events, or only cause events: All events: includes events correlated as symptoms of other events. All top level events: includes all events that do not have a cause assigned. All cause events: includes all events that are root cause events. They cannot be symptoms of another cause event.
Description	Description of an event as displayed in the contents of the original event's description field.
Lifecycle State	Stage in the problem lifecycle that the events you are looking for have reached, for example: <i>Open</i> , <i>In Progress</i> , <i>Resolved</i> or <i>Closed</i> . Multiple lifecycle states can be selected.
Priority	Searches for events that match the specified priorities, for example: <i>None</i> , <i>Low</i> , or <i>Medium</i> . Multiple priorities can be selected.

UI Element (A-Z)	Description
Severity	Selects an event severity to use as a filter option. Multiple severities can be selected.
Subcategory	Name of the event subcategory to which the events you are looking for belong.
Title	Title of the events you are looking for.
Type	Type of event you want to display with the filter.

Dates Filter Elements

The Dates elements in the Advanced Filter configuration dialog boxes display the UI elements listed in the following table.

UI Element (A-Z)	Description
<Absolute Time>	<p>Specifies the date and time in absolute (calendar) terms. A time can be specified by entering a calendar date, and time values for hours and minutes. Events either before or after the specified time can be selected using the following operators:</p> <ul style="list-style-type: none"> • before • after
<Relative Time>	<p>Specifies a point in time relative to the current time used to filter events. Events either older than or not older than the current time can be selected using the following operators:</p> <ul style="list-style-type: none"> • older than • not older than <p>The time period can be specified in minutes, hours, days, or weeks.</p> <div style="background-color: #f0f0f0; padding: 5px; margin-top: 10px;"> <p>Note: The Event Browser is dynamically updated. Events that no longer match a relative time filter are removed from the Event Browser and new events that match are added.</p> </div>
Time Created	Specifies the dates and times between which the events you are searching for occurred.

UI Element (A-Z)	Description
Time Lifecycle State Changed	Date and time when the last lifecycle state change took place.
Time Received	Specifies the dates and times between which OMi first received notification of the events you are searching for.

Additional Event Properties Filter Elements

The Additional Event Properties elements in the Advanced Filter configuration dialog boxes display the UI elements listed in the following table.

UI Element (A-Z)	Description
Application	Selects events linked to the named application.
CI Type	Selects the option to search for events that are related to the specified CI type or are a child of the specified CI type. The dedicated operators for filtering CI types are: <ul style="list-style-type: none"> • equals: Related CI matches a specified CI type • is derived from: Related CI is derived from the specified CI type
Custom Attribute	Selects the Custom Attributes editor where you can specify a custom attribute, an operator, and a value for use in filtering. You define a custom attribute filter by specifying the name of the custom attribute in the field on the left, selecting a filter matching criteria from the list, and specifying the value of the custom attribute in the field on the right.
Event Type Indicator	Enables you to filter by Event Type Indicator (ETI). You can combine several indicators using any of the operators.
Event Type Indicator Value	Enables you to filter by Event Type Indicator (ETI) value.
Key	Selects events that contain a reference to the named key.
Object	Selects events that are related to a named object, as specified in the original HPOM message.

UI Element (A-Z)	Description
Original Data	<p>Original event text as captured from HP Operations Agents before being formatted into an HPOM message.</p> <p>Contains information about the original input before being normalized by HP Operations Agent policies into a message. Typically, the information available includes node name, message group, application, object, severity, and message text.</p>
Solution	<p>A text field used to describe the solution steps taken to solve the problem identified by the event.</p> <p>Solution texts can be synchronized with external managers such as Service Manager.</p>

Advanced Properties Filter Elements

The Advanced Properties elements in the Advanced Filter configuration dialog boxes display the UI elements listed in the following table.

UI Element (A-Z)	Description
Assigned User	Selects events that are assigned or not assigned to a user, or assigned to the specified user.
Assigned Workgroup	Selects events that are assigned or not assigned to a group, or assigned to the specified group.
Automatic Action State	<p>Selects events that exhibit any of the specified Automatic Action States. The possible states are:</p> <ul style="list-style-type: none"> • Available • Running • Success • Failed • Not Available
CI Resolution Quality Measure	Selects events with the specified CI Resolution Quality Measure.
CI Resolution Success Status	Selects events with the specified CI Resolution Success Status.

UI Element (A-Z)	Description
Control Transferred	Selects events for which control was transferred to an external server or not transferred to an external server.
ETI Hint	Selects events with the specified ETI Resolution Hint.
External ID	Selects events with the specified External ID.
Instruction Interface Name	Selects events with the specified instruction interface name.
Instruction Parameter String	Selects events with the specified instruction parameter string.
Received During Downtime	Selects events which were received during downtime or not received during downtime.
Related CI Hint	Selects events with the specified Related CI Hint.
User Action State	Selects events that exhibit any of the specified User Action States. The possible states are: <ul style="list-style-type: none"> • Available • Running • Success • Failed • Not Available

Edit Expression Dialog Boxes for Advanced Filters

The Advanced Filter configuration dialog boxes include edit expression dialog boxes dedicated to types of expressions being specified. The follow sections describe these edit expression dialog boxes.

To access	<p>Workspaces > Operations Console > <select a perspective></p> <p>Open the Select an Event Filter dialog box using the Manage Event Filters (...) button.</p>
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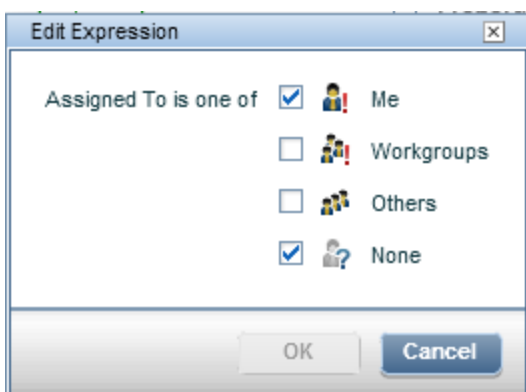
Relevant tasks	To filter events, see: <ul style="list-style-type: none">• "How to Filter Events by Views" on page 87• "How to Filter Events by Configuration Items" on page 87• "How to View and Apply Event Filters" on page 88• "How to Define Simple Event Filters" on page 89• "How to Define Advanced Event Filters" on page 90• "How to Share Event Filters" on page 92
See also	For more information about filtering events, see "Filtering Methods" on page 85 and "Event Filters" on page 84 .

For more information about the edit expression dialog boxes, see the following sections:

- ["Attributes Included in a Preconfigured List" below](#)
- ["Attributes Identified by a Text String" on the next page](#)
- ["Custom Attributes" on the next page](#)
- ["Events Selected by Dates" on page 107](#)
- ["CI Type" on page 107](#)
- ["Attribute Selection from a List" on page 108](#)
- ["Numerical Values" on page 108](#)
- ["True or False" on page 108](#)

Attributes Included in a Preconfigured List

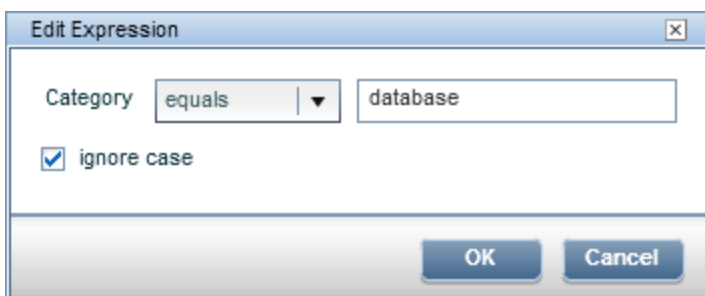
This Edit Expression dialog box is used to typically select a combination of attributes, for example, events assigned to the current user and events not assigned to any user.



Select one or more of the available event attributes that you want to include in your list of events.

Attributes Identified by a Text String

This Edit Expression dialog box is used to typically select an attribute with a specified relationship to its value, for example, events with the Category value equal to database, where the selection is insensitive to case.

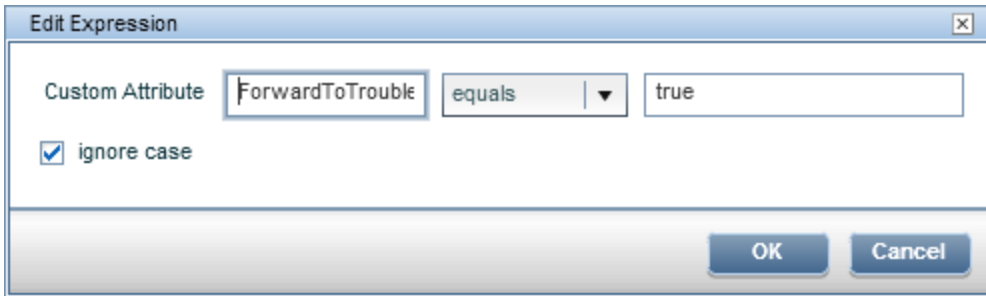


For the selected attribute, enter a text string to search for and select an operator to establish the relationship between the attribute and its value. For a description of the available operators, see ["Text Operators" on page 110](#).

Select **ignore case** to search for all forms of the specified text.

Custom Attributes

This Edit Expression dialog box is used to select a custom attribute with a specified relationship to its value, for example, events including the custom attribute **ForwardToTroubleTicket** with value equal to true, where the selection is insensitive to case.

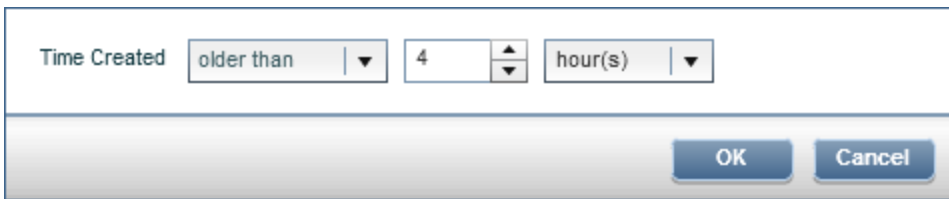


For the specified custom attribute, enter a text string for the attribute value to search for and select an operator to establish the relationship between the custom attribute and its value. For a description of the available operators, see ["Text Operators" on page 110](#).

Select **ignore case** to search for all forms of the specified text.

Events Selected by Dates

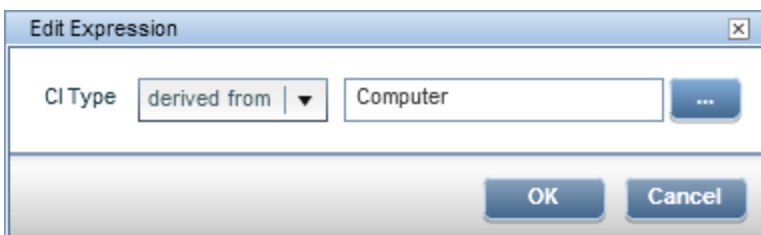
This Edit Expression dialog box is used to select events depending on when they were, created, received, or when their lifecycle state changed. In this example, events created longer than 4 hours ago are selected.



For the selected attribute, enter a time and an operator to be used to identify the appropriate events. For a description of the available operators, see ["Date Operators" on page 109](#).

CI Type

This Edit Expression dialog box is used to select events related to the specified CI type or related to a CI type derived from the specified CI type. In this example, events with a CI type derived from the CI type Computer are selected.

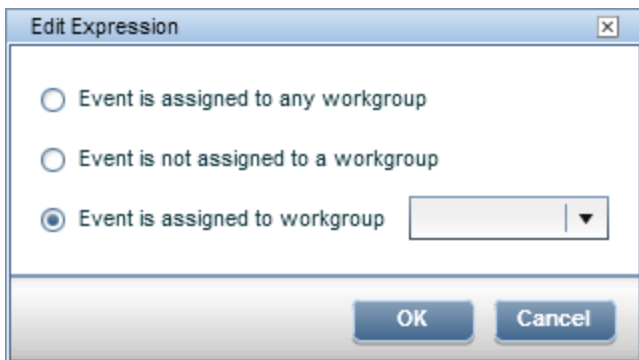


Select a CI type from the Select a CI Type dialog box (...) and select an operator (equals or derived from).

- **equals**: Related CI matches a specified CI type
- **derived from**: Related CI is derived from the specified CI type

Attribute Selection from a List

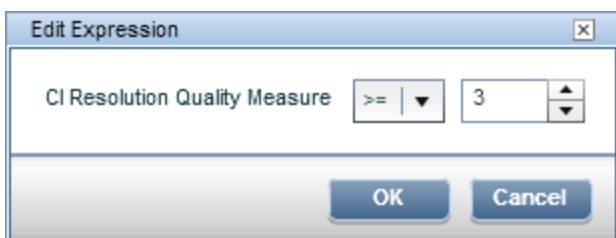
This Edit Expression dialog box is used to typically select one attribute from a predefined list, for example, events assigned to workgroups.



Select one event attribute that you want to include in your list of events, and, if necessary, specify the value of the attribute, for example, the workgroup called Administrators.

Numerical Values

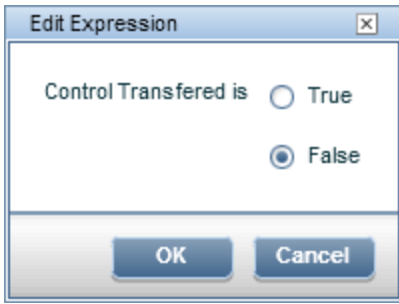
This Edit Expression dialog box is used to typically select an attribute with a specified relationship to its numerical value, for example, events with the value of the CI Resolution Quality Measure equal to or greater than 3.



Select a value for the event attributes and select an operator to establish the relationship between the event attribute and its value. For a description of the available operators, see ["Numerical Operators" on the next page](#).

True or False

This Edit Expression dialog box is used to typically select the true or false attribute value for the event attribute being configured, for example, Control Transferred is False.



Select true or false for the event attribute being configured.

Operators Used in Filter Configuration Dialog Boxes

The Advanced Filter configuration dialog boxes support the operators listed in the following tables:

- ["Date Operators" below](#)
- ["Numerical Operators" below](#)
- ["Text Operators" on the next page](#)
- ["True-False Operators" on page 111](#)

Date Operators

The following table lists the operators for use in date expressions.

Operators (A-Z)	Description
After	When specifying absolute times, selects events that have a timestamp more recent than the specified time.
Before	When specifying absolute times, selects events that have a timestamp older than the specified time.
not older than	When specifying relative times, selects events that have a timestamp more recent than the selected time point, for example, not older than one day.
older than	When specifying relative times, selects events that have a timestamp less recent than the selected time point, for example, older than one day.

Numerical Operators

The following table lists the operators for use in numerical expressions.

Operators	Description
=	Displays any event that has a value of the selected attribute that is identical to the specified value.
<	Displays any event that has a value of the selected attribute that is less than the specified value.
<=	Displays any event that has a value of the selected attribute that is lower than or identical to the specified value. For example, selecting the value 33, for CI Resolution Quality Measure displays all events with CI Resolution Quality Measure below 33%
>	Displays any event that has a value of the selected attribute that is greater than the specified value.
>=	Displays any event that has a value of the selected attribute that is higher than or identical to the specified value. For example, selecting the value 50, for CI Resolution Quality Measure displays all events with CI Resolution Quality Measure values above 50%.

Text Operators

The following table lists the operators for use in text expressions.

Operators (A-Z)	Description
contains	Displays any event that contains a reference to the specified string in the selected attribute. For example, searching for any string that contains database returns: <ul style="list-style-type: none"> • database • database status • Oracle Database status
equals	Displays any event that has an attribute or attribute value that is identical to the specified string. For example, searching for events of a category type that equals database returns events of the following category: <ul style="list-style-type: none"> • database
exists	Displays any event that contains a custom attribute of the specified string. For example, ABC exists displays all events that contain the custom attribute ABC.

Operators (A-Z)	Description
matches	<p>Displays any event that matches the specified regular expression.</p> <p>The pattern uses the syntax of the Java regular expressions class <code>java.util.regex</code>. For the exact syntax of this class, see the online Java documentation.</p> <p>Processing filters that contain regular expressions requires higher resources than for filters without them and it is recommended that regular expressions are used only when a simpler alternative is not possible.</p>
not contains	<p>Displays any event that does not contain a reference to the specified string in the selected attribute. Searching for a string that does not contain database returns all strings except those containing database, for example:</p> <ul style="list-style-type: none"> • Blue moon • Almost everything else
not equals	<p>Displays any event that has an attribute that is not identical to the specified string. For example, searching for events of a category that does not equal database returns events with categories that are not identical to database, returns event attributes such as:</p> <ul style="list-style-type: none"> • Storage • DB • Network
not matches	<p>Displays any event that does not match the specified regular expression.</p> <p>The pattern uses the syntax of the Java regular expressions class <code>java.util.regex</code>. For the exact syntax of this class, see the online Java documentation.</p> <p>Processing filters that contain regular expressions requires higher resources than for filters without them and it is recommended that regular expressions are used only when a simpler alternative is not possible.</p>

True-False Operators

The following table lists the operators for use in true and false expressions.

Operators (A-Z)	Description
False	Used to match an attribute if false.
True	Used to match an attribute if true.

Troubleshooting and Limitations

This section provides help for those people who are troubleshooting problems relating to OMi event filters, including creating, modifying, and enabling filters.

Filters Not Available in Event Filter List

- Filter does not belong to active user.
- Filters are only available for the area for which they are created. For example, an Event Browser filter is not available in an Administration UI.

Events Not Visible

- Make sure that the correct filter is enabled.
- Make sure that the currently enabled filter is correctly configured.
- Make sure that the currently applied CI or View does not filter out events that you want to see.

Event Closing and Archiving Tools

You can close and archive events using the command-line tools **opr-close-events** and **opr-archive-events**.

Both command-line tools are available only on data processing servers and are protected from unauthorized execution.

Learn More

This section includes:

- ["opr-close-events Command-Line Interface" below](#)
- ["opr-archive-events Command-Line Interface" on the next page](#)
- ["HPOM Events" on the next page](#)

opr-close-events Command-Line Interface

Caution: This tool is intended to only run offline.

It is possible that a certain problem in the IT environment results in the generation of a very large number of similar events (event storm) which are received by OMi. Browsing through and filtering a

large number of events can be time-consuming and can lead to time-out errors. After an event storm occurs, for example, you can use the `opr-close-events` CLI to close all active events which are related to a specific node, related CI, or a combination of both node and related CI.

Time-outs may be experienced as a result of delays in processing a large number of events in the web application, for example, when you select all events in the browser and attempt to close them. The user interface server may take a long time to start up or may experience a memory bottleneck.

You can use the **opr-close-events** command-line interface tool to close a large number of events, including related events, as experienced during an event storm, even when the OMi user interface is not responding.

For a description of the **opr-close-events** command options, see "[opr-close-events Command-Line Interface](#)" on page 115.

opr-archive-events Command-Line Interface

Closed events are not automatically removed from the database. The database maintenance command-line tool **opr-archive-events** enables you to archive closed events. The specified closed events are exported to an XML-format file. These events are deleted from the database on archiving.

Note: Importing closed events is not supported.

For a description of the **opr-archive-events** command options, see "[opr-archive-events Command-Line Interface](#)" below.

HPOM Events

HPOM events are not updated when using the `opr-close-events` tool and the `opr-archive-events` tool to close, delete, and archive events. The events in HPOM remain unaffected.

The opposite is also true when using the `omwmsgutil` (HPOM for Windows) tool and `opcack` and `opchistdown` (HPOM for UNIX) tools to close, delete, and archive events. The events in OMi remain unaffected.

All these tool operates directly on their respective databases and the changes do not go through the workflow process, resulting in the loss of synchronization between OMi and HPOM.

If you use these tools to close, delete, and archive events from one system (for example, OMi), you must make the equivalent changes with the appropriate tools on the other system (for example, HPOM).

opr-archive-events Command-Line Interface

Closed events are not automatically removed from the database. Use the `opr-archive-events` command-line interface to delete closed events from the database and add them to an archive file.

Note: HPOM events are not updated when using the `opr-close-events` tool and the `opr-archive-events` tool to close, delete, and archive events. The events in HPOM remain

unaffected.

The opposite is also true when using the `omwmsgutil` (HPOM for Windows) tool and `opcack` and `opchistdown` (HPOM for UNIX) tools to close, delete, and archive events. The events in OMi remain unaffected.

All these tool operate directly on their respective databases and the changes do not go through the workflow process, resulting in the loss of synchronization between OMi and HPOM.

If you use these tools to close, delete, and archive events from one system (for example, OMi), you must make the equivalent changes with the appropriate tools on the other system (for example, HPOM).

Location

`<OMi_HOME>/bin/opr-archive-events`

Default:

Windows: `C:\HPBSM\bin`

Linux: `/opt/HP/BSM/bin`

Synopsis

```
opr-archive-events
    opr-archive-events -u <date> -o <ouputPathAndFileName[-a][-s][-force][-utc]
[-i <severities>]
    opr-archive-events -u <date> -d [-s][-force][-utc][-i <severities>]
    opr-archive-events -h
```

Note: You can combine the options that are given between square brackets. Otherwise, use the rest of the options separately.

Options

Option	Description
-a,--archiveOnly <archive file>	Only archives events without deleting them from the database.
-d,--deleteOnly	Deletes only the events from the database without archiving.
-force	Archives events without asking user for confirmation.
-h,--help	Displays a summary of the command options and exits.

Option	Description
-i,--severities <severities>	Selects only events having the specified severities (for example, major, critical) are archived or deleted.
-o,--output <archive_file>	Path and name of XML file used to store archived events.
-s,--sweepOrphans	Deletes all orphaned objects not related to events. This option is ignored if '-a' is specified.
-t,--olderThan <older_than>	Archives events which are older than the specified time. Example: <code>opr-archive-events -olderThan 3D12H5M12S</code> In the example all events which have as time received a value older than the current time (time at executing the CLI) minus 3 days and 12 hours and 5 minutes and 12 seconds are archived. The time argument can also accept a subset of days, hours, minutes, and seconds, for example, the parameter "-olderThan 3D" is also valid.
-u,--until <date>	Archives the events that where received before the specified time. The time must be specified in one of the following formats: <code>yyyy.mm.dd-hh:mm:ss</code> <code>yyyy.mm.dd-hh:mm</code> <code>yyyy.mm.dd-hh</code> <code>yyyy.mm.dd</code>
-utc	Thread date/time parameter as UTC time.

Restrictions

The user running the `opr-archive-events` command-line interface must be a local user (Windows) or the user under which the OMi processes are running (Linux). If the SQL Server instance uses Windows Authentication Mode, the user running `opr-archive-events` must be granted access to the Events database.

opr-close-events Command-Line Interface

This section describes the options and parameters available in the **opr-close-events** command-line interface.

Caution: This tool is intended to only run offline.

Note: HPOM events are not updated when using the `opr-close-events` tool and the `opr-archive-events` tool to close, delete, and archive events. The events in HPOM remain

unaffected.

The opposite is also true when using the `omwmsgutil` (HPOM for Windows) tool and `opcack` and `opchistdown` (HPOM for UNIX) tools to close, delete, and archive events. The events in OMi remain unaffected.

All these tool operates directly on their respective databases and the changes do not go through the workflow process, resulting in the loss of synchronization between OMi and HPOM.

If you use these tools to close, delete, and archive events from one system (for example, OMi), you must make the equivalent changes with the appropriate tools on the other system (for example, HPOM).

Location

`<OMi_HOME>/bin/opr-close-events`

Default:

Windows: `C:\HPBSM\bin`

Linux: `/opt/HP/BSM/bin`

Synopsis

```
opr-close-events [-f <date>] [-u <date>] [-s <severity>] [-force] [-utc]
                  [-n <ci_id> [<ci_id>, ...]] [-c <ci_id> [<ci_id>, ...]]
opr-close-events -all [-force] [-utc]
opr-close-events -olderThan <relative time> [-force] [-n <ci_id>
 [<ci_id>, ...]] [-c <ci_id> [<ci_id>, ...]]
opr-close-events -h
```

Note: You can combine the options that are given between square brackets. Otherwise, use the rest of the options separately.

Options

Option	Description
-all	Closes all events.

Option	Description
-c,--relatedCiid <relatedCiid>	<p>Specify one or more CMDB CI IDs, each representing a CI of any type. All events that are related to the specified CIs are closed and all event browsers are refreshed.</p> <p>You can find the CMDB ID from the General properties of the related CI. For example, the CMDB ID for the related CI <code>myApache Tomcat Service</code> will be of the following format: <code>ef372b80d3ed6bbeecf1a7d1a960dcb7</code>.</p> <p>The -c option can be used in combination with the -n option to select all events that match both the specified node and the specified related CI. To close events that are related to both a node and a particular CI, combine the -c and -n options and specify the CMDB ID for the related CI and the CMDB ID for the node. Your command should take the following form:</p> <pre>opr-close-events -n 1e3aab8e7ecd24482a8118e24200f981 -c ef372b80d3ed6bbeecf1a7d1a960dcb7</pre>
-f,--from <date>	<p>Closes events (including related events) received after the specified time. This option can be combined with severity and until time. The time must be specified in one of the following formats:</p> <pre>yyyy.mm.dd-hh:mm:ss yyyy.mm.dd-hh:mm yyyy.mm.dd-hh yyyy.mm.dd</pre>
-force	<p>Closes events without asking user for confirmation.</p>
-h,--help	<p>Displays a summary of the command options and exits.</p>
-n,--node <node>	<p>Specify one or more CMDB CI IDs, each representing a CI of type Node. All events that are related to the specified Nodes are closed and all event browsers are refreshed.</p> <p>You can find the CMDB ID from the General properties of the related CI. For example, the CMDB ID for the node <code>mynode.example.com</code> will be of the following format: <code>1e3aab8e7ecd24482a8118e24200f981</code>.</p> <p>The -n option can be used in combination with the -c option to select all events that match both the specified node and the specified related CI. To close events that are related to both a node and a particular CI, combine the -c and -n options and specify the CMDB ID for the related CI and the Cmdb ID for the node. Your command should take the following form:</p> <pre>opr-close-events -n 1e3aab8e7ecd24482a8118e24200f981 -c ef372b80d3ed6bbeecf1a7d1a960dcb7</pre>
-r,--resetHIs	<p>Resets health indicators after closing of events.</p>
-s,--severity <severity>	<p>Closes events of the specified severity. This option can be combined with from time and until time. The severity can be one of the following: NORMAL, WARNING, MINOR, MAJOR, CRITICAL.</p>

Option	Description
-t,--olderThan <older_than>	<p>Closes events which are older than the specified time.</p> <p>Example: <code>opr-archive-events -olderThan 3D12H5M12S</code></p> <p>In the example all events which have as time received a value older than the current time (time at executing the CLI) minus 3 days and 12 hours and 5 minutes and 12 seconds are closed. The time argument can also accept a subset of days, hours, minutes, and seconds, for example, the parameter "<code>-olderThan 3D</code>" is also valid.</p>
-u,--until <date>	<p>Closes events received before the specified time. This option can be combined with severity and from time. The time must be specified in one of the following formats:</p> <p><code>yyyy.mm.dd-hh:mm:ss</code> <code>yyyy.mm.dd-hh:mm</code> <code>yyyy.mm.dd-hh</code> <code>yyyy.mm.dd</code></p>
-utc	<p>Thread date/time parameter as UTC time.</p>

Restrictions

The user running the `opr-close-events` command-line interface must be a local user (Windows) or the user under which the OMi processes are running (Linux). If the SQL Server instance uses Windows Authentication Mode, the user running `opr-close-events` must be granted access to the Events database.

Chapter 7: Health

OMi enables you to monitor the availability and performance of the revenue-generating applications and services in your organization. OMi also keeps track of the health of its deployment and informs you about problems it detects.

OMi uses data collected by HP Software applications, such as HP Operations Manager and HP Operations Agent, as well as data collected from external monitoring tools. OMi collects metrics about end-user experience from a range of environments, including ERP, CRM, Web, and Citrix, and about system performance from a range of back-end infrastructure components, including web servers, J2EE applications, databases, and network and storage devices.

The collected and aggregated data is used by the OMi health indicators (HIs) and key performance indicators (KPIs) to provide quantifiable measurements that help you monitor how well your business is achieving objectives. The KPIs and HIs provide real-time assessment of the present state of your business and processes, enable you to track critical performance variables over time, and help you assess the business impact of problems in the system.

At the top level, OMi provides an integrated view of critical applications and business processes; from there, you can drill down to the underlying IT infrastructure associated with these critical business processes. This drill-down view can be laid out in any number of ways, such as by data centers, by technology clusters, by geographical locations, and so on.

Event Type Indicators

Event type indicators (ETIs) are attributes of OMi events used to categorize events according to the type of occurrence in the managed IT environment. An OMi event is created as a result of receiving a message from a manager, such as HPOM or Network Node Manager. In HPOM, you can configure events to include the custom attribute `ETIHint`, which is used to set event type attributes. If the custom attribute is not configured, event type attributes can be set by the applicable mapping rules. If adequate information is not available, no ETI is set.

Any occurrence on the monitored system of a given type causing an OMi event must be assigned the same ETI. After defining appropriate correlation rules, events are correlated based on the ETIs. The correlation rules relate types of events that can occur on the CI.

Learn More

ETI Characteristics

ETIs are characterized by the following:

- Categorize type of event to abstract multiple event sources.
- At least one value is required. This value is used to describe the event occurrence in the environment, for example, an ETI could read: *System restart: Occurred*. Usually, you do not need to set any values for such ETIs because, as a convenience, one value is created that is called *Occurred*.
- Events contain an ETI attribute. ETIs do not exist as instances in their own right.
- ETIs without a corresponding HI are not shown within the Health Indicators pane.
- No manual reset necessary. An ETI is just an event attribute.

A configuration item inherits ETI assignments, including HIs, from its parent configuration item type. For example, ETIs assigned to the configuration item type *Database* also apply to the configuration item type *Oracle* and are applied to any Oracle Database configuration items.

Tasks

How to View Event Type Indicators

1. Open the Indicators manager:

Select an event in the Event Browser, open the context menu and select:

Configure > Event Type Indicators

2. In the CI Types pane, select a CI type.
3. In the Indicators pane, select an indicator.

Details of the selected indicator are displayed in the Details pane.

Health Indicators

Health indicators (HI) determine and display the health of specified aspects of a monitored CI. An HI is an event-specific monitor that uses one value to represent the normal state of the CI, for example, *System: Running*. One or more additional values are used to represent any abnormal states, such as *System: Stopped*. In this way, health indicators are used to show if a hardware resource is available and responding.

Health indicators can also display the state of a software application. For example, the possible states of a database server could be specified as: *Available*, *Starting* or *Stopping*. Health indicators can also be used to show the usage of a software application, for example, whether the load is *Normal*, *High*, or *Max. Exceeded*.

Only events that provide CI state information can set an HI. Health indicators are assigned to a specific configuration item type through the associated ETI. OMi sets indicators automatically using event attributes or mapping rules.

Learn More

Mapping Rules

Mapping rules can be used to match attributes of incoming events to defined health indicator values, such as *Low* or *High*, for a given configuration type. For example, you can define an HI to monitor events related to the CPU load on Unix systems (CI type: **Infrastructure Element > Node > Computer > Unix**). When an event reporting *Low* or *High* CPU load is received, the appropriate health indicator value is set.

HI-Based KPI Calculation

HI's provide the data that a KPI needs to calculate the availability and performance of monitored resources. The KPIs use calculation rules to collate the values from multiple health indicators and set a severity level, such as: *Critical*, *Major*, *Minor*, or *Normal*. For example, a KPI for a database can include multiple health indicators concerning the run state (*Up*, *Down*), the cache-hit ratio (*0*, *50*, *00%*), the length of query queues (*Empty*, *Full*), and response times (*#ms*) to determine overall health.

For more information about KPIs, see ["HI-Based KPI Calculations" on the next page](#).

Tasks


This section includes:

- ["How to View HI Details" below](#)
- ["How to Reset Health Indicators" on the next page](#)

How to View HI Details

1. Open the Health Perspective tab:

Workspaces > Operations Console > Health Perspective

2. In the Event Browser pane, select the event for which you want to view Health Indicator State details.
3. In the Health Indicators pane, point to the state icon, for example , for the health indicator for which you want to display details.

Details of the selected KPI are displayed in a pop-up window. The background color reflects the status of the KPI.

The details include:

- Status of the KPI
- Business Rule applied to the KPI
- Severity of the health indicator
- Message
- Value

How to Reset Health Indicators

Resetting an HI is a way of returning an object's severity status to a defined default value such as Normal.

Note: Resetting an HI is not usually necessary and should be performed in exceptional circumstances only, for example, when OMi does not reset it automatically.

1. Open the Event Browser:

Workspaces > Operations Console > <select a perspective>

2. In the Event Browser pane, right-click the event you want to close and for which you want to reset the health indicator.
3. In the context menu that displays, select **Close and Reset Health Indicator**.

HI-Based KPI Calculations

Key performance indicators (KPI) apply calculation rules to the data provided by health indicators to determine the availability and performance of the objects to which the health indicators are assigned. The value that results from the calculation is used to set a severity level, for example, normal, warning, minor, major, or critical.

KPIs related to the selected event are displayed in the Health Indicators pane of the Health Perspective tab. Their color reflects the assigned severity. In the Health Top View, KPIs appear under the monitored object to which they belong.

The color of each KPI reflects the KPI's current severity status. The severity status is determined by a business rule, which specifies how and when severity status propagates up a relationship chain. One resource with a critical problem does not mean that all dependent resources are, by definition, also critical. KPIs can use data from multiple sources to determine the overall affects up and down dependency chains and determine the severity status accordingly.

Note: The type of source determines the importance of the information provided. For example, live

data from a monitor running directly on a node is considered more important than data resulting from business rules, which base calculations on KPI relationships and dependencies. This means that KPI states propagated by a business rule may be overridden by live data directly from the CI.

Learn More

This section includes:

- ["KPIs for Health-Based Data" below](#)
- ["KPIs for Event-Based Data" below](#)

KPIs for Health-Based Data

The following KPIs use health-based data:

- **System and Application Performance KPI.** Performance-related data from health indicators can include values for the hit ratio in the database cache, server connection speeds, queue lengths, or database query processing times. This example describes health indicators that are specific to the database configuration item type. Other configuration item types have different health indicators.
- **System and Application Availability KPI.** Availability-related data can include server run states (up, down, starting, stopping) or process activity (refusing, accepting connections, not responding).

KPIs for Event-Based Data

There are two additional KPI types that use event data for Unassigned or Unresolved events and are attached by default to every configuration item. Unassigned KPIs concern events with an underlying problem that has not yet been allocated to any user for investigation. Unresolved KPIs concern events with underlying problems that are not yet fixed.

Note: Unassigned, event-based KPIs are, by definition, also unresolved.

If an unassigned or unresolved KPI references data from more than one event, the color of the KPI reflects the severity status set by a business rule. The business rule associated by default with unassigned and unresolved KPIs is the Operations Event Lifecycle Group Rule, which sets the status of the KPI to the highest severity of any events associated with the related configuration item. For example, if a KPI for an unassigned event refers to one critical and four normal events, the KPI appears red to reflect the critical event.

Note: There is no propagation from child CIs.

Tasks

This section includes:

- ["How to View KPI Business Rule Settings" below](#)
- ["How to View HI-based Key Performance Indicator Details" below](#)

How to View KPI Business Rule Settings

In this task, you learn how to find out which business rule OMi applies to set the severity of a KPI. KPIs use the data provided by one or more health indicators to set a specific severity level for a monitored object. A KPI business rule specifies how the status of dependent KPIs is combined and the result used in the calculation of a parent KPI's severity.

1. Open the Health Perspective tab:

Workspaces > Operations Console > Health Perspective

2. In the Event Browser pane, select an event.

The CI related to the event and its direct neighborhood CIs are displayed in the Health Top View.

3. In the Health Top View pane, point to the object for which you want to view the KPI business rule.

In the popup window that opens, check the value of the entry Business Rule to see which business rule was used to set the severity status, for example, Worst Child Rule.

How to View HI-based Key Performance Indicator Details

In this task, you learn how to list and view the details of a KPI. KPIs use the data provided by one or more health indicators to set a severity level (normal, warning, or critical) for the monitored object.

1. Open the Health Perspective tab:

Workspaces > Operations Console > Health Perspective

2. In the Event Browser pane, select the event for which you want to view KPI details.

3. In the Health Indicators pane, point to the status icon of the KPI for which you want to display details. Details of the KPI, such as Status, Business Rule name, Last Status Change date, are displayed in a pop up dialog box.

How to Propagate and Sum Up the Events Along the CI Impact Hierarchy

You can propagate and sum up the events along the CI impact hierarchy using the Event KPI Group And Sibling Rule (OMi) for the KPI Unresolved Events and Unassigned Events.

1. Change the default group rule for the event based KPIs (unassigned, unresolved) to **Event KPI Group And Sibling Rule (OMi)**.
2. Change the KPI Assignment Rule (**OMi KPI Assignments**) on CI Type **Configuration Item** to

use the **Business Rule Event KPI Group and Sibling Rule (OMi)** (one change for each of the two KPIs in this assignment).

3. Change the propagation rules on CI Type **Configuration Item (OMi Unassigned Event KPI Propagation and OMi Unresolved Event KPI Propagation)** to propagate the KPIs by using the **Event KPI Group And Sibling Rule (OMi)**.
4. Go to the rule definition in the repositories UI and make the hidden rule parameters visible by selecting the check box to make the rule parameter configurable. Then, update the rule of the KPI in the KES assignment. After you save the assignment you can hide the rule parameters again.

Alternatively, you can delete the existing KPIs before running the KES assignment. This action will cause the assignment to create the KPIs rather than update them.

5. Synchronize *all* CIs. (This may take some time, depending on the number of CIs.)

Annotation Tool

This page enables you to annotate a snapshot of the topology map you are viewing, to highlight important areas.

The annotation tool is identical in the Topology Map and Neighborhood Map components.

To access

Create a custom page that includes Topology Map or Neighborhood Map. Add a component which enables you to select a CI, such as View Explorer or Top View.

Click the **Annotate**  button on the Topology Map or Neighborhood Map toolbar.

For details see "[How to Set Up My Workspace](#)" on page 223.











UI Descriptions


Annotation Options

The elements that enable you to annotate your snapshot.

The annotation options are located on the left side of the annotation window.

User interface elements are described below:

















UI Element (A–Z)	Description
	<p>Pan Tool. Click to navigate the snapshot.</p>
	<p>Select Tool. Click and drag to select a specific area of the snapshot.</p>
	<p>Shape Tool. Click and drag to add a shape to the snapshot. Clicking the shape tool button enables the following shape buttons:</p> <ul style="list-style-type: none"> •  Rectangle. Click and drag to mark an area of the snapshot with a rectangle. •  Filled Rectangle. Click and drag to mark an area of the snapshot with a filled rectangle. •  Oval. Click and drag to mark an area of the snapshot with an oval. •  Filled Oval. Click and drag to mark an area of the snapshot with a filled oval. •  Rounded Rectangle. Click and drag to mark an area of the snapshot with a round rectangle. •  Filled Rounded Rectangle. Click and drag to mark an area of the snapshot with a filled round rectangle. <p>Customization. After selecting this button, you can customize your line appearance through the following parts of the interface:</p> <ul style="list-style-type: none"> • Line Type. Choose the type of line you want to add (solid line or jagged line). • Line Width. Select the width of the line, in pixels, in the annotation.
	<p>Line Tool. Click and drag to enable the line tool, which marks the selected area of the snapshot with a line.</p> <p>Customization. After selecting this button, you can customize your line appearance through the following parts of the interface:</p> <ul style="list-style-type: none"> • Line Style. Choose the style of line you want to add (regular line, line with endpoints, or line with arrows). • Line Type. Choose the type of line you want to add (solid line or jagged line). • Line Width. Select the width of the line, in pixels, in the annotation.

UI Element (A–Z)	Description
	<p>Text Tool. Click and drag to open a box where you can add text to the snapshot.</p> <p>Example: Add the syntax: <code>This is the problematic transaction above a line marking an area of the snapshot.</code></p>
<p>Border and Fill Colors</p>	<p>Select the relevant square to choose the color of the border and fill of your annotations. The available squares are:</p> <ul style="list-style-type: none"> • Upper Square. Click to choose the color of lines, as generated by the line tool and displayed in unfilled shapes. • Lower Square. Click to choose the color to fill shapes. <p>Clicking either of the squares generates a dialog box with the following tabs where you choose the color:</p> <ul style="list-style-type: none"> • Swatches • HSB • RGB
<p>Opacity</p>	<p>Slide the opacity bar to choose the darkness level of the selected shape line, text line, or shape color in the annotation.</p> <p>Note:</p> <ul style="list-style-type: none"> • A higher opacity percentage means that the selection appears darker. A lower opacity percentage means that the selection appears lighter. • This field is enabled when either the shape tool, line tool, or text tool button is selected.

Menu Bar

Displays the elements which enable you to perform actions on your snapshot.

User interface elements are described below (unlabeled elements are shown in angle brackets):

UI Element (A–Z)	Description
	<p>Save. Saves the snapshot on your local machine.</p> <p>Note:</p> <ul style="list-style-type: none"> • The snapshot is saved in .png format. • You cannot select the New Folder icon  when saving in the My Documents directory or any of its subdirectories.
	<p>Select All. Selects all of the annotations added to your snapshot.</p>
	<p>Clear Selected. Clears all annotations.</p>
	<p>Undo. Rolls back the most recent action performed on the snapshot.</p>
	<p>Redo. Cancels the roll back of the most recent action performed on the snapshot.</p>
	<p>Zoom In. Brings the snapshot view closer.</p>
	<p>Zoom Out. Sets the snapshot view further away.</p>
	<p>Restore original size. Restores the snapshot to its original size.</p>
	<p>Print. Prints the snapshot.</p>
	<p>Help. Displays online documentation help for the page you are currently viewing.</p>
<p>The following fields are enabled when selecting the Text Tool button .</p>	
	<p>Bold. Makes the text bold.</p>
	<p>Italic. Italicizes the text.</p>
	<p>Underline. Underlines the text.</p>
	<p>Anti-aliasing. Adjusts the pixel reading of text or annotation lines so that they appear smoother.</p>
<p></p>	<p>Select the font for the text in the report.</p>
<p></p>	<p>Select the size of the font in the report.</p>

Changes and Incidents Component

The Changes and Incidents component enables you to see the incidents opened for the CI selected in the active view, as well as requests for change and actual changes made to the CI.

To access

- **Workspaces > Dashboards > 360° View**

Select a CI, and click one of the following: **Actual Changes**, **Planned Changes**, or **Incidents**.

- You can also add this component to a user-defined page, together with a component where you can select CIs (for example Top View). For details see ["How to Set Up My Workspace" on page 223](#).

Learn More

Incidents and Requests for Change

Information on incidents and requests for change is collected from RTSM Federation Adapters. Federation adapters may be set up within OMi (such as the out-of-the-box adapter History Data Source), or outside OMi (such as HP Service Manager).

- For details on setting up federation, see the RTSM Developer Reference Guide.
- For details on the integration with HP Service Manager, refer to the OMi section of the Integrations tab in the [HP Software Integrations site](#).

Actual Changes

Information on actual changes is collected for CIs on the local machine, directly from RTSM. The types of changes displayed are History Attribute Change, and History Relation Change.

- Attribute changes are displayed for each attribute marked as Change Monitored. For details, see the Modeling Guide.
- Relationship changes are displayed if a relationship has been defined with a **TRACK_LINK_CHANGES** qualifier. For details, see the Modeling Guide.

Available CI Types

By default, incidents and requests for change are displayed for the following CI types: Business Service, Siebel Application, Business Application, Node. If you want to view change and incident information for other CITs, see the OMi Administration Guide.

Tasks

How to Select CIs for Display



If your workspace contains a component where you can select CIs (such as Model Explorer, Top View, Topology Map, or Hierarchy), and also contains the Changes and Incidents component, you can select a CI to display its related changes and incidents data.

If you want to use the Changes and Incidents component independent of other components, you can select a CI from within the component itself. Click the **Filter** button in the Changes and Incidents component toolbar, and then click **Configuration Items**. Open a view within the Configuration Items dialog box, and select a CI to display its changes and incidents data

Note: By default, data is also displayed for the child CIs which have an **Impact** relationship with the selected CI. If you deselect the **Show data for child CIs** check box, data is only shown for the selected CI.


How to Modify Duration Settings

By default, the Changes and Incidents component displays data for the previous week. You can change this setting to previous week, day, or hour (up to the current time).

- If you are using the Changes and Incidents component outside of the 360° View page, click the **Configure Component** button  in the Business Impact component toolbar, and enter the new duration setting in the **Time Period** field.
- If you are drilling down to Changes and Incidents from the Hierarchy component, click the **Configure Component** button  in the Hierarchy component toolbar, and enter the new duration setting in the **Time Period** field. This setting is shared by all of the Hierarchy CI detail drill-downs.

How to Modify Refresh Rates

By default, the component is refreshed every five minutes.

You cannot modify refresh rates of the out-of-the-box pages; however you can create a user-defined page with the components you need, and modify their refresh rates using the **Component Menu** button  on the component toolbar. Select **Preferences**, and change the refresh rate as needed.

UI Descriptions

Actual Changes area



UI Element (A-Z)	Description
Attribute	The name of the CI attribute that was changed.
Change Type	The type of change that occurred.
Changer	Description of the user or event that modified the CI's property (for example, user name or Discovery).
CI Name	The name of the CI that was changed.
Date	The date and time at which the change occurred.
New Value	The new value of the CI attribute.
Old Value	The previous value of the CI attribute (before the change).
Related CI	If the change involves a changed relationship between CIs, this field shows the name of the CI whose relationship with the selected CI was changed.

Incidents area

UI Element (A-Z)	Description
CI Name	The name of the CI that triggered the incident.
Closing Time	The date and time at which the incident was closed.
Description	Description of the incident.
ID	Incident ID, as it appears in the source application (for example, within HP Service Manager).
Opening Time	The date and time at which the incident was opened.

UI Element (A-Z)	Description
Origin	The source of the incident.
Severity	The severity of the incident as it appears in the source application (for example, within HP Service Manager).
Status	The status of the incident as it appears in the source application.
Update Time	The date and time at which the incident was updated.

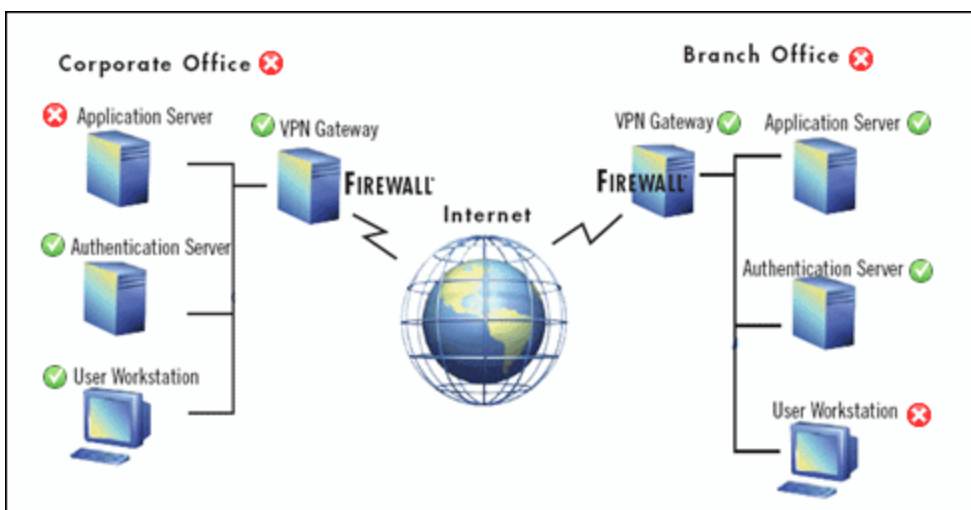
Requests for Change area

UI Element (A-Z)	Description
	If you have resized columns, click to restore all the columns to their original width.
	Click to open a dialog box which enables you to select which columns are displayed in the table.
CI Name	The name of the CI for which the change is planned.
Contact Person	The name of the contact person regarding the change.
ID	Change request ID, as it appears in the source application.
Impact Severity	The degree of impact of the change, as it appears in the source application.
Opened By	The name of the person who opened the change request.
Planned End Date	The time at which the change is scheduled to end.
Planned Start Date	The time at which the change is scheduled to start.
Risk Assessment	The degree of risk of the change, as it appears in the source application.
Status	The status of the planned change, as it appears in the source application.
Summary	A description of the planned change.

Custom Image Component

Custom Image enables you to associate a view's CIs represented by real-time status indicators with a custom image that describes the real world that your view represents. The graphical representation of a view used by your organization can be a logical network diagram, business logic, or any other graphic image.

For example, you can associate a graph representing your company's network with real-time data coming from different parts of the network:



One custom image can be defined for each view. The image shown is the one defined for the active view. When you select a different view, the corresponding image is automatically displayed. If you do not define a custom image for a view, users accessing the Custom Image component see a message stating that there is no defined image for the view.

The custom image is defined in Service Health Administration. For details, see the OMi Administration Guide.

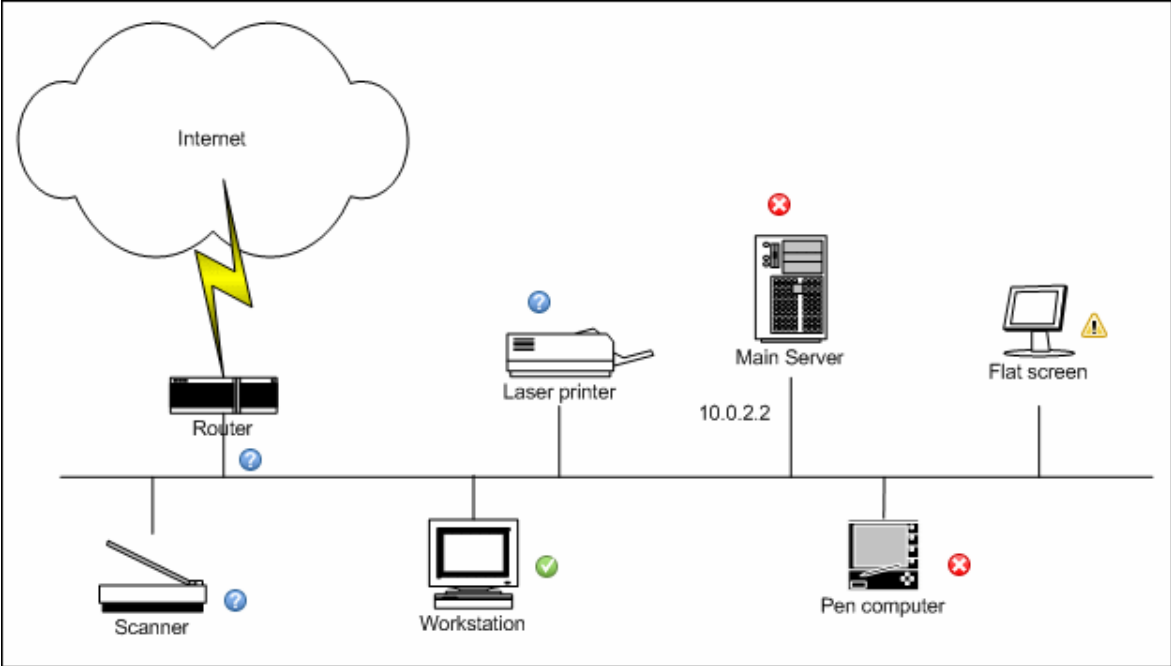
To access

You can create your own pages and include this component; for details see ["How to Set Up My Workspace"](#) on page 223.

Learn More

Examples of Custom Images

A custom image can display the status of each element in the network:



The following are additional examples of custom images:

PRODUCTION

CRM

Login	⚠
Logout	⚠
Homepage	✔
Query Transactions	
Customer Billing Address query	✖
Customer Services Query (installed Assets)	✔
Customer Pre-Bill Account Enquiry	✖
Customer Post-Bill Account Enquiry	✖
Customer Queries – New Products/Features	✔
Customer Queries – _____ Plan	✔
Customer Queries – _____ Product	✔
Update Transactions	
Customer Account Details Update	□
Customer Promisory Note	□
Customer Credit Card Payment	□
Customer New Orders	□
Customer Cancelled Orders	□

PRM

Login	⚠
Logout	⚠
Homepage	✔
Query Transactions	
Customer Billing Address query	⚠
Customer Services Query (installed Assets)	✔
Customer Pre-Bill Account Enquiry	✔
Customer Post-Bill Account Enquiry	✖

	Flow 1	Flow 2	Flow 3	Flow 4
DNS	✔ ✖	✔ ⚠	✖ ✔	✔ ⚠
Home Page	✖ ✔	✖ ✖	✔ ⚠	✔ ✔
Sub-Pages	✖ ✔	✔ ✔	⚠ ✖	✖ ✔
Others	⚠ ✖	✔ ⚠	✖ ✔	✔ ✖
	Availability - Performance	Availability - Performance	Availability - Performance	Availability - Performance

Tasks


How to Work With Custom Image

You work with Custom Image in two stages:

1. Within Service Health Administration, you associate an image with a view, and specify where each CI is located in the image. For details, see the OMi Administration Guide.
2. Within the Service Health application you can then access the Custom Image component, and see the CI statuses in the view, within your custom image.

Note: When a CI is removed from the IT universe model, the corresponding CI icon (in Service Health Administration) and the corresponding status indicators (in Service Health) are automatically removed from the relevant custom images.

How to Modify the Refresh Rate

You cannot modify refresh rates of the out-of-the-box pages; however you can create a user-defined page with the components you need, and modify their refresh rates using the **Component Menu** button  on the component toolbar. Select **Preferences**, and change the refresh rate as needed.

UI Descriptions

Custom Image Application UI

User interface elements are described below (unlabeled elements are shown in angle brackets):

<status indicator>	The status indicator indicates the worst status (worst of all KPIs) of the CI. The status indicator can be a standard status icon, or a CI type icon with status colors, as defined for the custom image.
---------------------------------	---

<Tooltip>	<p>Move the cursor above the status icon of the CI to display additional information about each KPI attached to the CI in a separate section. The tooltip associated with a CI status indicator displays information about each KPI attached to the CI in a separate section. The color of each section represents the color of the corresponding KPI's status.</p> <p>The tooltip can display any of the following information, depending on the KPI:</p> <ul style="list-style-type: none">• the header of each section displays Details followed by the name of the KPI.• CI name. The name of the CI.• Status. The status of the KPI.• Last Status Change. The date and time when the status changed to the current status.• Historical worst. The tooltip of the historical status of the CI. For details, see the OMi Administration Guide.
------------------------	--

Geographical Map Component

This component enables you to display real-time status indicators on a geographical map, with the view's CIs at the geographical locations they are related to. The status indicator shows the worst status of the CIs at the geographical location. You can also access detailed information about the CI's KPIs.

- If you have an Internet connection, Geographical Maps are displayed using **Virtual Earth**.
- If you do not have an Internet connection, Geographical Maps are displayed using an **Offline Map**.
- You can also view the Geographical Map information in a three-dimensional map, using the **Google Earth** application.

Tip: If you need a zoom level of a specific area that is not available in the Geographical Map, create a picture of the map and use the Custom Image feature instead.

To access

You can create your own pages and include this component; for details see ["How to Set Up My Workspace" on page 223](#).

Learn More

This section includes the following topics:

- ["Location Status Information" below](#)
- ["MSN Virtual Earth" below](#)
- ["Offline Map" on the next page](#)
- ["Google Earth" on page 140](#)

Location Status Information

The map displays color-coded status indicators that represent the worst KPI status for all CIs attached to the location at each geographical location. The color coding is the same as for other icons in Service Health.

To specify a location, create CIs of the type location and then create relationships between the location CIs and the CIs for which you want to display status indicators in the Geographical Map. For details, see the Modeling Guide. If you do not relate at least one CI in the view to a location CI, the Geographical Map tab displays only the map.

Each status indicator in the map can represent one or more CIs from the view with the same location. If you select a CI in View Explorer, the Geographical Map is redisplayed automatically and shows only the selected CI and the CI's children status indicators if a location is specified for them. If you select another view, the Geographical Map reloads automatically to show the view's CI status indicators in the appropriate locations.

Note: The Offline Geographical Map does not respond to changes in the CI selection because the Offline Map and View Explorer are not wired.

If you search for a specific CI in View Explorer and you click the result of the search, the Geographical Map is not automatically redisplayed. The map is redisplayed only when you go back to browser mode. It shows only the selected CI and the CI's children status indicators if they are related to a location CI.

MSN Virtual Earth

If you have an Internet connection, the Geographical Map is displayed by default using Microsoft MSN Virtual Earth. Virtual Earth presents a flat geopolitical view of the planet where you can display country borders, geographical features, or both. If the view's CIs are assigned geographical locations, real-time status indicators are displayed on the map at those geographical locations.

Note: The Virtual Earth map is only available in English and cannot be translated.

Example of Virtual Earth:



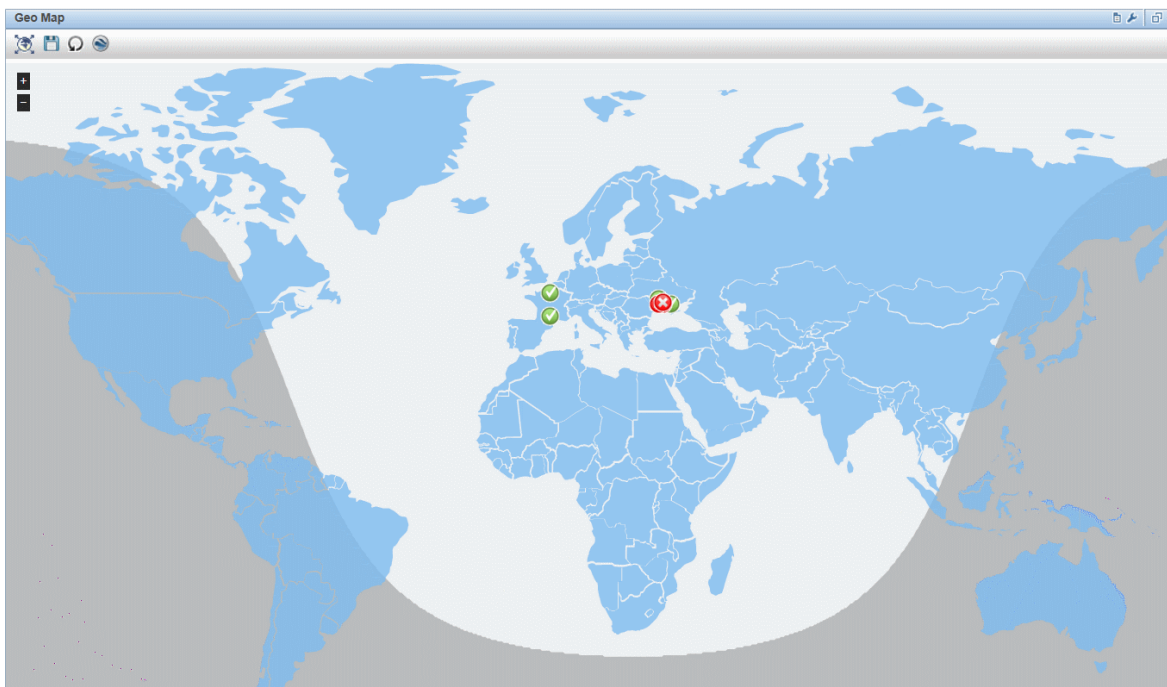
The Virtual Earth Geographical Map presents a flat geopolitical view of the planet where you can display the country borders, the geographic features, or both.

When you magnify the view, the main cities appear for the part of the map that is displayed on the screen.

Offline Map

If you do not have an internet connection, the Geographical Map page displays as offline map if the **Use Virtual Earth** infrastructure setting is set to **False** (see "[How to Enable the Offline Map](#)" on page 141). The map displays the worst status at each geographical location and detailed information about the CI's KPIs.

Example of the offline map:



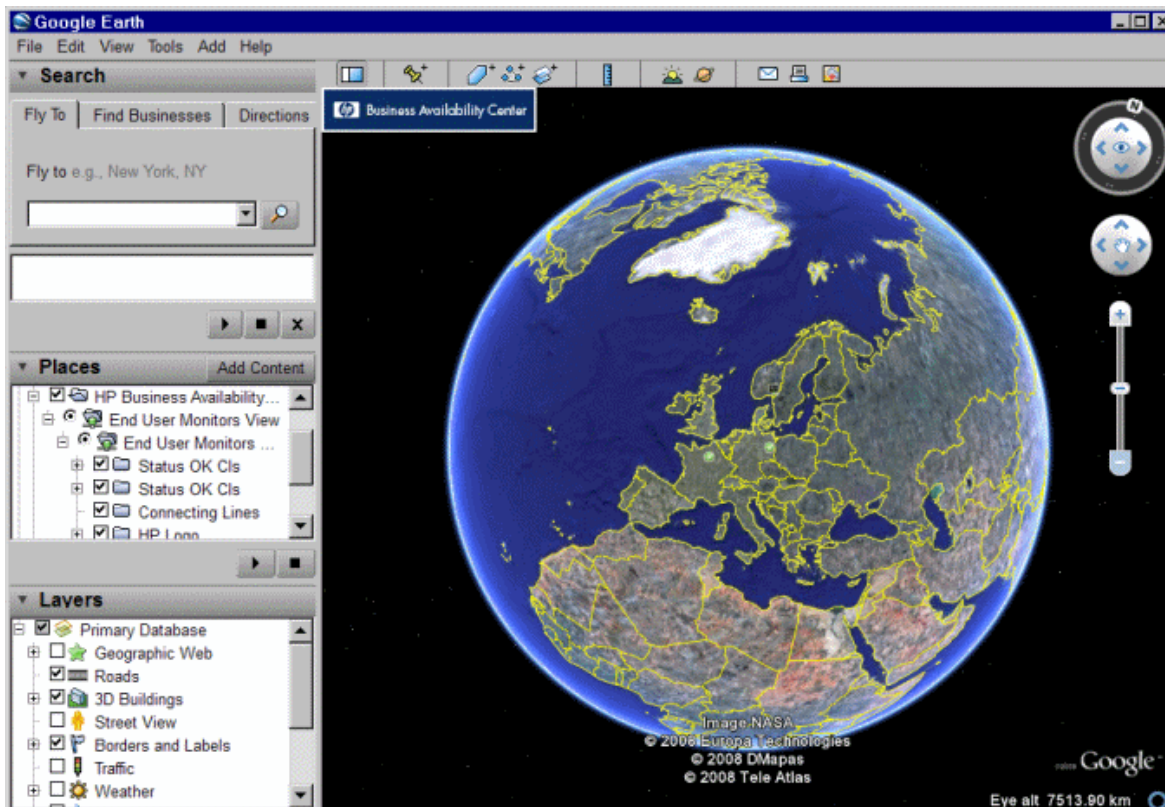
The default color for the offline map is blue. To change this color see "[Geographical Map Component](#)" on page 137.

The map provides a day-night overlay option which shows an approximation of the day/night line. To enable this option, see "[Geographical Map Component](#)" on page 137.

Google Earth

You can view the Geographical Map information in a three-dimensional map, using the Google Earth application.

Example of Google Earth:



Tasks


This section includes:

- "[How to Work With Geographical Map](#)" below
- "[How to Enable the Offline Map](#)" on the next page
- "[Specify the Maximum Number of CIs Displayed in a Location's Tooltip](#)" on the next page


How to Work With Geographical Map

You work with Geographical Map in a few stages:

1. Within RTSM Administration, you create CIs of the type location and then create relationships between the location CIs and the CIs for which you want to display status indicators.
2. In Service Health Administration, you then optionally specify the type of map you will use and configure the map. For details, see the OMi Administration Guide.
3. Within Workspaces, you then add the Geographical Map and View Explorer components to a page. When you access the page you see the CI statuses in the view, based on their geographic locations.

Note: You can modify refresh rates using the **Component Menu** button  on the component toolbar. Select **Preferences**, and change the refresh rate as needed.

How to Enable the Offline Map

1. Open Infrastructure Settings:
Administration > Setup and Maintenance > Infrastructure Settings
2. From the **Applications** drop-down list, select **Service Health Application**.
3. In the **Service Health Application - Maps Management Properties** table, locate **Use Virtual Earth** and click the **Edit Setting** button .
4. From the **Value** drop-down list, select **False**.
5. Click **Save**.

Specify the Maximum Number of CIs Displayed in a Location's Tooltip

You can specify the maximum number of CIs that can be displayed in the tooltip for a location in the Geographical Map. The default is 10.

Keep in mind that the CIs are displayed in the CausedBy section in the tooltip, so do not specify more than can be accommodated.









To modify the maximum number of CIs displayed in a location's tooltip, open Infrastructure Settings:

1. Open Infrastructure Settings:
Administration > Setup and Maintenance > Infrastructure Settings
2. From the **Applications** drop-down list, select **Service Health Application**.
3. In the **Service Health Application - Maps Management Properties** table, locate the **Maximum CIs in location tooltip** entry. Enter the new maximum.

UI Descriptions

Geographical Map in Virtual Earth


User interface elements are described below (unlabeled elements are shown in angle brackets):






UI Element (A-Z)	Description
	Click to zoom out completely.
	Click to save changes to the Geographical Map display.
	If you made changes to your map which you do not want to save, click to revert to the last saved version of the map.
	Click to open the Geographical Map for the view using Google Earth.
	Enable you to zoom in and out to enlarge or shrink the map.
	Click to shift the center of the map to the nearest CI.
	Click to zoom out completely.
<Adjustments>	Click the map and drag to move the map in the window. Double-click the map to zoom in.
<Status of a location> 	The Geographical Map of the view displays the worst status at each geographical location. The color coding is the same as for other icons in Service Health.

UI Element (A-Z)	Description
<Tooltip>	<p>Move the cursor above a status icon to display the location tooltip that provides the worst status for all KPIs associated with the location. A KPI is associated with a location if that KPI is assigned to at least one of the CIs related to the corresponding location CI.</p> <p>The tooltip includes the following information:</p> <ul style="list-style-type: none"> • KPI Name. The name of the KPI. The color of the header indicates the worst status of the KPI. • Location. The name of the location (country, city, and state, if applicable). • Status. The status of the KPI. • Held status since. The time and date when the KPI status changed to the current status. • CausedBy. The names of the CIs where the problem occurred.
Last Update	<p>Displays when the information in the component was last updated.</p> <p>To manually update the information in the component, click the Refresh icon.</p>
Road/Aerial/Bird's Eye/Hybrid/Labels	<p>Click:</p> <ul style="list-style-type: none"> • Road to display the map with the country borders. • Aerial to display the map with the topographical features. • Bird's Eye (inactive) • Labels to remove all labeling on the map other than CI status indicators.
Search	<p>Use this feature to perform a search in Microsoft MSN Virtual Earth (outside of OMi).</p>

Geographical Map in the Offline Map


User interface elements are described below (unlabeled elements are shown in angle brackets):

UI Element (A-Z)	Description
	Click to zoom out completely.

UI Element (A-Z)	Description
	Click to save changes to the Geographical Map display.
	If you made changes to your map which you do not want to save, click to revert to the last saved version of the map.
	Click to open the Geographical Map for the view using Google Earth.
	Enable you to zoom in and out to enlarge or shrink the map.
<Status of a location> 	<p>The Geographical Map of the view displays the worst status at each geographical location.</p> <p>The color coding is the same as for other icons in Service Health.</p>
<Tooltip>	<p>Move the cursor above a status icon to display the location tooltip that provides the worst status for all KPIs associated with the location. A KPI is associated with a location if that KPI is assigned to at least one of the CIs attached to the location.</p> <p>The tooltip includes the following information:</p> <ul style="list-style-type: none"> • KPI Name. The name of the KPI. The color of the header indicates the worst status of the KPI. • Location. The name of the location (country, city, and state, if applicable). • Status. The status of the KPI. • Held status since. The time and date when the KPI status changed to the current status. • CausedBy. The names of the CIs where the problem occurred.
<Country name>	Move the cursor above a country to highlight the country and display the name of the country.

Geographical Map in Google Earth

User interface elements are described below (unlabeled elements are shown in angle brackets):

UI Element (A-Z)	Description
<Places area>	Select the view and filter the CIs you want to display.
<Status of a location> 	<p>The Geographical Map of the view displays the worst status at each geographical location.</p> <p>The map presents color-coded status indicators that represent the worst status at each geographical location. The color coding is the same as for other icons in Service Health.</p>
<Tooltip>	<p>Move the cursor above a status icon to display the location tooltip that provides the worst status for all KPIs associated with the location. A KPI is associated with a location if that KPI is assigned to at least one of the CIs attached to the location.</p> <p>The tooltip includes the following information:</p> <ul style="list-style-type: none"> • KPI Name. The name of the KPI. The color of the header indicates the worst status of the KPI. • Location. The name of the location (country, city, and state, if applicable). • Status. The status of the KPI. • Held status since. The time and date when the KPI status changed to the current status. • CausedBy. The names of the CIs where the problem occurred.
<Zoom and direction tools>	Enables you to zoom in or out of the current display.

Health Indicator Component

The Health Indicator component displays details regarding the health indicators (HIs) that are used to calculate and set the current status of a selected CI. Each HI's status and value are displayed. The component displays the HIs grouped by two categories: HIs that are used to calculate KPIs, and HIs that are not used in any KPI calculation. HIs that are used in calculating multiple KPIs are listed multiple times, under each of the KPIs to which they contribute.

To access

- Select **Workspaces > Dashboards > 360° View > Hierarchy**. Select a CI, and click **Indicators**.

- To view HI details from another Service Health component, select a CI, then select the **Show > HIs** menu command.
- You can also add this component to a user-defined page, together with a component where you can select CIs (for example Top View). For details, see ["How to Set Up My Workspace" on page 223](#).

Learn More

HIs and the Event Console

When a **metric-based** HI generates an event, the Health Indicator component and the Event Console show the same date and time for the HI's status change. If this HI also generates a change in a KPI, the KPI shows this date and time for the KPI change as well.

When an **event-based** HI is created, the HI and Event Console display the same date and time. However, if the HI generates a change in a KPI, the KPI shows a delay of a few seconds until it is updated with the data from the HI.

Health Indicator Tooltips

The content and structure of an HI's tooltip depends on its data source:

- **Metric-based HI.** When an HI is based on sample data, the HI tooltip fields correspond to the business rule which calculates the HI. For details on the tooltips for each rule, see the OMi Administration Guide.
- **Event-based HI.** When an HI is based on events, the tooltip shows information on the specific event which contributed to the HI's latest status change.

When an HI is impacted by several events (for example in CIs monitored by SiteScope), the tooltip displays general information regarding the events and their severities. The Affected By field shows a list of the measurements which influenced the HI. When an HI is in OK status, no event data is displayed. The tooltip shows the events which have the same status as the HI itself.

Note: If you restart the Business Logic Engine, the data in the tooltip is reset.

Multiple Values

When an HI has multiple measurements (for example in some SiteScope monitors), the Value column shows **Multiple Values**, and the tooltip shows the values that influenced the HI's status. For example:

pcoe_sitescope_host_100 (Windows) ▾

Health Indicators Contributing to KPIs

KPI	Health Indicators	Value	Last status change
Legacy System	Legacy System	Multiple Values	8/4/2013 4:25 PM
	Swap Usage Level	N/A	7/31/2013 1:36 PM
System Performance	CPU Load	0.0	8/4/2013 4:17 PM
	Memory Load	Multiple Values	8/4/2013 4:25 PM
Network Performance	Interface Error Rate	N/A	virtual memory used % - 15.0 PM
	Interface Discard Rate	N/A	percent used - 15.0 7/31/2013 1:36 PM

Note: By design, the tooltip only shows the measurements which influence the HI's status. As a result, it is possible to see Multiple Values with a tooltip containing only one measurement.

Examples of HI Tooltips Impacted by Several Events

In the following image, two SiteScope monitors are monitoring disk utilization on two disks, on a single server. The System Performance KPI is fed by the Host Disk Utilization HI, which is fed by both of these monitors. (The image focuses on the relevant areas.)

The screenshot displays the HP SiteScope interface. At the top, the 'Event Browser for scdam070' window is open, showing a table of events:

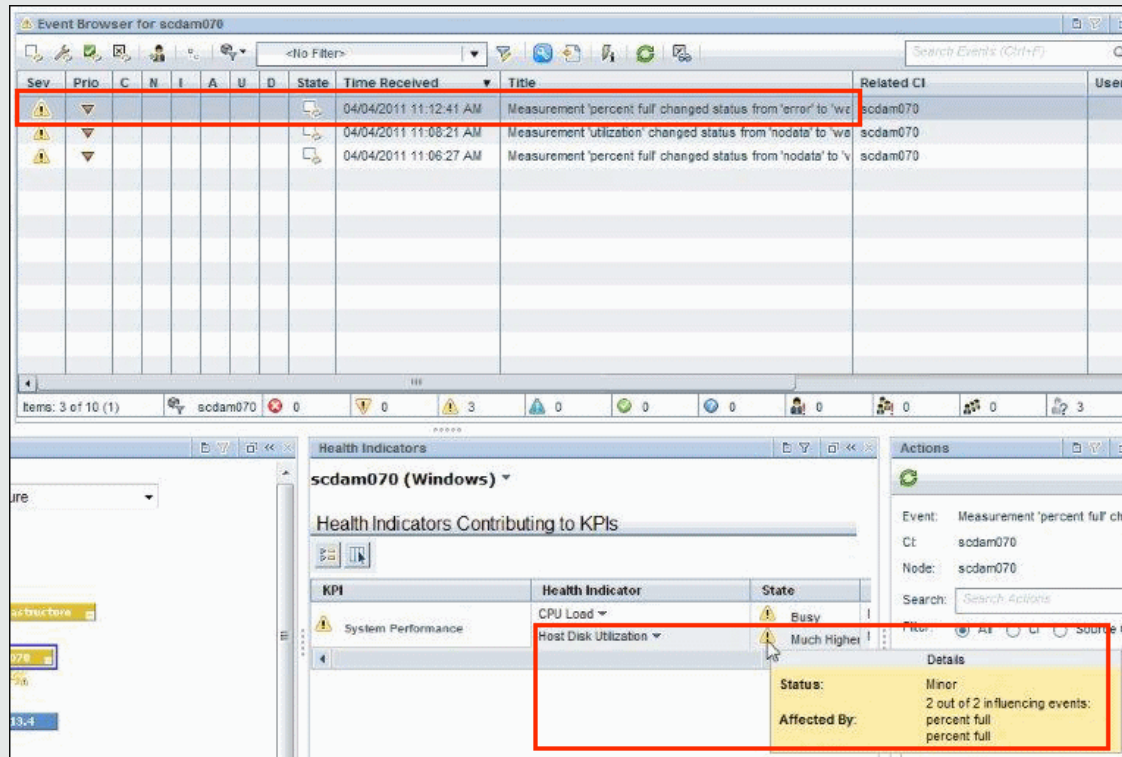
Sev	Prio	C	N	I	A	U	D	State	Time Received	Title	Related CI	User
Warning	3							Warning	04/04/2011 11:08:21 AM	Measurement 'utilization' changed status from 'nodata' to 'warning'	scdam070	
Critical	1							Critical	04/04/2011 11:06:37 AM	Measurement 'percent full' changed status from 'nodata' to 'critical'	scdam070	
Critical	1							Critical	04/04/2011 11:06:27 AM	Measurement 'percent full' changed status from 'nodata' to 'critical'	scdam070	

Below the event browser, the 'Health Indicators' window for 'scdam070 (Windows)' is shown. It lists 'System Performance' as a KPI, with 'Host Disk Utilization' as a contributing health indicator. The state of 'Host Disk Utilization' is 'Critical'. A tooltip is displayed over the 'Critical' state, showing:

- Status: Critical
- Affected By: 1 out of 1 influencing events: percent full

In this example, the HI is critical, and one of the two events feeding the HI is critical. The tooltip shows **1 out of 1 influencing events**, meaning one of the events which influences this HI has the same status as the HI.

In the following image, the severity of the monitor that had been Critical has changed to Minor:



The HI changes to Minor as well. Since both of the events feeding the HI are Minor, the tooltip shows **2 out of 2 influencing events**.

In both of the above examples, the subcategory (or subcomponent) of the events feeding the HI is **percent full**; this subcategory is displayed in the tooltip for each influencing event.

Tip: If you created an HI without subcomponents and later you want it to accept subcomponent data, delete the HI from the CI and then send the events with subcomponent data again.

Rule Parameters Influencing the HI Tooltip

Event-based HIs are calculated by the Generic Health Indicator Sub-component rule. By default, this rule uses the following rule parameters which influence the tooltip's behavior; modifying these defaults increases memory usage.

- **clearNormalStatuses.** By default, events with Normal status are not included in event-based HI calculation.

- **reportNormalStatusesEvents.** By default, events with Normal status are not displayed in event-based HI tooltips. Note that if the setting of **clearNormalStatuses** is false, the setting of **reportNormalStatusesEvents** is ignored.
- **maxNumOfDisplayedEvents.** By default, up to 8 events can be displayed in an event-based HI tooltip. As a result, if there are 10 events which influence an HI, by default the HI's tooltip will list 8 out of 10 influencing events.

Event-Based HI Tooltip Fields

When a health indicator is fed by events, its tooltip can contain the following fields by default.

If custom attributes are defined in OMi, these are displayed as well.

Tooltip Field	Description
Assigned User	Name of the user responsible for solving the event's underlying problem.
Category	Name of the logical group to which the event belongs, (for example, Database, Security, or Network).
Event Type Indicator	Display name of the event type indicator (ETI) used to calculate the status reported by the selected event and the current value, (for example, Web application state:Slow).
Lifecycle State	Point in the event lifecycle that the selected event has reached: Open, In Progress, Resolved, or Closed.
Priority	The priority assigned to the selected event (for example, Low, Medium, or High).
Severity	Severity assigned to the selected event.
Time State Changed	Date and time when the last lifecycle state change took place.
Time Received	The time when the event was received on the management server.
Title	Brief description of the nature of the selected event.
Type	String used to organize different types of events within an event category or subcategory (for example, users or applications, accounts, and security).
Subcategory	Name of the logical subgroup (category) to which the event belongs; for example, Oracle (database), Accounts (security), or Routers (network).
Solution	Text field used to document solutions to help operators solve the problem indicated by the event.

Tooltip Field	Description
Description	Optional information about the original event, in addition to the event's original title and the text captured from the event source.

Tasks

How to Select CIs for Display

If your workspace contains a component where you can select CIs (such as Model Explorer, Top View, Topology Map, or Hierarchy), and also contains the Health Indicator component, you can select a CI to display its related health indicators.

If you want to use the Health Indicator component independent of other components, you can select a CI from within the component itself. Click the **Filter** button in the Health Indicator component toolbar, and then click **Configuration Items**. Open a view within the Configuration Items dialog box, and select a CI to display its health indicator data.

How to Reset an HI's State to Default

In some workflows, you might have an HI showing that a problem has occurred, but when you deal with the problem you might want to reset the HI's state to **Normal** (default).

To reset an HI to its default state, access the menu command on an HI and select **Reset Health Indicator**. The HI's default state is restored immediately, and the new status is reflected in the component when it is next refreshed.

Tip: You can also reset HIs to default outside of OMi, using the Reset HIs API. For details, see the OMi Extensibility Guide.

Note the following:

- **Events/Metrics.** The Reset Health Indicator menu command is generally used for event-based HIs, and not for metric-based HIs.
- **Local Impact Views.** HIs cannot be reset to default within local impact views. This is because resetting HIs is relevant for event-based HIs, which do not use rule calculations but set status directly from events.

(Local impact views give you the capability to create different status calculations, which is relevant only for KPIs and metric-based-HIs. The event-based HIs in local impact views have the same status as in Global views, and resetting them would impact their status in all views - which is not desired behavior.)

How to Drill Down from the Health Indicator Component




You can use HI context menus to access various actions or reports, based on a combination of the relevant HI type, CI type, and **Monitored By** attribute (which describes which data collector collects information on the HI).

For example, you can drill down from an HI to the corresponding event in the Event Browser. From the HI's menu commands, select **Show Contributing Events**.

UI Descriptions

Health Indicator Component user interface

User interface elements are described below (unlabeled elements are shown in angle brackets>):

UI Element (A-Z)	Description
<CI name>	Name of the CI to which the displayed health indicators are assigned.
	Click the arrow next to a CI name to access the menu options for that CI. Available options depend on the type of CI and the context menu defined for the CI. Click the arrow next to an HI name to access the menu options for that HI.
	Reset columns width. Click to restore the width of the columns in the table to the default widths.
	Select columns. Click to select the columns you want to display in the table.
Health Indicator	HI status icon, and display name of the health indicator. If the saveLastSample global parameter is set to true , you can click the HI link to see its last sample details. For details, see the OMi Administration Guide. Note: <ul style="list-style-type: none"> The HI status is not based on a specific value, and may be calculated using several metrics or events, and comprised of several metric or event values. You can use the tooltip to see the values of the metrics by which the latest HI status was calculated. The content and structure of an HI's tooltip depends on its data source.
Health Indicators Contributing to KPIs	List of the health indicators that are assigned to the selected CI, and are used to calculate KPIs for the CI.

UI Element (A-Z)	Description
Health Indicators Not Contributing to KPIs	List of the health indicators that are assigned to the selected CI, but are not used to calculate any KPIs.
KPI	Name of the KPI which uses the health indicator in calculating its status, and current KPI status displayed by a status icon. The tooltip displays the status of the KPI, its calculation rule, the date when its status last changed, and additional tooltip parameters depending on the rule of selected KPI.
Last Status Change	The date and time from when this HI has held its current status.
Trend	Trend in real-time status for the HI, using three directions: up (green arrow), down (red arrow), and no change blue arrows). Note: This column is not displayed by default.
Value	Value of the HI. When an HI has multiple measurements (for example when monitored by SiteScope), the Value column shows Multiple Values , and the tooltip shows the values that influenced the HI's status.

Health Top View Component

The Health Top View component displays the business availability of your system components. The CI bar icons in the Health Top View provide a visual indication of the health of the related CI of the selected event, based on the hierarchy tree structure defined for each view. The connecting lines between the bars define the relationships between the CIs.

Note: You can refine the contents of the Health Top View pane by applying an alternative view.

You can use the View Mappings manager to map views to individual configuration item types. A list of mapped views appears in the Selected Views list in the Health Top View pane. The contents of the Selected Views list are determined by the configuration item type associated with the event selected in the Event Browser. For more information about view mapping, see ["Mapping Views" on page 201](#).

For more information about HIs and KPIs, see ["Health Indicators" on page 120](#) and ["HI-Based KPI Calculations" on page 122](#).

To access

You can create your own pages and include this component; for details see ["How to Set Up My](#)

[Workspace" on page 223.](#)

Learn More

Health Top View Displays Guidance Messages

The following guidance information is available in the Health Top View pane :

- If no event is selected, a message is displayed prompting you to select an event.
- If an event without any related CI is selected, a message is displayed informing you that there is no CI information.
- If an event with a related CI but without an associated view mapping is selected, a message is displayed informing you that there is no view mapping. A link the View Mappings manager where you can configure a suitable view mapping is also provided.
- If an event with a related CI and with a view mapping is selected, the list of mapped views is shown in the drop-down box and the selected view is shown.

UI Reference

Health Top View Pane

UI Element (A-Z)	Description
<Selected View>	<p>List of the views mapped to the configuration item type (and any parents) referenced by the event selected in the Event Browser, which contain the CI, and, if configured, filtered by event category.</p> <p>Select the view you want to apply to the contents of the Health Top View pane. A view enables you to refine the type and amount of configuration items displayed. The selected view can also affect the severity status of configuration items, since views can exclude or include additional (related) items which have an affect on the displayed topology.</p> <p>You can map views to configuration item types. For more information about mapping views, see "Mapping Views" on page 201.</p>
Last Updated	Date when the Health Top View information was last refreshed.

Health Top View Tooltips

When you hover the cursor over any configuration item displayed in the Health Top View pane *except* the root configuration item in the tree or any item that is colored gray, OMi displays details of the factors

that contribute to the status of a configuration item, as described in the following table.

UI Element (A-Z)	Description
Business Rule	Business rule used to determine the availability and performance of the selected configuration item.
CI Name	Name of the selected configuration item, for example, DB_Server.example.com.
Class Type	The CI type of the selected CI.
Hidden Child CIs	Indicates that the selected CI has child CIs that are not displayed in the Health Top View.
KPI Name	Display name of the key performance indicator to which the displayed health indicator is assigned, for example, System Availability KPI. For more information about KPIs, see "HI-Based KPI Calculations" on page 122 .
Last Status Change	Date and time since when the current status was applied to the selected configuration item.
Status	Severity assigned to the selected CI.
Unassigned Events	KPI associated with events that are either not assigned to any user or remain unresolved. The information includes, in addition to the details shown for performance and availability KPIs, the number of duplicate or related (and unassigned) events associated with the selected object. The background color indicates the highest severity of the KPIs associated with the selected object.
Unresolved Events	

Troubleshooting

This section includes:

- ["Health Top View is Empty" below](#)
- ["Health Indicators Display Incorrectly" on the next page](#)

Health Top View is Empty

- No event is selected in the Event Browser
- No view is mapped to the related CI of the selected event
- No CI is related to the selected event
- Java applet did not start or is not running correctly

Health Indicators Display Incorrectly

Health indicators are used to assign a severity to a state, for example, `Critical` severity to the state `Unavailable`. The state and the assignment are indicated in the Health Indicators pane. However, calculation rules for a KPI may use several health indicators to set a new severity level for the object in the Health Top View.

- No event is selected in the Event Browser
- The configuration item highlighted in the Health Top View pane does not have any assigned health indicators
- You selected an event in the Event Browser pane and a different configuration item in the Health Top View pane

Hierarchy Component

The Hierarchy component displays the hierarchy of the CIs in a view, and the real-time status of each of the KPIs assigned to the CIs. KPIs are grouped into domains; you can collapse a domain and display the worst status of all the KPIs in a domain. You can also filter the display to only show CIs with KPIs of a specific status, or specific CI types.

When you select a CI in the Hierarchy component, CI details are displayed. You can then click the detail links to display additional information regarding the selected CI.

Tip: The Hierarchy display is highly customizable; you can choose to display specific KPI domains, or filter for specific CI statuses, in order to focus attention on areas that are of particular interest to you.

To access

You can create your own pages and include this component; for details see ["How to Set Up My Workspace" on page 223](#).

Learn More

CI Detail Links

When you select a CI in the Hierarchy component and then click its CI detail links, you can access the following information about the CI:

- **Health Indicators.** Displays details regarding the health indicators (HIs) that are used to calculate and set the status of the CI selected in the active view. For details, see ["Health Indicator Component" on page 145](#).

- **Changes and Incidents.** Displays incidents opened for the CI selected in the active view, as well as requests for change and actual changes made to the CI. For details, see "[Changes and Incidents Component](#)" on page 129.

Hierarchy Personalization

You can make the following changes in the Hierarchy component (as described in the following sections); these are saved for future sessions (per user, per component):

- column order
- column width
- visible/hidden columns
- collapsed/expanded KPI domains
- collapsed/expanded CIs
- sound on/off (if sound mode is set to **True**)
- selection of Filter Flat Mode or Filter Hierarchical Mode

If you make changes in a user-defined page, click **Save** to retain the changes in the current session. To save your settings in future sessions, click **Logout** when you are ready to exit the browser. (If you close the browser without logging out, your changes are not saved.)

Tasks

The following tasks are optional, and can be performed in any order.

How to Create a Quick CI Filter

The Hierarchy component has a quick filter mechanism that enables you to display only those CIs that have at least one KPI in a given status. This creates a temporary filter that persists until you log off, until you change the selection of statuses, or until you select another filter. The filter returns all of the CIs in the view which fill the filter conditions.

Note: If more than one user is logged in at the same time using the same user name (for example, admin), every time one of the users saves a change to the filters, the associated filters file is updated with a copy of that user's filters.

- To temporarily display only those CIs whose KPIs have specific statuses, click the **Filter** button in the Hierarchy toolbar, select one or more statuses in the filter bar that opens, and click **Filter**.
- To disable filtering, click the **Remove Filter** button.

Example:

Without filtering, the Hierarchy component includes all KPI statuses.

Name	Application	
	Application Performance	Application Availability
[-] End User Monitors	-	-
[-] [gear icon] Default Client_Snt_Ap1_1	[warning icon]	[error icon]
[-] [server icon] Default Client_Snt_Ap1_1_Sanity_BTW1_1	[warning icon]	[error icon]
[-] [person icon] tx_10	[warning icon]	[check icon]
[-] [person icon] tx_15	[warning icon]	[check icon]
[-] [person icon] tx_1_failed	[question icon]	[error icon]
[-] [person icon] tx_2_failed	[question icon]	[error icon]
[-] [person icon] tx_5	[check icon]	[check icon]

To temporarily display only those CIs whose KPIs have Minor statuses, click the **Filter** button, select the Minor status icon in the filter bar, and click **Filter**.



The Hierarchy display now includes only those CIs whose KPIs have Minor status.

Name	Application	
	Application Performance	Application Availability
[-] End User Monitors		
[-] Default Client_Snt_Ap1_1	[warning icon]	[error icon]
[-] Default Client_Snt_Ap1_1_Sanity_BTW1_1	[warning icon]	[error icon]
[-] [person icon] tx_10	[warning icon]	[check icon]
[-] [person icon] tx_15	[warning icon]	[check icon]

How to Create an Advanced Filter

Advanced filters enable you to focus on specific problematic areas by filtering CIs according to specific KPI statuses, using either temporary or permanent filters. For example, the predefined **Show Errors** filter displays only those CIs which have one or more KPIs in Critical status.

You can also create an advanced filter which combines filtering according to both KPI status, and CI type. For example, you can create a filter that only shows hosts (Node CIT) with one or more KPIs in Critical status.

The filter returns all of the CIs in the view which fill the filter conditions.

1. To create a temporary advanced filter, click the **Filter** button in the Hierarchy toolbar, and then click **Advanced** in the filter bar.

To create a permanent advanced filter, click the **Favorite Filters Menu** button , and then click **New**.

2. In the **Status Selection** pane, select check boxes for each KPI status that you want to include in the filter.
3. (Optional) In the **Type Selection** pane, select a CI type to filter which CIs will appear in the Hierarchy display.

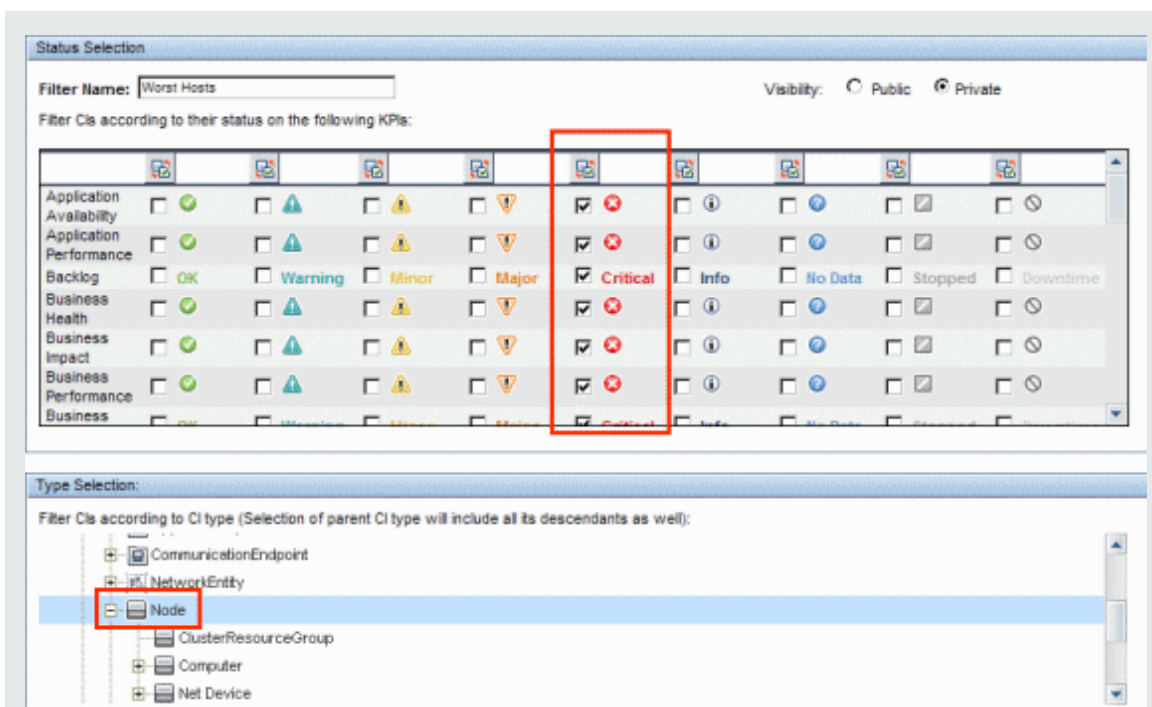
If you select a higher-level CIT, its descendant CITs are included in the filter as well.

4. To activate a temporary filter, click **Filter**.

To activate a filter and save its settings, click **Filter and Save**.

Example:

The **Worst Hosts** filter is created to display only those CIs whose CIT is Node, with at least one KPI in Critical status.



How to Set up Sound Notification When KPIs are Critical

You can set up Service Health to play an alert sound when the status of a KPI changes to **Critical** in the Hierarchy component.

When a view is loaded for the first time, no sound is played for the KPIs that are loaded at Critical status. When the sound is switched on, a sound alert is played when a KPI in the view changes status to **Critical** (red). The Critical status icon flashes until you roll your mouse over it. If a CI in a hidden part of the view has changed to **Critical** but does not change the status of any of the CIs in the currently displayed branches, no sound is heard.

You can use the following options:

- **Enable or Disable Sound.** Open Infrastructure Settings:

Administration > Setup and Maintenance > Infrastructure Settings


Choose **Applications** and select **Service Health Application**. In the **Service Health Application - Sound Notification** table, locate **Sound Notification**. Modify the value to **true** to enable the sound notification, or to **false** to disable it. The change takes effect immediately.

- **Mute or Restore.** You can temporarily turn the sound option on or off using the **Sound On/Off** button in the Hierarchy toolbar.
- **Modify the alert sound.** The alert sound is an mp3 file downloaded by the browser. To use another alert sound for Service Health, if you have administrative permissions, access **<Gateway server root directory>\AppServer\ webapps\site.war\static\dash\sounds** and replace the **ding.mp3**

file with your own .mp3 file (you must rename your file **ding.mp3**). The change takes effect after you clear your browser cache.

How to Modify the Refresh Rate

By default, the Hierarchy component is refreshed every 5 seconds.

You cannot modify refresh rates of the out-of-the-box pages; however you can create a user-defined page with the components you need, and modify their refresh rates using the **Component Menu** button  on the component toolbar. Select **Preferences**, and change the refresh rate as needed.

How to Modify the Number of CI Levels Displayed in the Hierarchy Component

By default, the Hierarchy component displays two levels of hierarchy display. For example, when you select a view, the component displays the view name (as the hierarchy root), and its top-level CIs. When you drill down from a selected CI, the selected CI is displayed as the root, and its child CIs are also shown.

To modify the number of levels that can be displayed in the Hierarchy component:

1. Open Infrastructure Settings:

Administration > Setup and Maintenance > Infrastructure Settings

Choose **Applications** and select **Service Health Application**.

2. In the **Service Health Layout Properties** table, locate **Business Console - Number of display levels**. You can select a value between 1 and 4. If you specify 1, the child CIs are displayed but cannot be expanded.

How to Display Child CIs Collapsed Rather than Expanded

1. Open Infrastructure Settings:

Administration > Setup and Maintenance > Infrastructure Settings

Choose **Applications** and select **Service Health Application**.








2. In the **Service Health Layout Properties** table, locate the **Hierarchy - Default state** property, and change its value to **collapsed**.


UI Descriptions




Hierarchy Toolbar

The toolbar enables you to customize how data is displayed in the Hierarchy table, and to create filters that define which KPIs are displayed.

User interface elements are described below:


UI Element	Description
<View Selector>	Select a view from the dropdown list (to display information on the CIs in the view).
	<p>Menu. Select one of the following options:</p> <ul style="list-style-type: none"> <li data-bbox="396 548 1349 632">  Expand Available Levels/Collapse All. Click to expand or collapse the CIs displayed in the Hierarchy component. <p>These buttons are enabled when one or more of the currently displayed CIs can be expanded or collapsed.</p> <li data-bbox="396 758 1328 842">  Drill Down. Select a CI and click to drill down to its child CIs. This button is only enabled when a CI is selected. <p>If a filter is active, the drill-down opens a new browser window for the selected CI.</p> <li data-bbox="396 936 1370 1020">  Up One Level. Click to display the parent CI of the CI currently displayed in the Hierarchy component. <p>This button is only enabled when the currently displayed CI has a parent CI.</p> <li data-bbox="396 1115 1354 1199">  Select Columns. Click to open the Select Columns dialog box, which enables you to select which KPIs are displayed. <p>Use the arrows to add or remove KPIs from the display.</p>
	<p>Filter. Click to open the filter bar, which enables you to only display CIs with at least one KPI of a given status (for example, only display CIs with at least one KPI with Critical status).</p> <p>When the Filter button has a yellow and red border, a filter is currently active.</p>
	<p>Remove Filter. If a filter is active, click to cancel filtering and show all KPI statuses for all CIs.</p>

UI Element	Description
<Filter Bar>	<p>After you press the Filter button, this bar appears directly below the Hierarchy toolbar.</p> <p>Select a combination of KPI statuses, to only display CIs which have at least one KPI with a given status.</p> <p>The filter bar includes the following buttons:</p> <ul style="list-style-type: none"> • Filter. After selecting statuses, click to activate filtering. • Clear. Click to clear all of the statuses. • Advanced. Click to create an advanced filter. This enables you to filter specific KPIs or CI types, and to create a permanent filter. <p>Note: The filter created using the filter bar is a temporary filter that persists until you log off, until you change its selection of statuses, or until you select another filter.</p>
<Favorite Filters List>	<p>This list contains the predefined filters, and the filters you have created using the Advanced Filter.</p> <ul style="list-style-type: none"> • Select a filter to apply it to the Hierarchy display. • To edit, clone, or delete a filter, select the filter from this list, then click the Favorite Filters Menu button. <p>Predefined filters are useful in displaying commonly required information; they cannot be modified or deleted. These are the predefined filters:</p> <ul style="list-style-type: none"> • global: Show Errors. Displays the CIs whose KPIs have a Critical status. • global: Show Errors and Warnings. Displays the CIs whose KPIs have a Minor, Major, or Critical status. • global: Show PNR. Displays, for all CI types, only the CIs whose PNR KPI has an OK, Warning, Minor, Major, Critical, or No Data status.
	<p>Favorite Filters Menu. This opens a drop-down menu, which enables you to perform the following actions:</p> <ul style="list-style-type: none"> • To create an advanced filter, click New. • To edit or delete a filter, select the filter from the Favorite Filters list, and click Edit or Delete. <p>Note that predefined filters cannot be modified or deleted.</p> <ul style="list-style-type: none"> • To clone a filter, select the filter from the Favorite Filters list, and click Clone.

UI Element	Description
	Filter Hierarchical Mode. When filtering is active, click to display the CIs that fill the filter conditions within a hierarchical structure, in the context of their parent CIs.
	Filter Flat Mode. When filtering is active, click to display the CIs that fill the filter conditions in a non-hierarchical, list format, without displaying their parent CIs.
	Sound On/Off. You can set up Service Health to issue an alert sound when the status of a KPI changes to Critical. Click to toggle the sound on or off.

Hierarchy Table Columns


User interface elements are described below as they appear in the UI (unlabeled elements are shown in angle brackets):



UI Element	Description
Acknowledge	Set or unset acknowledgment for a CI by clicking an icon in this column; a check mark  indicates that acknowledgment has been set.
Business Impact	<p>Note: Business Impact is not visible by default. To modify, see the OMi Administration Guide.</p> <p>This bar indicates the CI's business impact, using a rating from zero (no impact) to 5 (high impact). The rating shows how much of an impact the CI has on the business CIs and SLAs in your monitored environment.</p> <p>By default, the business impact rating is based on the criticality of impacted business CIs, and the number of impacted business CIs and SLAs. For details, see the OMi Administration Guide.</p> <p>If you are in Filter Flat Mode, you can click the column header to sort by ascending/descending order.</p>
<KPIs>	Each of the KPI columns displays the status and value of a specific KPI, for each of the CIs displayed in the table.
<KPI Domains>	<p>KPIs are grouped by domains. For example, the Application domain contains the Application Performance and Application Availability KPIs.</p> <p>You can view all the KPIs in a domain, or you can collapse a domain to view the worst status of all the KPIs in the domain.</p>

UI Element	Description
Last Status Change	Displays the date and time when the CI entered its current status. If you are in Filter Flat Mode, you can click the column header to sort by ascending/descending order.
Name	This column displays the CIs in the selected view in a hierarchical structure; you can expand a CI to drill down to its child CIs.
Status	Displays the worst KPI status for the CI. If you are in Filter Flat Mode, you can click the column header to sort by ascending/descending order.

Hierarchy Table Rows

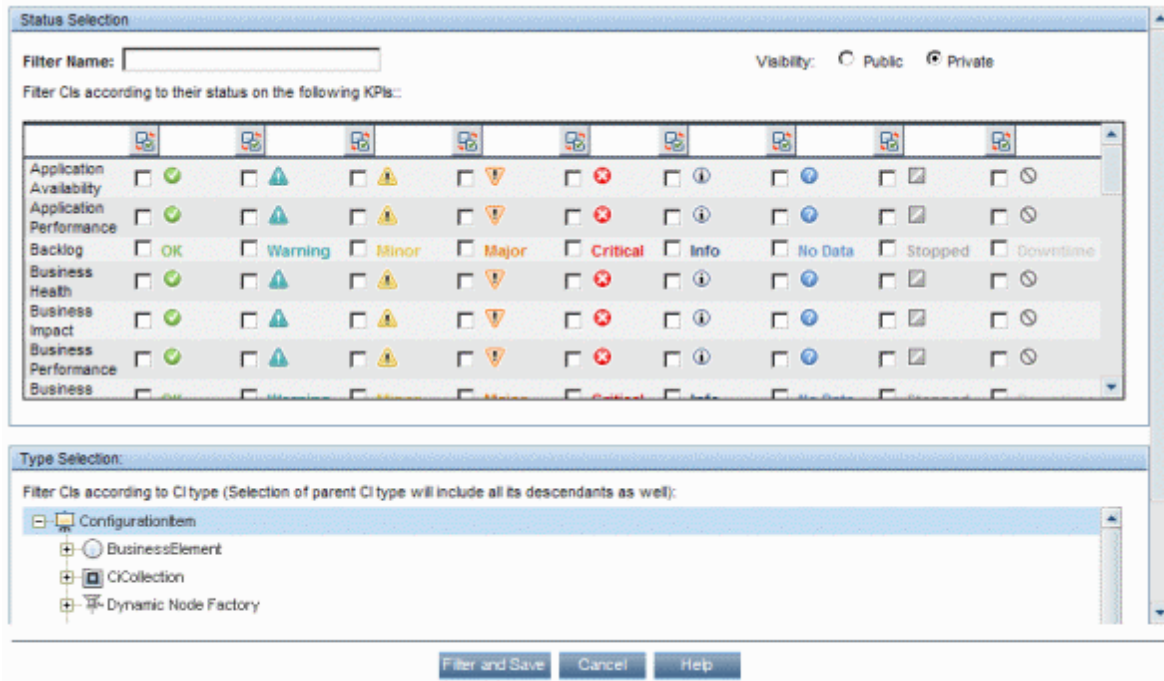
User interface elements are described below (unlabeled elements are shown in angle brackets):

UI Element	Description
<CI name>	Each row in the table shows the KPI statuses of a given CI.
	Click the down arrow next to a CI name to access the menu options for the CI. Available options depend on the type of CI and the context menu defined for the CI. If no context menu is defined for the CI, the menu arrow is not displayed. If a menu option is not supported for the selected CI, the option will be disabled or not displayed.
<KPI status/value>	Displays text or an icon indicating the current status or value of the KPI. Tooltip: <ul style="list-style-type: none"> • Status. The status of the CI (calculated according to one of the status calculation methods). It may also display: <ul style="list-style-type: none"> ■ Not up to date. For decayed CIs, indicating that the CI has passed its timeout period. (For a SiteScope CI, this status is displayed after a SiteScope monitor is disabled.) ■ Stopped. When a Business Process is stopped. • Business Rule. The name of the rule that calculates the KPI status or value. • Last Status Change. The date and time since which this CI has held its current operational status.


UI Element	Description
<p><KPI History></p> 	<p>When you select a CI, the history status icon displays either the worst status or the average status for the KPI during a specified time period. For details, see the OMi Administration Guide.</p> <p>Tooltip:</p> <ul style="list-style-type: none"> • History Type. The type of history (worst status or average status) used when calculating history status. • Historical Worst/Average. The worst or average status of the KPI in the selected time period.
<p><KPI Trend></p> 	<p>When you select a CI, the trend status icon shows the trend in real-time status for the KPI, using three directions: up, down, and no change. For details, see the OMi Administration Guide.</p> <p>Tooltip:</p> <ul style="list-style-type: none"> • Trend. The trend of the KPI in the selected time period.

Defining/Editing Filters Dialog Box

This dialog box enables you to define new filters or customize existing filters. To access, select **Applications > Service Health > 360° View > Hierarchy**. Click **Filter** and then click **Advanced**, or click the **Favorite Filters Menu** button.



User interface elements are described below:

UI Element (A-Z)	Description
	Invert Selection. Click to select or deselect one of the statuses, for all the KPIs.
<Status check boxes>	Select the check box for each KPI status that you want to include in the filter. The Hierarchy display shows all the CIs that have at least one KPI that fills the filter criteria.
Cancel	Click to exit the Defining/Editing Filters dialog box without saving changes.
Filter	Click to apply the filter (without saving filter settings).
Filter and Save	Click to apply the filter, and save your changes to the filter.
Filter Name	Type the name of the filter you are creating.
Type Selection	<p>This displays a CI type hierarchy, which you can use to filter specific CI types. Select a CI type to only display CIs of this type in the Hierarchy display.</p> <p>The CI type filtering is combined with the Status filtering. For example, suppose you select critical status for all KPIs in the Status Selection pane, and the Business Element CIT in the Type Selection pane. The Hierarchy display will only show CIs of this CIT (and its descendant CITs), which have at least one KPI in critical status.</p> <p>Note: If you select a higher-level CIT, all its descendant CITs are included in the filter as well.</p>

UI Element (A-Z)	Description
Visibility	<p>Select the required visibility option:</p> <ul style="list-style-type: none">• Private. Create a private filter that is available only to the user who created them. You can use the global and public active filters as templates to build private active filters. Their names have the following syntax: private:<name>. <p>For each user name used when logging on to OMi, Service Health creates an associated filters file. When you log on to OMi using a specific user name, you can only view and modify the filters contained in the associated filters file. The file is updated with the filter modifications made by each user who logs in under this user name, so any changes you make to the filters may overwrite modifications made by previous users.</p> <ul style="list-style-type: none">• Public. Administrators or users with the appropriate permissions can build public active filters. Those filters are available for all users at the specific customer. You can use the global active filters as templates to build public active filters. Their names have the following syntax: public:<name>. <p>Note: Visibility is displayed only to the administrator or to a user with the appropriate permissions.</p>

Neighborhood Map Component

Neighborhood Map displays the parent CIs and child CIs of a selected CI, in an interactive graphic. Each CI in the view is displayed as a bar, with a color-coded icon indicating its current worst KPI status. Below the name of the CI, icons identify its related KPIs and their current statuses.

You can view CIs within Neighborhood Map divided into layers, enabling you to focus attention on the layer which interests you the most (for example Business Enablement, Infrastructure, or Software).

Links between CIs are shown as defined in the RTSM (without View Folding); links between the CIs represent their physical links as they appear in the RTSM.

Tip: The Neighborhood Map is particularly useful if, for example, you want to explore the source of a problem which may come from a CI outside your monitored view.

To access

Create a custom page that includes Neighborhood Map. Add a component which enables you to select a CI, such as View Explorer or Top View. For details see ["How to Set Up My Workspace" on page 223](#).

Learn More

Display Options: Plain Mode or Layer Mode

You can view CIs in Neighborhood Map in one of two modes:

- **Plain mode.** In plain mode, each CI is displayed on its own.
- **Layer mode.** In layer mode CIs are divided into functional layers, such as Business Enablement, Infrastructure, or Software. CIs are assigned to the layers based on their Layer attribute in the RTSM. For example, in layer mode the Application Resource and Application System CITs are assigned to the Software layer, based on their Layer attribute.

In layer mode you can move CIs in and out of layers. You can also create additional layers using the Layer attribute in RTSM administration.

The layers in Neighborhood Map are identical to the layers in Topology Map; for details on each of the default layers, see "[Topology Map Component](#)" on page 178.

Annotating and Saving Images

Within Neighborhood Map, you can use annotation to create and save a snapshot of the image you are viewing, and highlight important areas of the image. Click the **Capture Result and Add Annotations** button on the toolbar to access the annotation tool. The annotation tool is identical in Neighborhood Map and Topology Map. For details, see "[Annotation Tool](#)" on page 125.

Tasks

How to Modify the Number of CI Levels Shown in Neighborhood Map

By default, when a CI is selected, Neighborhood Map shows two levels of its parent CIs and two levels of its child CIs. In other words, Neighborhood Map shows the selected CI in the context of its parent CIs and their parent CIs, as well as its child CIs and their child CIs.

You can modify this setting to display one, two, or three levels of CIs, using the following infrastructure setting:

Administration > Setup and Maintenance > Infrastructure Settings


Access **Applications > Service Health Application**. Locate the **Neighborhood map depth** entry in the Service Health Application - Service Health Layout Properties table, and modify as required.

How to Customize Neighborhood Map Display

The Neighborhood Map display is highly customizable; you can view CIs in layers or individually, display minimal or detailed information on CIs and the links between them, and modify other elements in the display. For details, refer to the UI Description below.

Note: Customizing the Neighborhood Map display has no effect at all on the RTSM topology; your customizations only influence how CIs are displayed in this component.








How to Modify the Refresh Rate

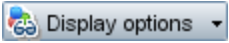
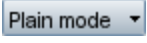


You cannot modify refresh rates of the out-of-the-box pages; however you can create a user-defined page with the components you need, and modify their refresh rates using the **Component Menu** button  on the component toolbar. Select **Preferences**, and change the refresh rate as needed.

UI Descriptions

Neighborhood Map Toolbar



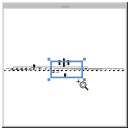
User interface elements are described below (unlabeled elements are shown in angle brackets>):

UI Element (A-Z)	Description
	Refresh. To enhance performance, Neighborhood Map does not reflect changes made to the CI topology within the RTSM. If you have made changes to CI topology in the RTSM, click Refresh to update the CI topology display.
	Refocus. To change Neighborhood Map's focus from the selected CI to a different CI, select a CI and click Refocus . Neighborhood Map changes focus to highlight the selected CI, and shows its parent and child CIs.
	Select. In Select mode, you can select CIs or groups to perform actions on the selected elements. For example, you must be in Selection mode to move CIs .
	Interactive Zoom. In Zoom mode, click within Neighborhood Map and drag up or down to zoom in and out of the image.
	Pan. In Pan mode, if your Neighborhood Map image is scrollable you can click and drag the image to move it. (If the entire image fits within your screen this feature has no effect.)
	Fit to screen. Click to fit the graph to the pane, either by expanding it or by reducing it. Relative proportions of the image are maintained.
	Toggle Presentation Type. Click to switch between minimal view, which displays only CI icons and worst statuses, and detailed view, which also displays CI names and KPI statuses.

UI Element (A-Z)	Description
	<p>Click to open a dropdown list of display options. You can select or de-select each of the following options:</p> <ul style="list-style-type: none"> • Show links. If you select this option, Neighborhood Map displays arrows between CIs that are linked. • Show link labels. If you select this option, Neighborhood Map displays each link together with its link type (for example, Containment or Ownership). If the Show links option is de-selected, this option is disabled.
	<p>Click to select between the following display modes:</p> <ul style="list-style-type: none"> • Plain Mode. Each CIs is displayed standing on its own. • Layer Mode. Neighborhood Map displays related higher-level CIs in layers; for example, Business Element CIs are displayed in the Business Enablement layer, while Node and Node Element CIs are displayed in the Infrastructure layer.
	<p>Display Minimap. Click to display the Neighborhood Map image in a small window (minimap), which is overlaid on top of the standard Neighborhood Map.</p> <p>A highlighted area within the minimap image shows which part of the Neighborhood Map is displayed in the larger image. You can resize or move this highlighted area to focus on the part of Neighborhood Map which is of interest to you. To close the minimap window, click within the larger image.</p>
	<p>Capture Result and Add Annotations. Click to open the Annotation Tool, which creates a snapshot of the Neighborhood Map and enables you to annotate the snapshot to highlight important areas. The tool enables you to draw in the snapshot, or add lines or text to the image. For details, see "Annotation Tool" on page 125.</p>

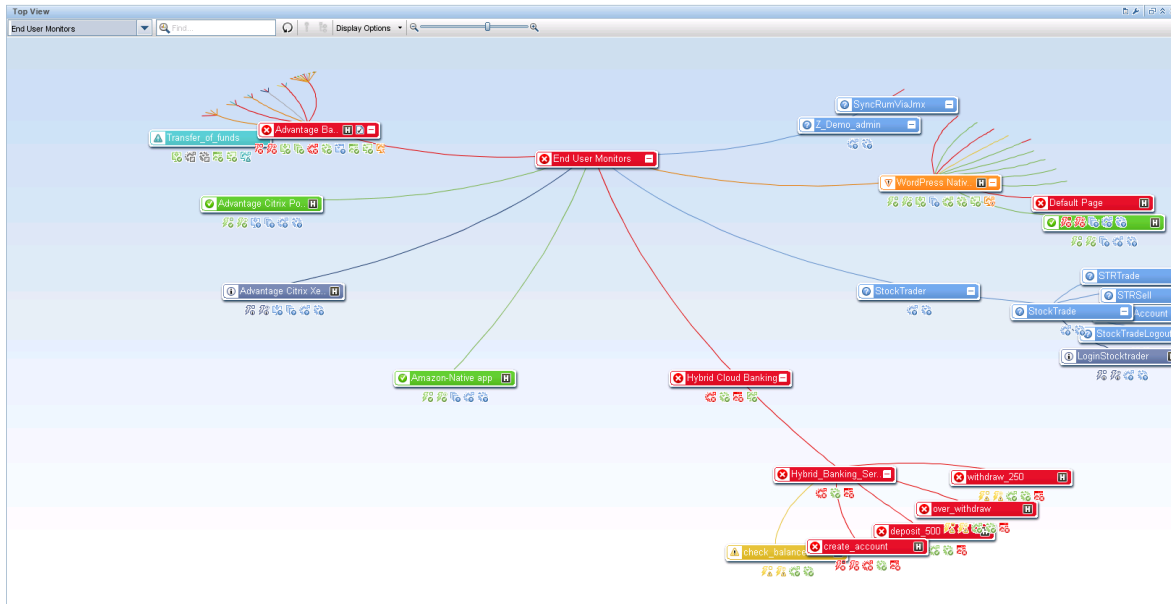
Neighborhood Map Display

User interface elements are described below (unlabeled elements are shown in angle brackets>):

UI Element (A-Z)	Description
<p data-bbox="240 373 334 436"><CI nodes></p> 	<p data-bbox="391 373 1333 436">Each CI in the selected view is displayed as a bar within Neighborhood Map, which contains the following elements:</p> <ul data-bbox="402 470 1365 695" style="list-style-type: none"> <li data-bbox="402 470 1365 533">• The left side of the bar shows an icon indicating the CI's CI type, as represented in the RTSM. <li data-bbox="402 562 1049 596">• CI aggregated status is overlaid on top of the CIT icon. <li data-bbox="402 625 1333 695">• If Neighborhood Map is in detailed view, the CI name and KPI statuses are also displayed. <p data-bbox="391 726 1325 789">Tooltips: The tooltip for a CI shows the CI name and CI type. The tooltip for a KPI shows status and performance data for the KPI:</p>  <p data-bbox="391 1083 1000 1115">CI and KPI status are displayed as color-coded icons.</p>
<p data-bbox="240 1142 367 1205"><layers of CIs></p>	<p data-bbox="391 1142 1373 1241">In layer mode, high-level CIs are displayed within layers that are divided by functionality, such as Business Enablement or Infrastructure. Each layer is shown in a separate shaded area, labeled by the layer name.</p> <p data-bbox="391 1262 1325 1325">Layers cannot be renamed or deleted; CIs can be removed from layers, or added to them.</p>
<p data-bbox="240 1352 350 1451"><links between CIs></p>	<p data-bbox="391 1352 1357 1415">In the list of Display options, if you select Show links, Neighborhood Map displays arrows between CIs that are linked within the RTSM.</p> <p data-bbox="391 1436 1341 1499">If you also select the Show link labels option, Neighborhood Map also displays the link type (for example, Containment or Ownership).</p>
<p data-bbox="240 1533 367 1596"><minimap image></p> 	<p data-bbox="391 1533 1349 1596">If you click the Display Minimap button, the Neighborhood Map image appears in a small window (minimap), overlaid on top of the standard Neighborhood Map.</p> <p data-bbox="391 1617 1373 1715">The highlighted area shows which part of the Neighborhood Map is displayed in the larger image. Resize or move the highlighted area to focus on the part of Neighborhood Map which is of interest to you.</p>
<p data-bbox="240 1757 334 1820">Last Update</p>	<p data-bbox="391 1757 1146 1789">Displays when the information in the component was last updated.</p> <p data-bbox="391 1810 1024 1841">To manually update CI statuses, click the Refresh icon.</p>

Top View Component

Top View enables you to see the business availability of your system components at a glance. The CI bars in the component provide a visual representation of real-time IT performance metrics mapped onto business applications, based on the hierarchy structure defined for each view. The connecting lines between the bars define the relationships between the CIs.



By presenting an integrated, single view of essential applications and business processes, Top View provides you with an overall perspective on the health of your business services, and enables you to quickly assess how a performance issue impacts the availability of any part of your business. Each CI is color-coded to indicate the worst status held by the CI's KPIs. You can also quickly view KPI details, and CI business impact.

To access

When creating a custom page, Top View can be used as an independent component using its built-in view selector, or together with another component which selects views such as View Explorer. For details see ["How to Set Up My Workspace" on page 223](#).

Learn More

Interactive Map

Top View presents an interactive map of the CIs that can be intuitively manipulated using the mouse, enabling you to drill down to specific branches of the tree and to focus on particular business or problem areas.

By default, the Top View component displays four levels of CIs. The rest of the CIs are collapsed. You can expand CIs from the fourth level and see their child CIs. The lines connecting the bars represent the branches of the tree. The bars and lines can be manipulated to change the amount of information displayed and the overall layout of the diagram.

Understanding the Colors and the Icons

Each CI contained in the view is displayed as a bar, color-coded according to the current worst operational status for that CI.

For a list of the KPIs used in Service Health, see the OMi Administration Guide.

Note: The root CI does not display KPI icons because it is a container and not a real CI.


Virtual Containers

Virtual container CIs are displayed in Top View in regular CI bars, color-coded according to the current worst operations status for the child CIs included in that group. You cannot right-click the bar to display context menu options.

Tasks

How to Use Top View

- **Manipulate the display.** Click and drag anywhere in the component to move and rotate the graphic around that point. Double-click a CI (or click the lower-right corner of a selected CI) to rearrange Top View with the selected CI in the center of the display. Click **Reload View** in the toolbar to restore the view to its original display.
- **Increase/decrease CI display size.** You can use the magnifying slider on the toolbar to increase or decrease the CI display size. Changes are saved per user, per component.
- **Show CI details.** By default, CIs are shown without their KPIs. To display KPI icons for all CIs, select **Display Options > Show KPIs** in the toolbar. To view a list of a CI's KPIs and their statuses, click a CI.

To display HI information, select **Display Options > Show HIs** in the toolbar. Each CI that has HIs assigned will have a  icon in its CI bar. Click this icon to view HI details; see "[Health Indicator Component](#)" on page 145 for more information about the data displayed.

When you hover over a CI's status icon, its status and CI type are displayed. When you hover over a KPI's status icon, its status and calculation rule are shown.

- **Focus on problematic areas.** Select a problematic CI, then click **Path to Root** in the toolbar to display the path from the selected CI to the view root CI.

You can also select a problematic CI, then click **Problematic Subtree** in the toolbar to display all of its child CIs that have Critical or Major status. This helps you find the problematic child CI that caused the selected parent CI to have a status other than OK.

Note: Problematic Subtree and Path to Root are disabled in local impact views where a breakdown is configured.

- **Locate a CI.** You can search for a CI among the CIs currently displayed in Top View. Type the first letters of a CI name in the toolbar Search bar. A list of the relevant CIs currently included in Top View display appears; select a CI to focus on that CI and open its CI details.

How to Use Keyboard Navigation

You can use the following keyboard navigation options in Top View:

- Arrow keys (up, down, right, left): Move from one CI to another.
- Shift-C: Center Top View focus on the selected CI.
- Plus (+) and minus (-) keys: Expand and collapse the selected CI.
- **Ctrl** + (plus) and **Ctrl** - (minus): Increase/decrease CI display size.

How to Customize Top View

Using Service Health Administration, you can customize various aspects of the following:

- Top View colors, fonts, or layout
- CI or KPI display options
- Background image
- Number of CI levels displayed

For details on customizing Top View, see the OMi Administration Guide.

How to Debug Top View


To debug Top View, type `Ctrl-Alt-L` to control the client log debugging mechanism.

Note that your debug level is reset to default when you exit Top View; the permanent level is set by the **Log Level** infrastructure setting. For details, see the OMi Administration Guide.

The data is printed to the console and saved in the log files that are located in `<username>\.hplogs`.

How to Modify the Refresh Rate

The default refresh rate for Top View is 5 seconds.

You cannot modify refresh rates of the out-of-the-box pages; however you can create a user-defined page with the components you need, and modify their refresh rates using the **Component Menu** button  on the component toolbar. Select **Preferences**, and change refresh rates as needed.




Note:


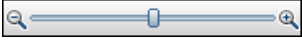
Top View Limitation: If Top View is loading a view which has no KPIs defined for CIs (such as the System Software Monitoring view), the view is reloaded every refresh interval.

UI Descriptions

Top View Toolbar



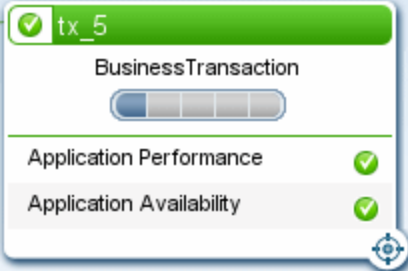

User interface elements are described below (unlabeled elements are shown in angle brackets):

UI Element	Description
<View Selector>	Select a view from the dropdown list (on the top left area of the toolbar) to display its CIs in Top View.
<Search Bar>	Type a CI name to focus on that CI in Top View. Note: You can only search among the CIs currently available to Top View; you cannot search for a CI that is another view, or in a hierarchy level that Top View has not accessed.
	Reload View. Click to restore Top View to its original display.
	Path to Root. After selecting a problematic CI, click to display the path from the selected CI to the view root CI. Click again to display the full Top View. Note: This is disabled in local impact views where a breakdown is configured.
	Problematic Subtree. After selecting a problematic CI, click to display all of its child CIs with Critical or Major status; this helps you to quickly locate a problematic child CI. Click again to display the full Top View. Note: This is disabled in local impact views where a breakdown is configured.

UI Element	Description
	Show KPIs. Click to show/hide KPI icons on CIs. Show HIs. Click to show/hide HI icons on CIs, which indicate whether a CI has HIs assigned.
	Use the slider to increase or decrease the CI display size. Changes are saved per user, per component.

Top View Display

User interface elements are described below (unlabeled elements are shown in angle brackets>):

UI Element (A-Z)	Description
<CIs>	<p>By default, each CI in the selected view is shown in a bar, which contains CI aggregated status and CI name:</p>  <p>If you select Display Options > Show KPIs in the toolbar, KPI icons are displayed below each CI bar:</p>  <p>When you click a CI, its details are displayed:</p>  <ul style="list-style-type: none"> • The detailed display shows the CI name and status, CI type, business impact, KPIs, and KPI statuses. • CI and KPI statuses are displayed as color-coded icons. • The business impact bar, using a rating from zero (no impact) to 5 (high impact), shows how much of an impact the CI has on the business CIs and SLAs in your monitored environment. <div style="background-color: #f0f0f0; padding: 10px; margin: 10px 0;"> <p>Note: The Business Impact bar is not visible by default in Service Health application components. To modify, see the OMi Administration Guide.</p> </div> <ul style="list-style-type: none"> • Click the target icon in the lower right corner to rearrange Top View with the selected CI in the center of the display. <p>Health Indicators: If you select Display Options > Show HIs in the toolbar, and a CI has HIs attached, the CI bar will show this icon: . Click the icon to view HI details; see "Health Indicator Component" on page 145 for more information about the data displayed.</p> <p>Tooltips: CI tooltips show CI status and CI type. KPI tooltips show status and performance data for the KPI.</p>

UI Element (A-Z)	Description
<right-click menu options>	Right-click a CI bar to list the available menu options.
Last Update	Displays when the information in the component was last updated. To manually update the information in the component, click the Refresh icon.

Troubleshooting

Top View Freezing the Browser

In rare cases, if an OMi client is loaded with many Top View pages running concurrently in My Workspace, and you have been logged on for an extended period of time, an out of memory issue can cause the browser to freeze. To prevent this, set Top View refresh independent of other components, using the **Top View Independent Refresh** infrastructure setting. For details, see the OMi Administration Guide.

Topology Map Component

Topology Map enables you to assess the business availability of your system components at a glance, using an interactive graphic representation of the CIs in a view. Each CI in the view is displayed as a bar, with a color-coded icon indicating its current worst KPI status. Below the name of the CI, icons identify its KPIs, and their current statuses.

You can display CIs according to view folding (View Display), or according to the CI definitions in the RTSM (Graph Display). Topology Map also enables you to arrange CIs in groups (divided by CI type or application), or in functional layers.

Tip: By presenting an integrated, single view of essential applications and business processes, Topology Map provides you with an overall perspective on the health of your business services, and enables you to quickly assess how a performance issue impacts the availability of any part of your business.

To access

When creating a custom page, Topology Map can be used as an independent component using its built-in view selector, or together with another component which selects views such as Model Explorer. For details see ["How to Set Up My Workspace" on page 223](#).

Learn More

Plain Mode, Group Mode, and Layer Mode

You can view CIs in Topology Map in one of three ways:

- **Plain mode.** In plain mode, the graphic display of CIs does not include groups or layers.
- **Group mode.** In group mode, the Topology Map graphic display can include groups of CIs. CIs can be automatically grouped either by CIT, or based on their Classification attribute in the RTSM.

You can also create user-defined groups, and move CIs into and out of groups, to fill your organizational needs.

In group mode, a status icon shows the worst status of all CIs in the group, as follows:



- **Layer mode.** In layer mode CIs are divided into functional layers, such as Business Enablement, Infrastructure, or Software. CIs are assigned to the layers based on their Layer attribute in the RTSM. For example, in layer mode the Application Resource and Application System CITs are assigned to the Software layer, based on their Layer attribute.

In layer mode you can move CIs in and out of layers. You can also create additional layers using the Layer attribute in RTSM administration.

Groups are only available in group mode; layers are only visible in layer mode.

If you create a new layer, click the **Restore Default View** button to display the layer properly in Topology Map.

Default Layers

Within layer mode, CIs are assigned to default layers based on their CIT attributes within the RTSM. The following section describes each of the layers that are defined out-of-the-box.

- **Business Enablement.** This layer contains business services, processes, and activities. These include both business services which a business provides to another business (or one organization provides to another within a business), and IT services which an IT organization provides to support business services or IT operations.

A Business Service typically has an associated end-user or customer, a business application, and a service level agreement. Examples include payment processing, backup and recovery, and self-service help desk.

- **Application and Services.** This layer contains applications and their core components, not including elements that are deployable. An application is a set of components which supports a business activity, which is seen as a whole, and is known by a specific name.

The Application and Services layer also includes business transactions, as well as infrastructure services that support business services and processes. Examples include voice and network services, database services, backup and restore services, desktop services, and Windows administration services.

- **Software.** This layer includes individual installations of software elements. These are executables that can be deployed, or are deployed, on a logical system.
- **Infrastructure.** This layer includes logical systems such as virtualization and clustering, and physical systems such as storage devices, network devices, and servers.
- **Facilities.** This layer includes locations, sites, buildings, rooms, racks, and so on.

View or Graph Display

The basic structure of the CIs in a Topology Map can be defined in one of two ways:

- **View Display.** This shows the topology of the view based on the View Folding, with a single root node, and child CIs that have no recursive loops. Such loops are resolved by copying CIs, so that a CI can appear a few times in a view.

The view display follows the Impact model, so all the links between CIs are either Impact (Dependency) or Impact (Containment). By default, link labels are not shown in view display.

- **Graph Display.** This shows the topology of the view as defined in the RTSM, without View Folding. The links between the CIs represent their physical links as they appear in the RTSM. By default, Topology Map shows link labels in the graph display.

Tasks

How to Customize Topology Map Display

The Topology Map display is highly customizable; you can view CIs in layers or groups, display minimal or detailed information on CIs and the links between them, and modify other elements in the display. For details on these options, refer to the UI Description section below.


Note: Customizing the Topology Map display (hiding CIs, moving CIs in and out of layers, and so on) has no effect at all on the RTSM topology; your customizations only influence how CIs are

displayed in this component.

How to Annotate and Save Images

Within Topology Map, click the **Capture Result and Add Annotations** button on the toolbar to access the annotation tool. You can use annotation to create and save a snapshot of the image you are viewing, and highlight important areas of the image. For details, see ["Annotation Tool" on page 125](#).






How to Modify the Refresh Rate

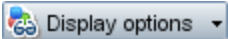
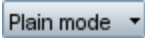




You cannot modify refresh rates of the out-of-the-box pages; however you can create a user-defined page with the components you need, and modify their refresh rates using the **Component Menu** button  on the component toolbar. Select **Preferences**, and change the refresh rate as needed.





UI Descriptions

Topology Map Toolbar

User interface elements are described below (unlabeled elements are shown in angle brackets):


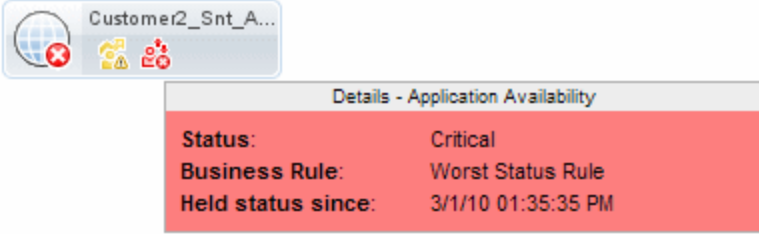
UI Element	Description
<View Selector>	Select a view from the dropdown list (on the top left area of the toolbar) to display the view in Topology Map.
	Select. In Select mode, you can select CIs or groups to perform actions on the selected elements. For example, to move CIs or groups you must be in Selection mode.
	Interactive Zoom. In Zoom mode, click within Topology Map and drag up or down (or use your mouse wheel) to zoom in and out of the image.
	Pan. In Pan mode, if your Topology Map image is scrollable you can click and drag the image to move it. (If the entire image fits within your screen this feature has no effect.)
	Fit to screen. Click to fit the graph to the pane, either by expanding it or by reducing it. Relative proportions of the image are maintained.
	Toggle Presentation Type. Click to switch between minimal view, which displays only CI icons and worst statuses, and detailed view, which also displays CI names and KPI statuses.

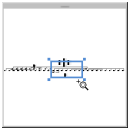
UI Element	Description
	<p>Click to open a dropdown list of display options. You can select or de-select each of the following options:</p> <ul style="list-style-type: none"> • Show links. If you select this option, Topology Map displays arrows between CIs that are linked. • Show link labels. If you select this option, Topology Map displays each link together with its link type (for example, Contains or Depends on). If the Show links option is de-selected, this option is disabled.
	<p>Click to select between the following display modes:</p> <ul style="list-style-type: none"> • Plain Mode. Each CIs is displayed standing on its own, not in a layer or group. • Group Mode. Topology Map displays related lower-level CIs in groups; for example, within the Application System hierarchy, CIs related to SAP or Siebel are grouped within ERP. • Layer Mode. Topology Map displays related higher-level CIs in layers; for example, Business Element CIs are displayed in the Business Enablement layer, while Node and Node Element CIs are displayed in the Infrastructure layer.
	<p>Hide Selection. Click to hide selected CIs or groups from the display. Note that hidden CIs are still included in view calculations.</p>
	<p>Restore Hidden. Click to restore any hidden CIs or groups to Topology Map.</p>
	<p>New Group. In group mode, perform one of the following:</p> <ul style="list-style-type: none"> • Click the New Group button to create a new (empty) group; you can then drag CIs into this new group. • Select one or more CIs, then click the New Group button to create a group which contains these CIs. <p>This button is only active in group mode.</p>
	<p>Delete Group. Select a group and click the Delete Group button to delete the group container.</p> <p>If the deleted group was nested within another group, the CIs are moved to the parent group; if the deleted group was not nested, the CIs are moved to their original location in the view hierarchy.</p> <p>This button is only active in group mode.</p>

UI Element	Description
	<p>Rearrange Layers. In layer mode, click to rearrange the graphic display so that the CIs and their links are neatly organized. This is useful if you have moved CIs in and out of layers, and want to neatly rearrange the display.</p> <p>Note that if you have moved CIs in and out of layers, this action does not restore them to their original layers.</p> <p>This button is only active in layer mode.</p>
	<p>Restore Default View. Click to restore Topology Map to its original, pre-customization settings.</p> <p>Note: If you create a new layer, click Restore Default View to display the layer properly in Topology Map.</p>
<p>View Display/Graph Display</p>	<p>Select one of the following ways to build a Topology Map:</p> <ul style="list-style-type: none"> • View Display. This shows the topology of the view based on View Folding, using the Impact model, with a single root node, and child CIs that have no recursive loops. • Graph Display. This shows the topology of the view as defined in the RTSM, without View Folding. The links between the CIs represent their physical links as they appear in the RTSM.
	<p>Display Minimap. Click to display the Topology Map image in a small window (minimap), which is overlaid on top of the standard Topology Map.</p> <p>Drag the magnifying glass icon within the minimap to focus Topology Map to show the area which is of interest to you. You can move the minimap by clicking and dragging its header bar. To close the minimap window, click within the larger Topology Map image.</p>
	<p>Capture Result and Add Annotations. Click to open the Annotation Tool, which creates a snapshot of the Topology Map and enables you to annotate the snapshot to highlight important areas. The tool enables you to draw in the snapshot, or add lines or text to the image. For details, see "Annotation Tool" on page 125.</p>

Topology Map Display

User interface elements are described below (unlabeled elements are shown in angle brackets):

UI Element (A-Z)	Description
<p><CI nodes></p> 	<p>Each CI in the selected view is displayed as a bar within Topology Map, which contains the following elements:</p> <ul style="list-style-type: none"> • The left side of the bar shows an icon indicating the CI's CI type, as represented in the RTSM. • CI aggregated status is overlaid on top of the CIT icon. • If Topology Map is in detailed view, the CI name and KPI statuses are also displayed. <p>Tooltips: The tooltip for a CI shows the CI name and CI type. The tooltip for a KPI shows status and performance data for the KPI:</p>  <p>CI and KPI status are displayed as color-coded icons.</p>
<p><groups of CIs></p>	<p>In group mode, groups of related CIs are displayed within a border. Some CIs are assigned to groups by default; you can also create groups to fit your needs.</p> <p>To modify a group, click the Select button in the Topology Map toolbar. You can then perform the following:</p> <ul style="list-style-type: none"> • To rename a group, double-click the group name and type a new name for the group. • To add CIs to a group or remove CIs from a group, drag them in or out of the group. • To nest one group within another, drag one group inside another group. • To collapse or expand a group, click the Collapse or Expand icons in the upper right corner of the group container.
<p><layers of CIs></p>	<p>In layer mode, high-level CIs are displayed within layers that are divided by functionality, such as Business Enablement or Infrastructure. Each layer is shown in a separate shaded area, labeled by the layer name.</p> <p>Layers cannot be renamed or deleted; CIs can be removed from layers, or added to them.</p>

UI Element (A-Z)	Description
<links between CIs>	<p>In the list of Display options, if you select Show links, Topology Map displays arrows between CIs that are linked within the RTSM.</p> <p>If you also select the Show link labels option, Topology Map also displays the link type (for example, Contains or Depends on).</p> <p>Note: If a CI outside a group links to a number of CIs inside a group, when the group is collapsed no link label is shown; when the group is expanded link labels are shown for each link.</p>
<minimap image> 	<p>If you click the Display Minimap button, the Topology Map image appears in a small window (minimap), overlaid on top of the standard Topology Map.</p> <p>The highlighted area shows which part of the Topology Map is displayed in the larger image. Resize or move the highlighted area to focus on the part of Topology Map which is of interest to you.</p>
<right-click menu options>	<p>Right-click a CI bar to list the available menu options.</p>
Last Update	<p>Displays when the information in the component was last updated.</p> <p>To manually update the information in the component, click the Refresh icon.</p>

View Explorer Component

The View Explorer displays configuration items from the Run-time Service Model database (RTSM). The displayed selection can be filtered by applying a view. Views configure the View Explorer to display only the configuration items specified in the view.

The interaction between the View Explorer component and the information presented in the other components on a page varies, according to the context. For example, when you select one or more configuration items in the CI Tree, a filter is automatically applied to the Event Browser so that only those events that are related to the selected configuration items are displayed. The selected view also limits the events displayed to those related to CIs contained by the view.

Note: The behavior of the Event Browser depends on the type of the CI selected: CI Group type, Node type, or Other types.

The active filter is indicated in the Filter applied list. The View Explorer selections can also be cleared using the **Clear All** button.

Some components such as Top View or Topology Map have built-in view explorers, but you may want to add the View Explorer component to a page with one of these components, for ease of navigation within a complex view.

To access

- **Workspaces > Operations Console > <select a perspective>**
- There are a number of default pages in My Workspace which contain this component.
- You can also create your own pages and include this component; for details see "[How to Set Up My Workspace](#)" on page 223.

Learn More

Browse Views and the Search CIs Tabs

The View Explorer includes the Browse Views and the Search CIs tabs.

- In Browse Views you can search for and display a view, and browse through the view to locate a particular CI. You can also perform operations for the CI from a context menu.
- In Search CIs you can search for one or more CIs in the views or the RTSM by name or by CI type.

Unavailable Views and CIs

The View list in the View Explorer may not display all views in the RTSM, or it may not display the contents of a view, because it includes:

- Only the views for which you have the necessary permissions. To set permissions, open Users, Groups, and Roles:

Administration > Users > Users, Groups, and Roles

- Only the views that are assigned to the application.
- Inactive views (appear in red) that cannot be selected.
- Out-of-the-box views for which you do not have a license. These views do not contain CIs. For information about the out-of-the-box views, see "Predefined Folders and Views" in the Modeling Guide.

Tasks

How to Select a View

1. Open the Event Perspective or the Health perspective to display the list of known events:

Workspaces > Operations Console > <select a perspective>

2. Do one of the following:
 - In the View Explorer pane, select the **Browse Views** tab and use the **View** list to display the available views and select the required view.

Note: Entering a character in the View field highlights the first matching view name.

- In the Event Browser, select a view from the View Selector. The five most recent selections are displayed at the top of the list.

The events displayed in the Event Browser are limited to events associated with the selected view. The Event browser title changes to show the view selected.

Note:

- The OMi perspectives are wired so that selecting a view in the Event Browser View Selector disables the CI selected in the View Explorer.
- The Event Browser View Selector is disabled in locked Event Browser pages so that only events associated with a preselected view are displayed.

How to Refresh the View Explorer

Using the Modeling Studio, you can configure new views or modify existing views to change, increase, or decrease the information displayed:

Administration > RTSM Administration > Modeling > Modeling Studio

The RTSM view lists are cached and reused for subsequent requests by the same user. The view lists are not loaded directly from the RTSM every time they are required.

The cache is automatically cleared after 3 hours or when the OMi server is restarted.

UI Descriptions

Browse Views Tab

User interface elements are described below (unlabeled elements are shown in angle brackets):

UI Element (A-Z)	Description
<CIs>	The CIs contained in the currently selected view.
<Tooltip>	Hold the cursor over a CI to display a tooltip with the relevant CI type.
<View>	<p>The View box displays the currently selected view. To select a view to display, click the down arrow on the right side of the View box; this displays an abridged list of views, containing the most recently accessed views. Click the arrow at the bottom of the list to scroll through the entire list.</p> <p>Alternatively, place the cursor in the list and begin typing the view name. If the first few letters that you type match an existing entry, the view name is completed. If the names of several views begin with those letters, all matching views are displayed in the list.</p>

Search CIs Tab

User interface elements are described below (unlabeled elements are shown in angle brackets):

UI Element (A-Z)	Description
<Context sensitive menu options>	The View Explorer shortcut menu contains different options in each of the pages in which it appears.
<Search results>	<p>After you run the search, the results are listed in the lower part of the View Explorer component. The results are shown in two columns:</p> <ul style="list-style-type: none"> • Name. Contains the name of the CI. • Type. Contains the CI type of the CI. <p>If the CI or view name is abbreviated, resize the table columns. You can sort the search results by clicking the appropriate heading.</p>
Name	To search for a CI by name, enter the name of the CI for which to search.
Search	Performs the search.
Type	To search for CIs by CI type, enter the CI type for which to search.

Watch List Component

The Watch List component provides high level health overview of critical CIs from different views.

You can view CI information for a customizable list of CIs. For example, if a System Administrator has eight servers in different geographic locations that are critical for the running of the operation, they could create a Watch List which shows the status of those CIs.

Details of each CI are displayed on an individual card.



To access

Create additional Watch Lists as components in My Workspace user pages. For details, see ["How to Set Up My Workspace" on page 223](#).

Learn More

Information on a Watch List Card

The Watch List displays information about CIs on virtual cards. Each card contains the following information about the CI:

- The name of the RTSM view that the CI was added from.
- Name of the CI
- CI Type
- Icon representing the CI status which is the most severe status of any KPI associated with the CI.
- Business Impact bar which shows the impact that the CI has on the business CIs and SLAs in your monitored environment. The business impact is rated from zero (no impact) to five (high impact).

Note: The Business Impact bar is not visible by default in Service Health application

components. To modify, see the OMi Administration Guide.

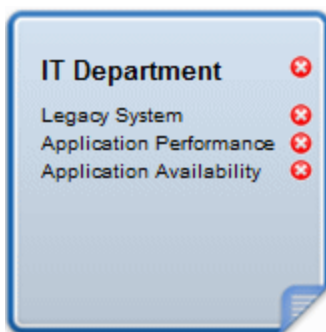
- Time that the health status changed to the currently shown status.

List of Associated KPIs

Click the lower-right corner of a card to "flip" the card and view the status of KPIs associated with the CI. The flip side of the card lists up to seven KPIs that do not have a status of OK.

Hold the pointer over a KPI to display a tooltip showing status and performance data for the KPI.

If there are more than seven KPIs without a status of OK, there is a **More** link which opens a new window with a complete list of KPIs that do not have a status of OK.






Tasks

How to Add CIs to the Watch List

You add CIs to the Watch List in Edit mode. You select CIs to add to the Watch List from a list of views, or search for a specific CI from the Search tab.

Note: You need appropriate permissions to access Edit Mode.


1. In the Watch List page, click **Edit Watch List** .
2. On the Browse Views tab, select a view and then select the required CIs or use the Search tab to locate the required CIs.
3. Click **Add CIs to List**  and then click **Save changes and open Watch List in View Mode** .

Note: You cannot drag and drop CIs onto the Watch List.

How to Add CIs From a Wired Component

Wiring components creates a link between components on the same page so that if you select an item in one component, Service Health automatically selects the item if it appears elsewhere on the screen.

If a page in My Workspace or Service Health contains Watch List together with other components, you can add a wired CI to Watch List from other components on the screen. For example, if you have a page in My Workspace which contains Topology Map in one pane and Watch List in a different pane, you can click on a CI in Topology Map to add it to Watch List.



1. Open or create a page which contains Watch List together with other components.
2. In Watch List, click **Edit Watch List**  to open Edit Mode.
3. In a different component (for example Topology Map), click on a CI that is not currently included in the Watch List and then click **OK** in the message box to add the CI to Watch List.

Note:




- If you select a CI located under a virtual breakdown CI in the wired component, you may not receive a prompt to add it to Watch List.
- You cannot add a <view name> root CI to a Watch List.
- Watch List wiring with OMi (Event Browser) in Edit mode is not currently supported.

UI Descriptions

Watch List View Mode

UI Element	Description
	Edit Watch List. Opens Edit mode so that you can add or remove CIs from the Watch List.
	Open in a New Window. Opens the Watch List in a separate pop-up window.
Card Size	Sets the display size of the CI cards.

Watch List Edit Mode

UI Element	Description
	Add CIs to Watch List. Adds the selected CIs to the right pane.
	Cancel all changes since last save. Deletes all changes that you made since you opened Edit mode.
	Save changes and open Watch List in View Mode. Saves changes and closes Edit mode.
Left Pane	List of views or search from which you can select CIs to add to the Watch List.
Right Pane	List of CIs currently in the Watch List.

Chapter 8: Actions

The Actions pane is used to display the actions that are available for the selected event, its related CI, or the node that hosts the CI. Actions include Tools, Run Books, Custom Actions, and Performance Graphs. The Actions pane is used in the Event Perspective and the Health Perspective and can be added to custom perspectives.

To access:

Open a perspective containing the Actions pane to display the list of known events and their associated actions:

Workspaces > Operations Console > <select a perspective>

Learn More

This section includes:

- ["HP Operations Manager Actions" below](#)
- ["Custom Actions" on the next page](#)

HP Operations Manager Actions

You can run actions configured in HP Operations Manager from OMi. Events from HPOM received by OMi can contain event-related actions. If event-related actions exist, the following icons are displayed in the Event Browser in the A column and the U column:



— Automatic action is available



— User action is available

Operator-initiated actions and automatic actions are also displayed in the Actions tab of the Event Details pane.

Further icons indicate the status of the actions, including, starting, running, succeeded, and failed. For a complete overview of the icons and actions available, see ["Event Browser" on page 30](#).

You can execute these actions from either the Actions tab or the context menu of the event. The result of the action execution creates an entry in the History that is added to the event, if configured in the policy. It is also possible to stop an event-related action before execution completes.

Event-related actions for assigned and unassigned events require authorization to run. If you are not authorized to execute event actions, you still see the configured commands but you are not permitted to execute them.

Note: Actions that contain the `$OPC_GUI_CLIENT` and `$OPC_GUI_CLIENT_WEB` variables

are not supported and are filtered out.

Custom Actions

Custom actions are script-based actions that can be executed on the selected event. You configure custom actions from the Custom Actions manager, where you set up scripts to run custom actions on events. For example, you can add a text string to certain events to make them easier to identify in the Event Browser. Available custom actions for an event are executed from the context menu.

For more information about creating and managing custom actions, see the OMi Administration Guide.

Tasks

This section includes:

- ["How to Run an Action" below](#)
- ["How to Run an HPOM Action" on the next page](#)
- ["How to Launch a Custom Action" on page 196](#)

How to Run an Action

1. Select an event.

The Actions pane displays the actions available for the selected event.

Action types are identified by the following icons:

 — Automatic action (see also ["How to Run an HPOM Action" on the next page](#))

 — Custom Actions (see also ["How to Launch a Custom Action" on page 196](#))

 — Performance Graphs (see also ["Performance Graphing Overview" on page 261](#))

 — Run Books (see also ["Launching Operations Orchestration Run Books" on page 57](#))

 — Tools (see also ["Tools" on page 197](#))

 — User action (see also ["How to Run an HPOM Action" on the next page](#))

Note: The maximum script and executable command length for tools is limited to 2500 characters including resolved parameters.

If the script or command exceeds 2500 characters including parameters resolved during tool execution, an error message is displayed.

Review the possible custom parameter values or contact the tool designer to reduce the script or command length.

2. Select an action from the Actions pane.

If the action does not require any further data, it is run immediately. If further data is required, for example for a Tool or a Run Book, the associated user interface is launched and a wizard guides you through the action launch.

Optional: Enter the Action name or part of the Action name in the **Search** field to reduce the list of displayed Actions. Similarly, select **CI** or **Node** to limit the list of displayed Actions to those that are applicable to either the related CI or the host Node.

How to Run an HPOM Action

1. Select an event that includes event-related actions.

Actions are identified by the following icons displayed in the Event Browser in the **A** column and the **U** column:

 — Automatic action is available

 — User action is available

Further icons indicate the status of the actions, including, starting, running, succeeded, and failed. For a complete overview of the icons and actions available, see ["Tools" on page 197](#).

2. Select the **Actions** tab.

The action specification, target node, and the status of the available actions are displayed. A maximum of one automatic action and one user action is available for an event.

3. For the action that you want to run, select **Start**.

Alternatively, from the context menu for the event, select the appropriate action:

Right-click **Actions > Start**

The action starts, the status changes to *Running* and the associated action icon in the Event Browser changes to reflect this status.

After the action execution has completed successfully, the status changes to *Succeeded*. If the action did not execute successfully, the status is changed to *Failed*.

4. Select the **Annotations** tab for a summary of the executed action.

How to Launch a Custom Action

Select the Custom Action that you want to run on an event:

Right-click > Launch > Custom Actions > <select a custom action>

The selected custom action is launched in the context of the selected event.

UI Reference

Actions Pane

UI Element (A-Z)	Description
CI	CI related to the selected event.
Clear	Removes the currently applied search string and displays all applicable actions for the selected CI.
Event	Title of the event that provides a brief summary of the event.
Filter	Used to reduce the number of actions displayed in the Actions pane by showing only those applicable to CIs or Nodes. All — Shows all applicable actions for the selected event. CI — Shows actions that can be run on the CI related to the selected event. Node — Shows actions that can be run on the Node related to the selected event. Source CI — Shows all actions that can be run on the source CI of the received event.
Node	Host name to which the event is related.
Search	Used to reduce the number of actions displayed in the Actions pane by showing only those that match the entered search string.

Chapter 9: Tools

You can specify tools, for example, to ping a system. These tools are launched from events or from the Actions panel and run on the associated CI. Tools are designed to help users solve common problems quickly and efficiently.

All available tools are displayed in the Select Tool window launched in the context of a configuration item. The selection of tools a particular user sees in context menus depends on the tools that are available for the configuration item affected by a particular event.

Learn More

Tools in Context Menus

In the context of an event, available tools are displayed in the **Launch > Tools** context menu.

In the context of a configuration item, available tools are displayed in the **Launch Tools** context menu and are also displayed in the Actions pane of a perspective.

The selection of tools a particular user sees in context menus depends on the tools that are available for the configuration item affected by a particular event.

For more information about using the Tools manager to configure custom tools, see the OMi Administration Guide.

Tasks

How to Launch a Tool

In this task, you learn how to launch a tool that is configured for a particular configuration item type. Tools are displayed in the context menus.

Note: Tools, custom action, performance graphs, and OO Run Books available for a selected event are also displayed in the Actions pane of a perspective.

1. Open the Event Browser to display the list of known events:

Workspaces > Operations Console > <select a perspective>

2. In the View Explorer pane, select a view containing the configuration item type with the tool you want to start.

Note: Use the search feature if you are not sure of the name or location of the configuration item.

3. To open the Run Tool dialog box, make one of the following selections:

- Right-click an event in the Event Browser and select:

Launch > Tool > <select a tool>

- Right-click a configuration item in the View Explorer and select

Launch Tool > <select a tool>

The Run Tool dialog box opens for the selected tool configured for the configuration item type associated with the event.

4. If the tool requires any additional information to resolve parameters, type the required information in the pages presented by the Run Tool wizard.

5. To run the selected tool, select **Run Tool**.

For scripts and executable commands, the Execution Result window opens and displays the output of the tool execution.

Use the **Word wrap for output** option to make sure that all output text is displayed within the output pane.

Use the **Refresh** button to update the displayed output or select a refresh interval to regularly update the displayed output while the tool is executing.

For URL launches, the target is opened in a browser.

6. For scripts and executable commands, after the tool is run, select **Close**.

UI Reference

Run Tools User Interface

The Run Tool dialog box enables you to view the tool you want to run before running it. You can also browse any other tools that are displayed in the same tools context menu.

The Run Tools page displays the UI elements listed in the following table.

UI Element (A-Z)	Description
Back	Opens the previous page in the Run Tool Wizard, if available. The Back button is inactive (gray) if no previous page is exists.
Cancel	Closes the Run Tool Wizard without running a tool.
Close	Closes the Run Tool Wizard after a tool is run.
Next	Opens the next page in the Run Tool Wizard, if available. The Next button is inactive (grey) if no other page exists.
Refresh	Updates the displayed output of the active tool.
Refresh every	Automatically updates the displayed output of the active tool using the refresh interval selected from the list.
Run Tool	Starts the tool that is selected in the Run Tool Wizard. If the tool requires additional information to resolve parameters, a wizard enables you to supply the required information before the tool starts.
Word wrap for output	Wraps tool output text so that it is displayed within the width of the output pane.

Troubleshooting and Limitations

This section provides help for those people who are troubleshooting problems concerning the launch and use of OMi tools. For more information about troubleshooting tool configuration and availability, see the OMi Administration Guide.

No Tools Display

- No tools are available for the selected type of configuration item or the configuration item associated with the selected event.
- The selected event does not contain Related CI or Node information.

Tool Does Not Run

- The tool is incorrectly configured.

Tools are not launched in the context of an event. They can be run on configuration items only. However, all tools contain event parameters.

- The tool depends on external resources such as network or Internet connectivity that are not currently available.

Chapter 10: Views

The configuration item (CI) model in the configuration management database can be very large, holding thousands of CIs. A view enables you to build a subset of the overall CI model, containing only those CIs relating to a specific area of interest. You can define your own views to display only the information that is relevant to your organization's business needs.

Learn More

This section includes:

- ["Filtering By Views" below](#)
- ["Managing Views" below](#)
- ["Mapping Views" below](#)
- ["Service Health View Bundle" on the next page](#)

Filtering By Views

Views for OMi help you to limit the CIs displayed in the View Explorer. OMi filters the contents of the Event Browser in the Event Perspective and the Health Perspective according to the selected view.

Administrators can also configure users and groups so that you can see only the events filtered by views associated with that user or group. You can also allow users or groups to deselect the selected view and display all events. For details see the OMi Administration Guide.

For more information, see ["Filtering by Views and View-Based Authorization" on page 48](#).

Managing Views

To configure and modify views, use the Modeling Studio:

Administration > RTSM Administration > Modeling > Modeling Studio

You can also modify existing views to change, increase, or decrease the amount and type of information displayed. You can exchange the views between instances of OMi using the Import and Export features of the Content Packs manager.

OMi Management Packs provide views that group configuration items into sets that help you to perform your tasks more efficiently.

Mapping Views

A view displays a subset of the overall ConfigurationItem model, for example, only those CIs that relate to a specific area of interest. Selecting a view enables you to refine both the type and the amount of

information displayed, for example, in the CI Tree or the Health Top View pane.

You can map views to configuration item types. The mapped views appear in the Selected Views list displayed in the Health Top View pane of the Health Perspective tab. For more information about the contents of Health Top View and the Selected Views list, see ["Health Top View Component" on page 152](#).

You can exchange the view mappings that you configure between instances of OMi using the Import and Export features of the Content Packs manager.

Note: Only users with the appropriate access permissions can use the Administration features.

Service Health View Bundle

Certain views defined in the RTSM are not available by default in OMi, because these applications filter for a view bundle named **service health**. To display a view that is not visible in OMi, open the view in RTSM administration or in the Service Health View Builder, and assign the view to the **service health** bundle. For details on bundles, see "Building a Business View" in the Modeling Guide.

Chapter 10: My Workspace

My Workspace is a customizable Web 2.0 user environment for working with OMi. OMi administrators can create role-based workspaces for different types of users such as operations users, and senior management. My Workspace provides smooth interactions between different OMi components.

For details on working with My Workspace, see:

- ["Monitoring Your Environment With My Workspace" on page 204](#). This chapter describes My Workspace, and available pages and components.
- ["How to Set Up My Workspace" on page 223](#). This chapter describes how to create new pages and add components to My Workspace.

Chapter 11: Monitoring Your Environment With My Workspace

The My Workspace administrator sets up pages that include components that are of interest to specific users or groups of users. For each page, the administrator defines the layout of components on the page, and their interaction with one another.

Understanding OMi My Workspace

My Workspace includes the following:

- **Components.** Each component is a part of OMi which displays information relevant to users' business tasks; the Component Gallery contains application components that can be used within My Workspace, grouped by their source applications. For details, see ["Available Components" on page 207](#).

You can add components to a page from the Component Gallery. You can also add external URL-based components, which can interact with other components on a page. For details, see ["How to Create an External Component" on page 229](#).

- **Pages.** Pages are collections of several components displayed together, interacting with one another.

You can open pages from the Page Gallery, which contains predefined pages grouped by applications. For details, see ["Predefined Pages" on the next page](#).

You can also easily create new pages using both OMi components, and external components. For details, see ["How to Set Up My Workspace" on page 223](#).

- **Wiring.** Wiring refers to how components on a page interact with one another. Within a page, components can pass information to one another, so that one component can react to a change in another. For example, you can set up a page so that if you select a CI in one component, the other components on the page focus on that CI as well.

Default pages have wiring predefined; you can also define wiring for non-default pages. For details, see ["How to Set Up Wiring Between Components" on page 231](#).

- **Layout.** The layout refers to how components are arranged on a page; components can be arranged horizontally, vertically, and in tabs. For details, see ["How to Configure Page Layout – Use-Case Scenario" on page 225](#).

Working with My Workspace

- To open a page, select the page from the Page Selector drop-down list on the Page Management


toolbar, on the upper right area of your workspace. You can also type part of the page name in the Page Selector, to limit the number of pages in the drop-down list.

- To close a page, click the close icon in the upper right corner of the page.
- Depending on your user permissions, you may also be able to create or delete pages, configure page layouts, add or remove components on a page, define how components interact with each other, and edit page and component categories. For details on these options, see ["How to Set Up My Workspace" on page 223](#).

Viewing in an External Portal

You can simply copy a component's URL and paste it to an external portal in order to view OMi information.

Predefined Pages

The Workspaces area of OMi comes out-of-the-box with a number of predefined pages. You can open these pages using the Page Selector drop-down list on the toolbar, or using the **Page Gallery**  button.

You can also create custom pages using components of your choice. For details on how to work with My Workspace pages and components, see ["How to Set Up My Workspace" on page 223](#).

Some pages have a single component with a built-in view selector; others have multiple components where one component is used to select views or CIs for the other components. For details on each of the components, see ["Available Components" on page 207](#).

The following are the predefined pages within My Workspace.

Note: You can only access pages for which you have permissions, as described in ["User Permissions in Workspaces" on page 225](#).

Page	Description
Dashboards	
360° View	Displays comprehensive data about a selected CI in one central location. The 360° View contains the Hierarchy component which provides KPI data about the CIs in a selected view. If you select a CI within the Hierarchy component, you can see its detail links. When you click the detail links, you can access the following components: Business Impact, Health Indicators, Alerts, and Changes and Incidents. For details, see "360° View" on page 245 .

Page	Description
KPI Over Time	The KPI Over Time dashboard enables you to view the statuses and status summaries of selected KPIs and CIs over time. The dashboard lets you choose from a number of widgets to survey historical KPI status data and the health of the monitored environment at a glance. For details, see "KPI Over Time Dashboard" on page 246 .
Monitoring Dashboard	Monitoring Dashboards provide an at-a-glance overview of the events from the environment you are monitoring. Monitoring Dashboards enable you to quickly assess the health of the environment and to identify areas that require your attention. For details, see "Monitoring Dashboards" on page 237 .
ROI Dashboard	The Return on Investment Dashboard displays the proportion of events received by OMi that have been automatically handled against those that required intervention by operators. The higher the proportion of automatically handled events, the greater the contribution OMi is making to the management of your infrastructure. If the cost of manually handling a typical event is known, this value can be entered into OMi, based on which, the total cost saving achieved through OMi can be displayed. These statistics can be displayed for any specified time period within which OMi has been monitoring your IT environment. For details, see "Return On Investment Dashboard" on page 251 .
Operations Console	
Discover OMi	Enables you to explore OMi step-by-step, following predefined paths and learning OMi features along the way. The map begins with an interactive tutorial. Each step offers built-in information as well as links to additional resources, for example, the related UI page, online help, or videos. Discover OMi tracks your progress so that you are aware of the areas you have already visited. Note that progress is stored locally, and that deleting browser cookies (or clicking Reset States within the map) will delete your progress.
Event Perspective	Displays a summary of the events that occur in the operating environment you are monitoring, as well as detailed information about selected events. For details, see "Event Perspective" on page 258 .
Health Perspective	Displays the health of related CIs in the context of events. The event selected in the Event Browser determines what is displayed in the Health Top View pane and Health Indicators pane. The page helps you understand the health status of an object, shows you which business rules and KPIs are being used, and how the health status of the selected object affects the health of related CIs. For details, see "Health Perspective" on page 259 .
Performance Perspective	Enables you to draw graphs from templates and create ad hoc graphs by selecting required metrics from a metric list, which is populated based on the CI you have selected. For details, see "Performance Graphing Overview" on page 261 .

Available Components

Components from different applications can be added to My Workspace pages. The following section describes the available OMi components. For user interface details, see ["Component Gallery Dialog Box" on page 217](#).

Note: To access components from an application, you must have a license for that application.

Some components are also available as predefined pages. For details, see ["Predefined Pages" on page 205](#).

You can add components from the following applications:

- ["Event Management" below](#)
- ["General" on the next page](#)
- ["NNMI" on the next page](#)
- ["Performance Management" on page 209](#)
- ["Service Health" on page 210](#)
- ["SiteScope" on page 211](#)
- ["User Engagement" on page 211](#)

Event Management

Component Name	Description
Actions	Displays a list of the Actions (Tools, Run Books, Custom Actions, and Performance Graphs) applicable to a selected event, its related CI, or the node that hosts the CI. For details, see "Actions" on page 193 .
Event Browser	Displays a summary of all the events that have occurred in the operating environment you are monitoring. For details, see "Event Perspective" on page 258 .
Event Browser with Details	Displays a summary of all the events that have occurred in the operating environment you are monitoring, together with the Details pane that displays detailed information about the selected event. For details, see "Event Perspective" on page 258 .
Event Details	Displays detailed information about the selected event in a dedicated pane below the Event Browser or as a popup window. For details, see "Event Perspective" on page 258 .

Component Name	Description
Monitoring Dashboard	Enables you to select a Monitoring Dashboard configuration that displays a summary of events that match an event filter or that are related to the configuration items included in a referenced view. Monitoring Dashboards display status information using different types of widgets (for example, stack and pie widgets). For details, see "Monitoring Dashboards" on page 237 .
ROI Dashboard	The Return on Investment Dashboard displays the proportion of events received by OMi that have been automatically handled against those that required intervention by operators. The higher the proportion of automatically handled events, the greater the contribution OMi is making to the management of your infrastructure. If the cost of manually handling a typical event is known, this value can be entered into OMi, based on which, the total cost saving achieved through OMi can be displayed. These statistics can be displayed for any specified time period within which OMi has been monitoring your IT environment. For details, see "Return On Investment Dashboard" on page 251 .

General

Component Name	Description
Discover OMi	Enables you to explore OMi step-by-step, following predefined paths and learning OMi features along the way. The map begins with an interactive tutorial. Each step offers built-in information as well as links to additional resources, for example, the related UI page, online help, or videos. Discover OMi tracks your progress so that you are aware of the areas you have already visited. Note that progress is stored locally, and that deleting browser cookies (or clicking Reset States within the map) will delete your progress.

NNMi

To access the NNMi components, you must have the appropriate licenses installed. NNMi components are only displayed if you have configured a connection to an NNM server in Infrastructure Settings:

Administration > Setup and Maintenance > Infrastructure Settings

Select **Foundations > Integrations with other applications > HP NNM**.

Wiring between NNMi and OMi components is enabled only if an NNMi-OMi integration has been implemented. For details on integrations, refer to the OMi section in the **Integrations** tab in the [HP Software Integrations site](#) (<http://support.openview.hp.com/sc/solutions/index.jsp#tab=tab3>).

Tip: If you customize an NNMi node group map and export that customized map to a URL, you can then add the URL as an external component to My Workspace. For details, see ["How to](#)

[Create an External Component" on page 229.](#)

Component Name	Description
Layer 2 Neighbor View	Shows a map view of a selected device and its connector devices within a specified number of hops from the selected device. This view is useful for understanding the switch connectivity between devices.
Layer 3 Neighbor View	Shows a map view of a selected device and its connector devices within a specified number of hops from the selected device. This view is useful for understanding the router connectivity between devices.
MPLS VPN Inventory	This is an enterprise customer view of how their sites are connected via service provided MPLS networks.
Open Key Incidents	Shows the incidents that are most important to network operators, and that often require more immediate action.
Overall Network Health (Node Group Overview)	Displays a map containing all (top-level) Node Groups that do not have parent Node Groups.
Overall Network Health - Routers	Displays a Node Group Map of the Router connectivity in your network.
Overall Network Health - Switches	Displays a Node Group map of the Switches connectivity in your network.
Router Redundancy Groups Inventory	Shows the available Router Redundancy Groups created by the NNMI administrator. Each Router Redundancy Group is a set of two or more routers that use one or more virtual IP addresses to help ensure that information packets reach their intended destination.

Performance Management

Component Name	Description
Performance Graphs	Displays the Performance pane from which you can draw graphs from the default templates. For details, see "Performance Graphing Overview" on page 261.

Component Name	Description
Performance Graphs with Details	Displays the Performance with Details pane from which you can draw predefined graphs and also create ad hoc graphs by selecting the required metrics for a selected CI. For details, see "Performance Graphing Overview" on page 261 .

Service Health

Component Name	Description
Changes and Incidents	Displays the incidents opened for the selected CI, as well as planned changes and actual changes made to the CI. For details, see "Changes and Incidents Component" on page 129 .
Custom Image	Displays a user-defined custom image that describes the real world that a view represents, with the view's CIs represented by real-time status indicators in the image. For details, see "Custom Image Component" on page 133 .
Geographical Map	Displays, on a geographical map, real-time status indicators at the geographical location assigned to the view's CIs. The status indicator shows the worst status of the CIs at the geographical location. For details, see "Geographical Map Component" on page 137 .
Health Indicators	Displays details regarding the health indicators that are used to calculate and set the current status of a selected CI. For details, see "Health Indicator Component" on page 145 .
Health Top View	Displays a topological view of the configuration items affected by the event selected in the Event Browser pane. For details, see "Health Top View Component" on page 152 .
Hierarchy	Displays a hierarchy of CIs in a view, the KPIs assigned to each CI, and their KPI statuses. If you select a CI within the Hierarchy component you can see its detail links. When you click the detail links, you can access additional components which provide comprehensive data regarding the CI. For details, see "Hierarchy Component" on page 155 .
KPI Over Time	The KPI Over Time dashboard enables you to view the statuses and status summaries of selected KPIs and CIs over time. The dashboard lets you choose from a number of widgets to survey historical KPI status data and the health of the monitored environment at a glance. For details, see "KPI Over Time Dashboard" on page 246 .
Neighborhood Map	Displays the parent CIs and child CIs of a selected CI, in an interactive hierarchical graphic. For details, see "Neighborhood Map Component" on page 167 .

Component Name	Description
Top View	Displays CI bars that represent real-time IT performance metrics mapped onto business applications, linked by lines that represent relationships between CIs. For details, see "Top View Component" on page 172.
Topology Map	Displays the CIs within a view in an interactive hierarchical graphic. Topology Map display links between CIs, and enables you to view CIs divided into layers or groups. For details, see "Topology Map Component" on page 178.
View Explorer	Contains a list of views and CI hierarchies in each view. The component enables you to select a view and to select CIs, or to search for a CI. View Explorer is used with other components which respond to view or CI selection. For details, see "View Explorer Component" on page 185.
Watch List	Displays a high-level health overview of important CIs, from multiple views. For details, see "Watch List Component" on page 189.

SiteScope

Component Name	Description
SiteScope Multi-View	Displays availability and status information of SiteScope objects that belong to different hierarchical levels in a single view. For details, see "SiteScope Multi-View" in the Using SiteScope Guide.

User Engagement

Component Name	Description
User Engagement Achievements	Displays an overview of all running achievements grouped by categories. Disabled and paused achievements are not shown. Each category is displayed with a progress bar. For details, see "Achievements" on page 18.
User Engagement Dashboard	Using gaming technology, User Engagement adds fascination to work and recognizes users' achievements as they learn to use OMi and become progressively more knowledgeable. For details, see "User Engagement" on page 17.

Component Name	Description
User Engagement Experts	The experts boards make it easy for you to identify and contact the individuals in your organization with the most experience of the various OMi domains. The User Engagement experts page displays the overall most experienced individuals and those for a selected category. You can drill down into each category and see the complete list of participants taking part in the Expert Boards. For details, see "Experts" on page 17 .
User Engagement Timeline	Shows the history of a user's Achievements. The Timeline provides a personal overview of User Engagement participation and is not shared. For details, see "Timeline" on page 18 .

My Workspace User Interface

This section includes:

- ["My Workspace" below](#)
- ["Page Gallery Dialog Box" on page 216](#)
- ["Component Gallery Dialog Box" on page 217](#)
- ["New/Edit Component Dialog Box" on page 219](#)
- ["Wiring Dialog Box" on page 221](#)

My Workspace

My Workspace enables you to view default pages from OMi, and to create new pages containing OMi components and external components. Each page is displayed as a tab within the workspace. For a list of default pages, see ["Predefined Pages" on page 205](#). For a list of default OMi components, see ["Available Components" on page 207](#).

To access:

Workspaces > My Workspace








- **Important Information:** This help topic appears if you create a non-default page and access **Help > Help on this page** in the OMi menu bar.
- **Relevant Tasks:** ["How to Set Up My Workspace" on page 223](#).


Learn More

Page Management Toolbar

The Page Management toolbar on the upper right of the workspace, enables you to create pages, add components to pages, and define how components interact between one another.

User interface elements are described below:








UI Element	Description
<Page Selector>	<p>Select a page from this drop-down list to open the page in your workspace. The list contains the pages that are defined in the Page Gallery.</p> <p>If you start typing a page name in this box, the list includes only those pages whose name starts with the typed letters.</p>
	<p>Refresh. Refresh the page.</p>
	<p>Save or Save As. Save the current page to the Page Gallery. A dialog box enables you to name the page, give the page a description, and select a category for the page.</p> <p>The description appears as a tooltip for the page, within the Page Gallery.</p>
	<p>Page Gallery. Open the Page Gallery. The Page Gallery contains default pages, as well as pages you have saved. You can then edit page definitions, or open pages. For user interface details, see "Page Gallery Dialog Box" on page 216.</p>
	<p>New Page. Create a new page.</p> <p>After opening a new page you can configure its layout, add components to the page, and define wiring between the components. For task details, see "How to Set Up My Workspace" on page 223.</p>
	<p>Edit Page Layout. Modify the layout of an existing page. Use the Layout tools in the top left corner of each layout to modify the layout areas.</p> <p>Exit Editing. When you are done, click this button to stop editing.</p>
	<p>Components. Open the Component Gallery, which contains default components, as well as components you have added. You can then edit component definitions, or add components to a page. For user interface details, see "Component Gallery Dialog Box" on page 217.</p>
	<p>Page Wiring. Define the wiring between components, which determines how components interact with one another. For user interface details, see "Wiring Dialog Box" on page 221.</p>




UI Element	Description
	<p>Start Slideshow/Stop Slideshow. Start a slideshow of open pages. A dialog box enables you to define how often the pages are rotated. Pages are refreshed before they are displayed.</p> <p>If a slideshow is running, click this button to stop the slideshow.</p> <p>Note: If the page refresh interval is longer than the slideshow interval, the page will not be refreshed. For example, if a component is set to refresh every minute, but the slideshow rotates pages every 30 seconds, the page will not be refreshed.</p>

Layout Tools

When a layout is empty, the layout tools on the upper left area enable you to define the layout. Icons in the center of the layout indicate the type of layout: horizontal, vertical, or tabbed.

User interface elements are described below:




UI Element	Description
Layout Tools	
	Remove Layout. Remove a layout from the page.
	Add Component. Open the Component Gallery. You can then double-click a component to place it in the layout area. For user interface details, see " Component Gallery Dialog Box " on page 217.
	Split. Divide a vertical layout into two layouts, one above the other.
	Split. Divide a horizontal layout into two layouts, side by side.
	Switch to Horizontal. Change the layout from vertical or tabbed to horizontal. Components placed in this area will be added side by side.
	Switch to Vertical. Change the layout from horizontal or tabbed to vertical. Components placed in this area will be added one above the other.
	Switch to Tabs. Change the layout from vertical or horizontal, to a tab layout. Components placed in this area will be added as tabs.
Layout Icons	

UI Element	Description
	<Horizontal layout> . This icon in the center of a layout indicates that the layout is horizontal. Components placed in this area will be added side by side.
	<Vertical layout> . This icon in the center of a layout indicates that the layout is vertical. Components placed in this area will be added one above the other.
	<Tabbed layout> . This icon in the center of a layout indicates that the layout is horizontal. Components placed in this area will be added as tabs.

Component Toolbar

The component toolbar on the upper right of each component enables you to administer the component.

User interface elements are described below:

UI Element	Description
	<p>Open one of the following:</p> <ul style="list-style-type: none"> • Preferences. Enables you to rename a component, and customize refresh rates. • Wiring. Enables you to customize how this component interacts with the other components on the page. For details, see "Wiring Dialog Box" on page 221. • Refresh. Manually refresh the component. • Help. Access help on the component. <p>Note:</p> <ul style="list-style-type: none"> • Depending on the component, some of these options may not be available. • Within Mozilla Firefox, if you have a number of components on a page and you open the Preferences or Wiring dialog box for a component, it is recommended that you not drag the dialog box to a new location as this may cause UI problems.
	Configure Component. Define filtering for the component, when a component supports internal filtering.
	<p>Display the component in a separate popup window.</p> <p>Note: The popup window that opens does not support wiring.</p>

UI Element	Description
	Temporarily collapse a component (the button on the left is for horizontal components; the button on the right is for vertical components).
	Restore a collapsed component (the button on the left is for horizontal components; the button on the right is for vertical components). Note: When you collapse a horizontal layout, it collapses into a narrow stripe. Click the stripe to restore the component.
	In a vertical or horizontal layout, closes a component and removes it from the page. In a tabbed layout each tab has a button which closes the tab; the main close button removes the layout.

Page Gallery Dialog Box

This dialog box enables you to select a page and open it in My Workspace, and to manage the Page Gallery. Within the Page Gallery, pages are assigned to categories. You can add, edit, or delete page categories; assign pages to categories; and open, edit, or delete pages.

To access	In My Workspace, click the Page Gallery button.
Important information	To open a page in My Workspace, double-click a page within the Page Gallery.
Relevant tasks	"How to Set Up My Workspace" on page 223

Categories (left side)





User interface elements are described below:

UI Element	Description
	New Category. Create a new category. You can then assign pages to this category. For details see "How to Modify Page and Component Categories" on page 232 .
	Edit Category Name. Select a user-defined category and click to rename (default categories cannot be renamed).
	Delete Category. Select a user-defined category and click to delete (default categories cannot be deleted).

UI Element	Description
Categories	<p>This contains a list of categories to which pages are assigned. A category can have the following indications after its name:</p> <ul style="list-style-type: none"> • A number following the category name shows how many pages are in the category. • A lock icon following the category name shows that the category is a default category, and cannot be renamed or deleted. <p>You can use the toolbar to manage a category, or select a category to display its pages on the right side of the dialog box.</p> <p>Note that categories are not exclusive - you can assign a page to more than one category.</p>

Pages (right side)


User interface elements are described below:

UI Element	Description
	Open Page. Select a page and click to open it in My Workspace.
	Categorize Page. Select a page and click to assign it to a category.
	<p>Clone Page. Select a page and click to create a copy of it. You can then make changes to the page and save it with a new name.</p> <p>A dialog box enables you to name the new page, give the page a description, and select a category for the page. The description appears as a tooltip for the page within the Page Gallery.</p>
	Delete Page. Select a page and click to delete it from the gallery.
Pages	<p>This shows the default pages available for display in My Workspace, as well as custom pages that you have saved.</p> <p>You can select a page and use the toolbar to edit page definitions, or double-click a page to open it in My Workspace.</p>
Search box	Type a text string to search for a specific page.

Component Gallery Dialog Box




After you open a page, this dialog box enables you to manage components, and to open them in My Workspace. Within this dialog box you can modify component categories, assign components to

categories, and open, edit, or delete components.

To access	In My Workspace, click the Components  button.
Important information	To open a component in My Workspace, select a component and drag it to your page. The components displayed by default are those for which you have appropriate licenses. For details, see "Available Components" on page 207 .
Relevant tasks	"How to Set Up My Workspace" on page 223





Categories (left side)

User interface elements are described below:

UI Element	Description
	New Category. Create a new category. You can then assign components to this category. For details see "How to Modify Page and Component Categories" on page 232 .
	Edit Category Name. Select a user-defined category and click to rename (default categories cannot be renamed).
	Delete Category. Select a user-defined category and click to delete (default categories cannot be deleted).
Categories	<p>This contains a list of categories to which components are assigned. A category can have the following indications after its name:</p> <ul style="list-style-type: none"> • A number following the category name shows how many components are in the category. • A lock icon following the category name shows that the category is a default category, and cannot be renamed or deleted. <p>You can use the toolbar to manage a category, or select a category to display its assigned components on the right side of the dialog box.</p> <p>Note that categories are not exclusive - you can assign a component to more than one category.</p>

Components (right side)

User interface elements are described below:

UI Element	Description
	<p>Add External Component. Add a new component based on a URL.</p> <p>This opens a dialog box where you define the new component. For details, see "New/Edit Component Dialog Box" below.</p> <p>You can add any URL as a component.</p>
	<p>Edit Component Properties. Select an external component and click this button to edit the component's definitions. For details, see "New/Edit Component Dialog Box" below.</p>
	<p>Categorize Component. Select a component and click this button to assign it to a category.</p>
	<p>Delete Component. Select a component and click this button to delete it from the gallery.</p>
Components	<p>This shows the default components available for display in My Workspace, as well as external components that you have added.</p> <p>Select a component and use the toolbar to edit component definitions, or drag the component onto the page.</p>
Search box	Type a text string to search for a specific component.

New/Edit Component Dialog Box

This dialog box enables you to define a component based on an external URL. You can set up wiring to use attributes from contexts sent by other components to define the URL's pattern, such as CI attributes.

To access	Access the Component Gallery and click Add External Component , or select an external component and click Edit Component Properties .
Important information	<p>URLs for external components must begin with one of the following: https://, http://, or ftp://.</p> <p>If a URL is saved with a different prefix, the OMi session will hang.</p>
Relevant tasks	"How to Create an External Component" on page 229
See also	"How to Create a Component Using a Dynamic URL – Use-Case Scenario" on page 230

<Upper Pane>

User interface elements are described below:

UI Element	Description
Name	Enter the name you want to assign to the component.
URL	<p>Enter the URL of the component. If you are creating a dynamic URL using parameters, enter the static part of the URL here.</p> <p>For example, the URL to search for the string hp in Google.com uses the following format: <code>http://www.google.com/search?q=hp</code></p> <p>The static part of this URL is the section before the question mark: <code>http://www.google.com/search</code></p>
Description	Enter a description of the component.
Display last update label	Select this checkbox if you want the component to display its last update time.

Categorize Component Area

Optional: Select one or more categories to which you want the component assigned.



Configure Wiring Area

Wiring Context

This area enables you to select one or more contexts whose attributes will be used to define the URL pattern:

- If you select **CIChange**, CI attributes can be used to define the URL.
- If you select **EventChange**, event attributes can be used to define the URL.
- If you select **ViewChange**, the view name can be used as an attribute.



User interface elements are described below:

UI Element (A-Z)	Description
	<p>Add Context. Add a context whose attributes can be used to define the URL pattern.</p> <p>A dialog box enables you to select which context to add.</p>
	<p>Remove. Select a context and click this button to remove it from the list.</p>
<Context>	Each line represents a context whose attributes can be used to create the URL pattern.

URL Parameters and Values

This area enables you to add URL parameters and values to build the URL pattern, using wiring context attributes.


User interface elements are described below:

UI Element	Description
	<p>New Parameter. Add a URL parameter.</p> <p>In the dialog box that appears, select one of the following elements of the URL: path, query string, or fragment of the URL, and type the parameter name.</p> <p>Use the following pattern: <code>http(s)://domain/ <path> ? <query_string> # <fragment></code>.</p> <p>For example, to create a dynamic URL based on <code>http://www.google.com/search?q=hp</code>, add a URL parameter named <code>q</code>.</p>
	<p>Remove. Select a URL parameter and click this button to remove it from the list.</p>
<p>Attributes</p>	<p>This contains a list of the attributes that can be used to build the URL pattern. This list is dependent on the contexts you select in the Wiring Context area.</p> <p>For example, if you select <code>CIChange</code> in the Wiring Context area, the attribute <code><<ciId>></code> is available to build your URL pattern.</p> <p>To use an attribute as the value of a URL parameter, drag the attribute from this area to the Value area of the parameter.</p>
<p>URL Parameter and Value</p>	<p>Each line represents the name of a URL parameter which is used to create the URL pattern, and its value.</p> <p>After defining a parameter name, drag an attribute from the Attributes area to the Value area of the parameter.</p> <p>To edit a parameter name or value, click the parameter or value itself and edit its contents.</p>
<p>URL Parameters</p>	<p>This shows the URL pattern that was built using the static URL that you entered in the URL field, and the URL parameters that you defined in the URL Parameters area.</p>

Wiring Dialog Box

This dialog box enables you to define wiring between the components on a page, which determine how components interact with one another. After you place components on a page, you can use this dialog box to define which components (sources) send contexts to which components (targets). When you finish setting up your wiring, save the page.

For example, suppose View Explorer is defined as a source component which sends the **CIChange** wiring context to Top View (target component). When you select a CI in View Explorer, Top View focuses on this CI as well.

To access	In My Workspace, click the Wiring  button.
Relevant tasks	"How to Set Up Wiring Between Components" on page 231

User interface elements are described below:

UI Element (A-Z)	Description
Contexts	<p>After you select a source component, this contains a list of the contexts that can be sent from this source to the target components.</p> <p>Select the context which you want sent to one or more targets, then select the target components.</p>
Source Components	<p>This displays all of the components on the page that have the ability to send contexts to other components.</p> <p>Select a source component, then select context and target components.</p> <p>Note: This list will be empty if no components on the page have the ability to send information to other components. To resolve this, add a component to the page which enables you to select a CI or a view, such as Top View or View Explorer.</p>
Summary of Page Wiring	<p>This displays a summary of the wiring that has been defined for the page. Each line shows a source, the context it sends, and the target component receiving this context from this source.</p>
Target Components	<p>After you select a source component and context, this displays all of the components on the page that have the ability to receive this context from the specified source.</p> <p>Select one or more target components which will receive contexts from the source component.</p>

Chapter 12: How to Set Up My Workspace

This section describes how to set up My Workspace. The following tasks are optional, and can be performed in any order.

Note that your ability to perform these tasks depends on your user permissions. For information on roles and permissions, see the OMi Administration Guide.

- ["Open a page" below](#)
- ["Configure the layout of a page" below](#)
- ["Add components to a page" below](#)
- ["Add an external component to the Component Gallery" on the next page](#)
- ["Define how components interact with one another" on the next page](#)
- ["Modify categories of pages and components" on the next page](#)
- ["Close a page or delete a page" on page 225](#)

Open a page

My Workspace is provided with predefined pages, which are located in the Page Gallery, together with any pages you have created and saved. For details, see ["Predefined Pages" on page 205](#).

- To open a page, select the page from the Page Selector dropdown list on the Page Management toolbar, on the upper right area of your workspace. You can also type part of the page name in the Page Selector, to limit the number of pages in the dropdown list.
- To create a new page, click the **New Page** button on the Page Management toolbar.

Configure the layout of a page

After you open a page, you can configure how the components will be arranged on the page. My Workspace enables you to define each layout as horizontal (components are displayed side by side), vertical (components are displayed one above the other), or in tabbed areas.

For details, see ["My Workspace" on page 212](#).

For an example of defining layout, see in ["How to Configure Page Layout – Use-Case Scenario" on page 225](#).

Add components to a page

My Workspace is provided with default components from the OMi applications, as described in ["Available Components" on page 207](#). The default components are located in the Component Gallery,

together with any external components you have added.

You can add a component to a page in one of two ways:

- Within an empty layout area, click the **Add Component** button. Within the Component Gallery, double-click a component to place it in the layout area.
- Click the **Components** button on the Page Management toolbar. Select a component in the Component Gallery, and drag it to an area on the page.

For details, see ["Component Gallery Dialog Box" on page 217](#).

When adding components to a page, note the following:

- If the target area is hidden by the Component Gallery dialog box, click the dialog box title bar and drag it to another location on your screen.
- If you are dragging a new component to a target area that already has a component defined, drag the new component to the title bar of the target area, and not to the part of the component that is colored white.

Add an external component to the Component Gallery


You can add a URL as a component within My Workspace. Open a page, and click the **Components** button on the Page Management toolbar.

Click the **Add External Component** button, and define the component as described in ["How to Create an External Component" on page 229](#). The new component is added to the Component Gallery, and can then be added to any page.

For details, see ["New/Edit Component Dialog Box" on page 219](#).

Define how components interact with one another

The interaction between components on a page in My Workspace is called **wiring**. After you place components on a page, you can define how components interact with one another.

Default pages have wiring predefined. You can also modify default wiring definitions. For example, if you have two components on a page, and you do *not* want them to interact with each other, you need to disable the wiring between them. Click the **Page Wiring** button , and clear the corresponding checkbox.

For details, see ["How to Set Up Wiring Between Components" on page 231](#).

Modify categories of pages and components

My Workspace contains default categories within the Page Gallery and the Components Gallery to help you organize pages and components. You can add categories, edit or delete user-defined categories, and add or remove pages and components from categories.

For task details, see ["How to Modify Page and Component Categories" on page 232](#).

Close a page or delete a page

To close a page, click the close icon in the upper right corner of the page. The page is closed in your workspace, but it is not removed from the page gallery.

To delete a page from the page gallery, click the **Page Gallery** button, select the page, and delete it. For details, see "[Page Gallery Dialog Box](#)" on page 216.

User Permissions in Workspaces

Permissions to work with Workspaces components and pages are defined in Users, Groups, and Roles.

To access:

Administration > Users > Users, Groups, and Roles > Edit Role or Create Role > Permissions > Workspaces

The operations that can be defined for a user are dependent on the area within Workspaces, as follows:

- **Predefined Pages.** These pages are defined out-of-the-box. Users cannot add, modify, or remove components on these pages. The only operation that can be defined via user permissions is **View**, to enable a user to view these pages.
- **User Pages and User Components.** Users can be granted permissions to perform the following regular operations on user-defined pages and components: **Add, Change, View, Delete, and Full Control.**

Within user pages, there is an additional permission level unique to My Workspace called **Locked**. If you want specific users to only monitor information, but not to select a view or apply filters on a page, you can apply **Locked** permissions to a user-defined page. This is relevant for pages which include built-in view explorers such as the Service Health components (Top View, Hierarchy, Geographic Map and so on), and the Event Browser.

How to Configure Page Layout – Use-Case Scenario

This section provides an example of how to configure the layout of components on a page. The layout defines the appearance of the page—how many areas are on the page, whether components are arranged horizontally, vertically, in tabbed areas, and so on.

It is recommended that you plan in advance which components you want to place on your page and how they should be arranged, and then configure your page layout accordingly.

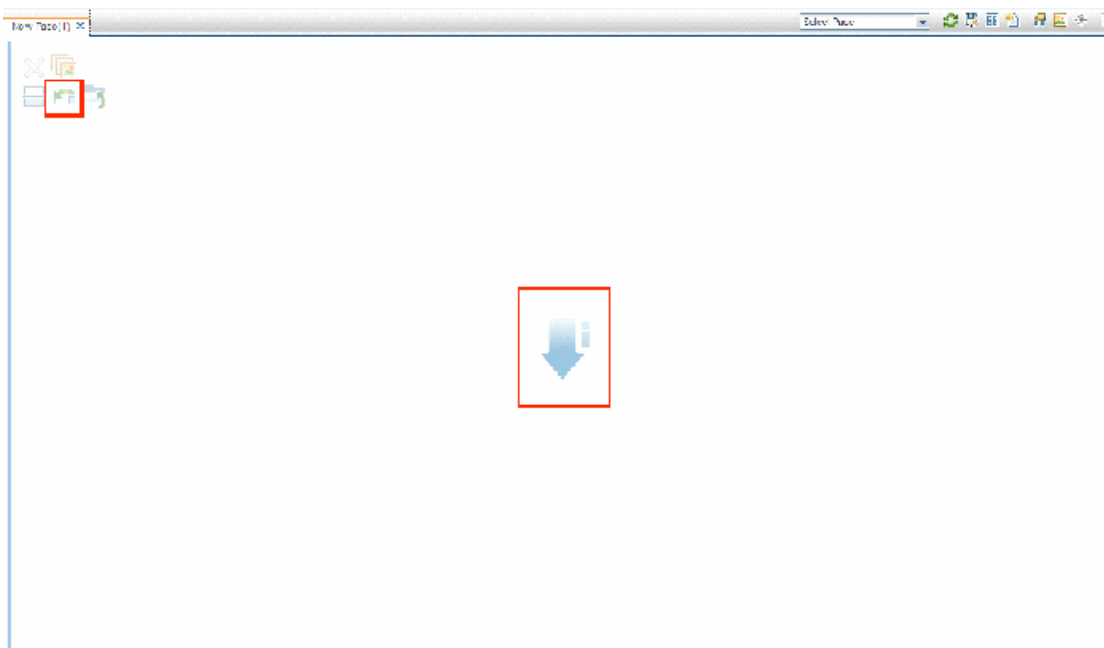
1. Background

Adam, an administrator at ACME corporation, wants to set up a page with two components in tabs

on the left side of the page, and a vertical area (with components arranged one above the other) on the right side of the page.

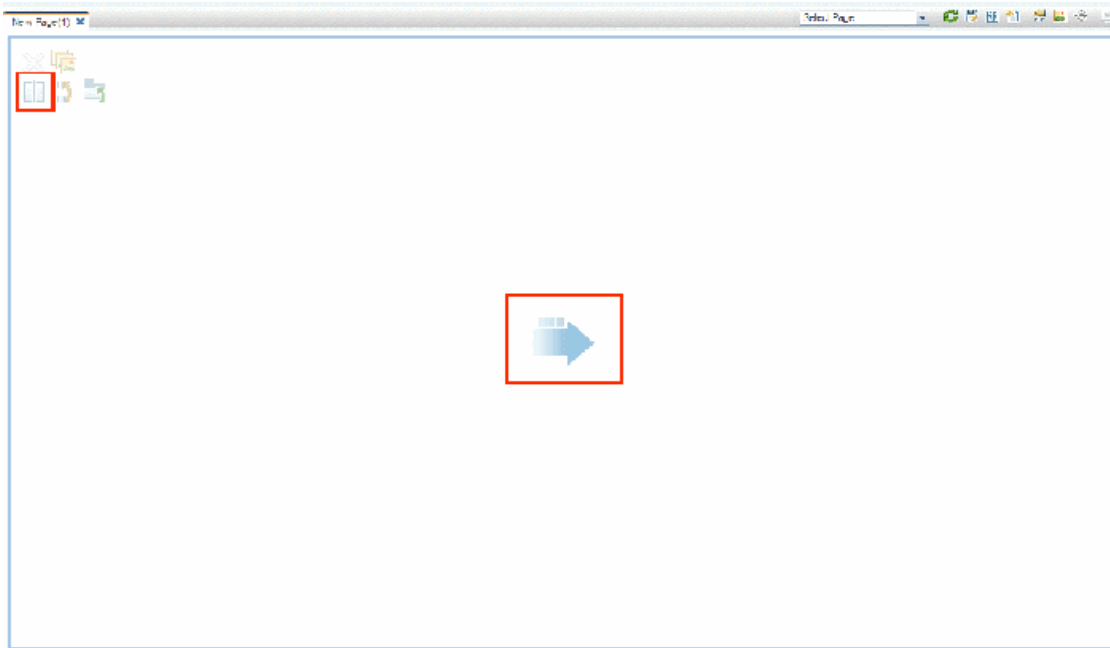
2. Open a page

Adam opens a new page, which has a horizontal layout by default:



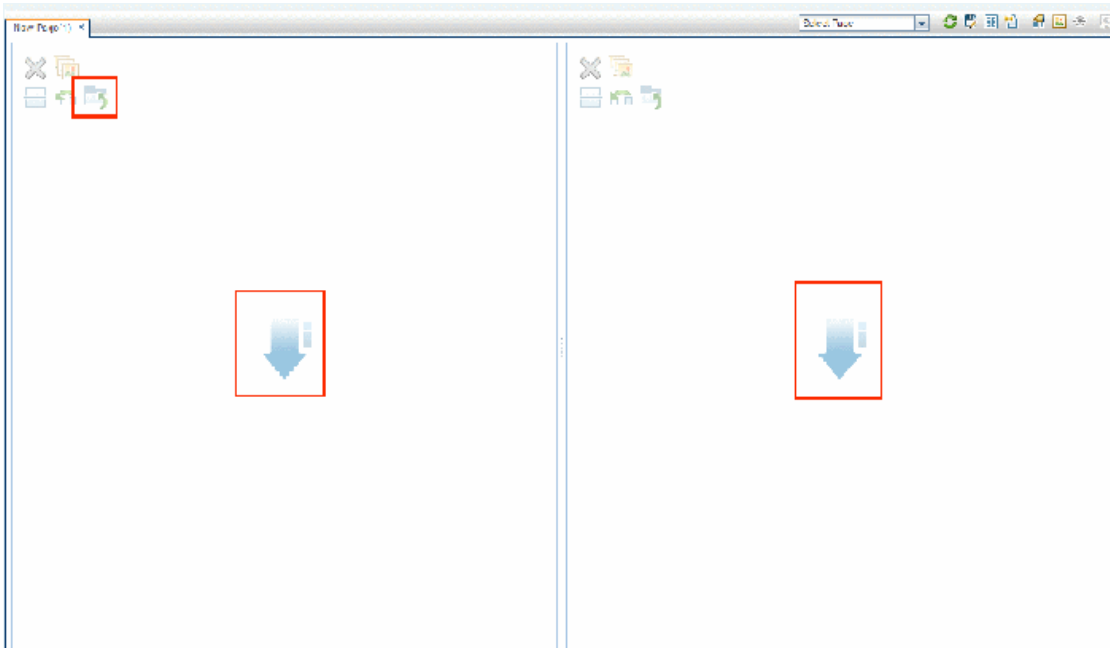
3. Switch the page layout to vertical

From the layout tools in the upper left area, he clicks **Switch to Vertical**. The layout is now oriented horizontally:



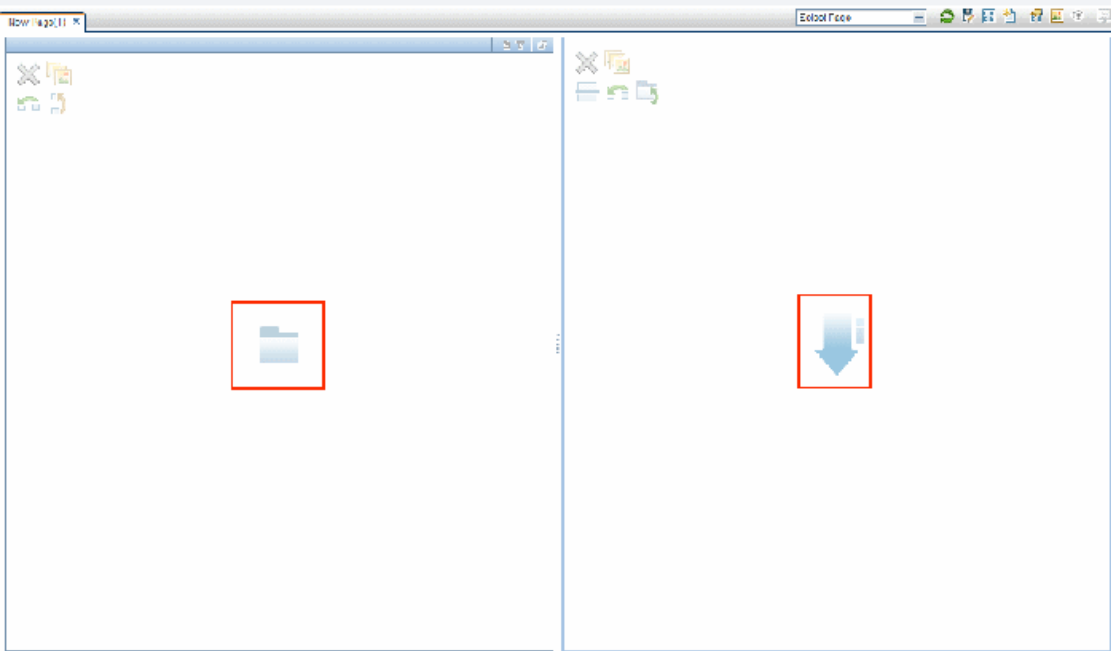
4. Split the page

Adam then clicks **Split** to divide the layout into a left and right pane:



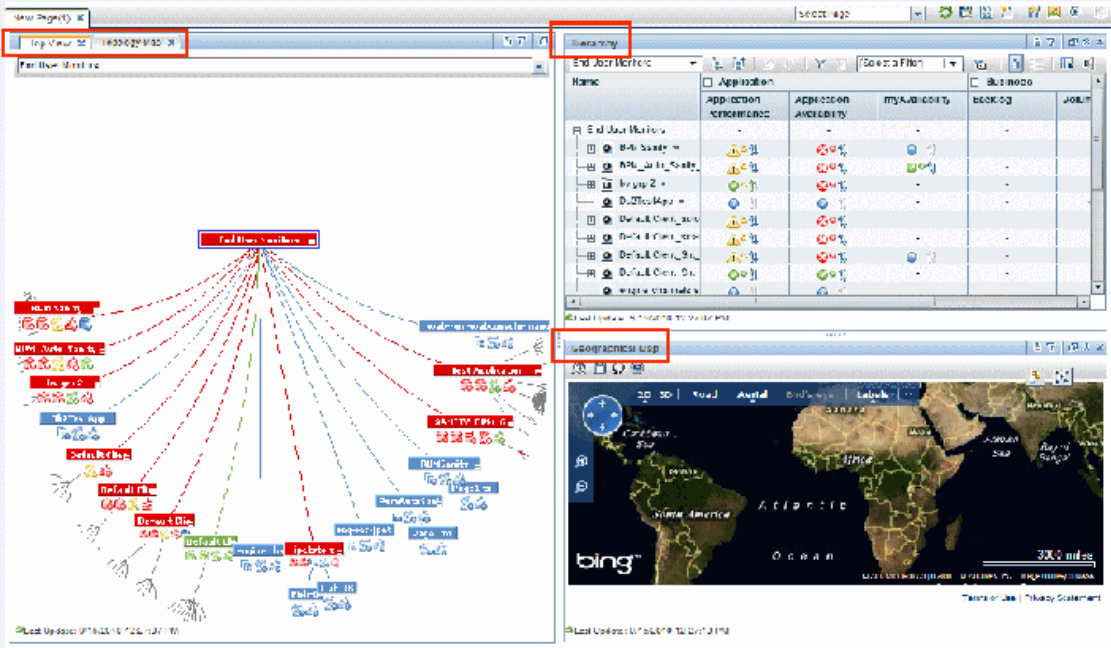
5. Create a tab layout in the left pane

Within the layout on the left side, he clicks **Switch to tabs** to create a tabbed area in the left pane:



6. Result

Within the layout, Adam now adds components to the two areas; the components added to the left side of the screen (Top View and Topology Map) are displayed in tabs, and the components added to the right side (Hierarchy and Geographical Map) are displayed vertically:



How to Create an External Component

The following task describes how to create a component using a URL. You can use a static URL, where the component simply opens the URL that you enter. You can also create a dynamic URL, where the component URL responds to other components on the page.

For a scenario which shows how to create a component based on a dynamic URL, see ["How to Create a Component Using a Dynamic URL – Use-Case Scenario" on the next page](#).

Note: The URL for an external component must begin with one of the following: `https://`, `http://`, or `ftp://`

1. Open the Add Component dialog box

Open the Component Gallery, and click the **Add External Component** button on the Component Gallery toolbar. The **New Component** dialog box appears; for details, see ["New/Edit Component Dialog Box" on page 219](#).

2. Define the static part of the URL

In the upper area of the **New Component** dialog box, enter a name for the component and the component's URL.

- To create a component using a static URL, enter the full URL.
- To create a component using a dynamic URL, enter the static portion of the URL only.

3. Categorize the component (optional)

To help you organize your content, you can assign pages and components to default categories, or to user-defined categories. For details, see ["How to Modify Page and Component Categories" on page 232](#).

In the **Categorize Component** area, select one or more categories to which you want the component assigned. Note that this is optional.

4. Define the dynamic part of the URL

If you are creating a component using a dynamic URL, perform the following steps:

- a. In the **Wiring Context** area, select one or more contexts whose attributes can be used to define the URL pattern, as follows:
 - Select **CIChange** if the URL should respond to a component where CIs are selected.
 - Select **EventChange** if the URL should respond to a component where events are

selected.

- o Select **ViewChange** if the URL should respond to a component where views are selected.
- b. In the **URL Parameters and Values** area, add one or more URL parameters which are used to define the URL pattern. You can define the URL's path, query, or a fragment of the URL, using the following pattern:

`http(s)://domain/ <path> ? <query_string> # <fragment>`

For example, you could use dynamic URL parameters to create one of the following:

- o `www.google.com/search?hl=<<lang>>&q=<<viewID>>`
- o `en.wikipedia.org/wiki/<<articleName>>`

A pattern such as: `http://download.oracle.com/javase/1.4.2/docs/api/<<className>>.html#<<methodName>>` might take you to:

`http://download.oracle.com/javase/1.4.2/docs/api/java/net/URL.html#toString()` (which is a valid URL).

- c. The **Attributes** list contains a list of attributes that can be used to build the URL pattern, based on the contexts you selected in the **Wiring Context** area. To use attributes as parameter values, drag attributes from the **Attributes** list into the **Value** areas of URL parameters.

The **URL Parameters** area shows the dynamic URL you have built, using the static URL in the upper area of the dialog box, and the URL parameters that you defined.

How to Create a Component Using a Dynamic URL – Use-Case Scenario

Jane is an administrator in the ACME corporation, and she wants to set up a page in My Workspace as follows: the left side of the page will display the Service Health Topology Map, and the right side of the page will display the ACME Support directory.

When a CI is selected in Topology Map, the Support directory will display details on whom to contact when this CI is in a problematic state.

The dynamic URL of the ACME Support directory is as follows:

`http://www.acme.com/support/search?q=<contact person>.`

Tip: In this scenario, the dynamic URL is built using the query string. You can also define the URL's path, or a fragment of the URL, using the following pattern: `http(s)://domain/ <path> ? <query_string> # <fragment>`.

1. Jane opens a new page, and divides it into two panes. She opens the Component Gallery, and drags Topology Map into the left pane. She then clicks the **Add External Component** button on the Component Gallery toolbar.
2. In the upper area of the **Add Component** dialog box, she types `ACME Support` as the component name, and enters the static portion of the Support directory URL:
`http://www.acme.com/support/search.`
3. In the **Wiring Context** area, Jane adds **CIChange** to the list of contexts, so that the Support directory will respond when a CI is selected in the Topology Map.
4. In the **URL Parameters and Values** area, she adds a URL parameter named `q`.

The ACME corporation uses a CI attribute called `<<CIContact>>`, to define whom to contact when a CI is problematic. The **Attributes** list includes the attribute `<<CIContact>>`. Jane drags this attribute to the **Value** field of the parameter named `q`.

The URL Pattern now shows the following:

```
http://www.acme.com/support/search?q=<<CIContact>>.
```

5. Jane clicks **OK** to save the component, and then drags the ACME Support component into the right pane.
6. Jane then clicks the **Wiring** button on the Page Management toolbar, and defines the page wiring so that the Topology Map source component sends `CIChange` contexts to the ACME Support target component.

When a CI is selected in Topology Map, the Support directory displays details on whom to contact regarding the CI.

How to Set Up Wiring Between Components

The following task describes how to configure the wiring between components on a page. Wiring defines how components interact with each other.

A component can send a wiring context to another component indicating what has changed in the first component, and the second component can respond to this change. For example, suppose View Explorer is defined as a source component which sends the **CI Selection** wiring context to Top View (target component). When you select a CI in View Explorer, Top View focuses on this CI as well.

Default pages have wiring predefined; you can also modify default wiring definitions.

1. Open the Wiring dialog box
Open the page whose wiring you want to configure, and click the **Page Wiring** button on the Page Management toolbar. The **Wiring** dialog box appears. For details, see "[Wiring Dialog Box](#)" on [page 221](#).

2. Select a source component for wiring

From the list of **Source Components** on the left side of the Wiring dialog box, select a component whose contexts will be sent to one or more target components.

3. Select a context to send from the source component

The list of **Context Types** shows which contexts can be sent from the selected source component:

- Select **CI Selection** to control which components are notified when a different CI is selected in the source component.
- Select **Event Change** to control which components are notified when a different event is selected in the source component.
- Select **View Change** to control which components are notified when a different view is selected in the source component.

4. Select target components for wiring

From the list of **Target Components** on the right side of the Wiring dialog box, select one or more components that will receive contexts from the source component.

The **Summary of Page Wiring** area displays all of the wiring defined for the page.

To define wiring for this page from additional source components, repeat the above steps as required.

How to Modify Page and Component Categories

To help you organize your content in My Workspace, you can add or remove pages and components from categories, create new categories, and edit or delete user-defined categories. This section describes how to work with categories within the Page Gallery and Components Gallery to help you organize pages and components.

Tip: Categories are not mutually exclusive; you can assign a page or a component to more than one category.

- For details regarding pages, see "[Page Gallery Dialog Box](#)" on page 216.
- For details regarding components, see "[Component Gallery Dialog Box](#)" on page 217.

Create a new category

My Workspace is provided with categories to which pages and components are assigned. To add a

new category, click the **Components** or **Page Gallery** button on the Page Management toolbar, then click the **New Category** button. Type a name for the new category.

You can then assign existing pages and components to the category, or add new external components to the category.

Rename or delete a user-defined category

To rename a user-defined category, select the category and click the **Edit Category Name** button.

To delete a user-defined category, select the category and click the **Delete Category** button.

Note that default categories cannot be renamed or deleted.

Assign a page or component to a category

To assign a page or component to a category, select it and click the **Categorize Page** or **Categorize Component** button. Select one or more categories to which you want the page or component assigned.

Modify category assignments of a page or component

To change the category assignments of a page or component, select the page or component and click the **Categorize Page** or **Categorize Component** button. Modify which categories the page or component is assigned to as needed.

How to Modify the Maximum Number of Pages

By default, up to 10 pages can be open at the same time. If you have multiple pages open, up to 5 pages are refreshed automatically (based on which pages were accessed most recently); any additional open pages are refreshed when you select them.

These limits apply both to My Workspace and Service Health.

This section describes how to modify these limits. Note that if you increase these limits, performance may be impaired.

Modify the maximum number of open or active pages

To modify the open pages limit or the number of pages automatically refreshed in My Workspace and Service Health, open Infrastructure Settings:

Administration > Setup and Maintenance > Infrastructure Settings

1. Select **Applications > MyBSM**.
2. In the **MyBSM - General** area, modify the **Maximum number of open pages** or **Maximum number of active pages** entry as needed.

Note that if you increase the maximum number of pages, performance may be affected.

Troubleshooting My Workspace

My Workspace pages and components are missing

If you modified databases on a running OMi deployment, My Workspace will no longer contain any pages and components. To restore pages and components:

1. Open the following directory:

```
<OMi_HOME_GATEWAY>/conf/uimashup/import
```

This contains two directories: loaded and toload.

2. Copy the contents of the loaded directory into the toload directory.
3. Restart OMi.

Part III: Dashboards

Dashboards give you an overview of the health of the environment in graphical form. The data updates in real time so that you are always presented with the most recent information. OMi provides the following dashboards by default:

- **Monitoring Dashboard.** (Formerly known as Event Dashboard.) Monitoring Dashboards provide an at-a-glance overview of the events from the environment you are monitoring. Monitoring Dashboards enable you to quickly assess the health of the environment and identify areas that require your attention. For details, see ["Monitoring Dashboards" on page 237](#).
- **360°.** This page provides a high-level overview of the status of CIs in a selected view. The page displays a hierarchy of CIs in a view, the KPIs assigned to each CI, and their KPI statuses. For details, see ["360° View" on page 245](#).
- **KPI Over Time.** The KPI Over Time dashboard enables you to view the status or the value of selected KPIs and CIs over time. The report also lets you choose from a number of layouts to monitor statuses and values at a glance. For details, see ["KPI Over Time Dashboard" on page 246](#).
- **ROI Dashboard.** (Return on Investment.) The ROI Dashboard displays the proportion of events received by OMi that have been automatically handled against those that required intervention by operators. The higher the proportion of automatically handled events, the greater the contribution OMi is making to the management of your infrastructure. If the cost of manually handling a typical event is known, this value can be entered into OMi, based on which, the total cost saving achieved through OMi can be displayed. These statistics can be displayed for any specified time period within which OMi has been monitoring your IT environment. For details, see ["Return On Investment Dashboard" on page 251](#).

Chapter 13: Monitoring Dashboards

Monitoring Dashboards provide an at-a-glance overview of the events from the environment you are monitoring. Monitoring Dashboards enable you to quickly assess the health of the environment and to identify areas that require your attention.

For example, operators might use Monitoring Dashboards in the following ways:

- To get an overview of their monitored environment.
- To check a health status of various OMi components.
- As a starting point for daily management operations.
- To quickly apply event filters to the Event Browser.
- To keep an eye on the monitored environment while working on an event.

Monitoring Dashboards display status information using different types of widgets (for example, stack and pie widgets). Each widget references an event filter, a view, or both, and only displays the status of those events that match the criteria of the filter and that are related to the configuration items included in the referenced view.

In OMi, Monitoring Dashboards are available as My Workspace components and can be added to My Workspace pages as required.

To access

Workspaces > Dashboards > Monitoring Dashboard

Learn More

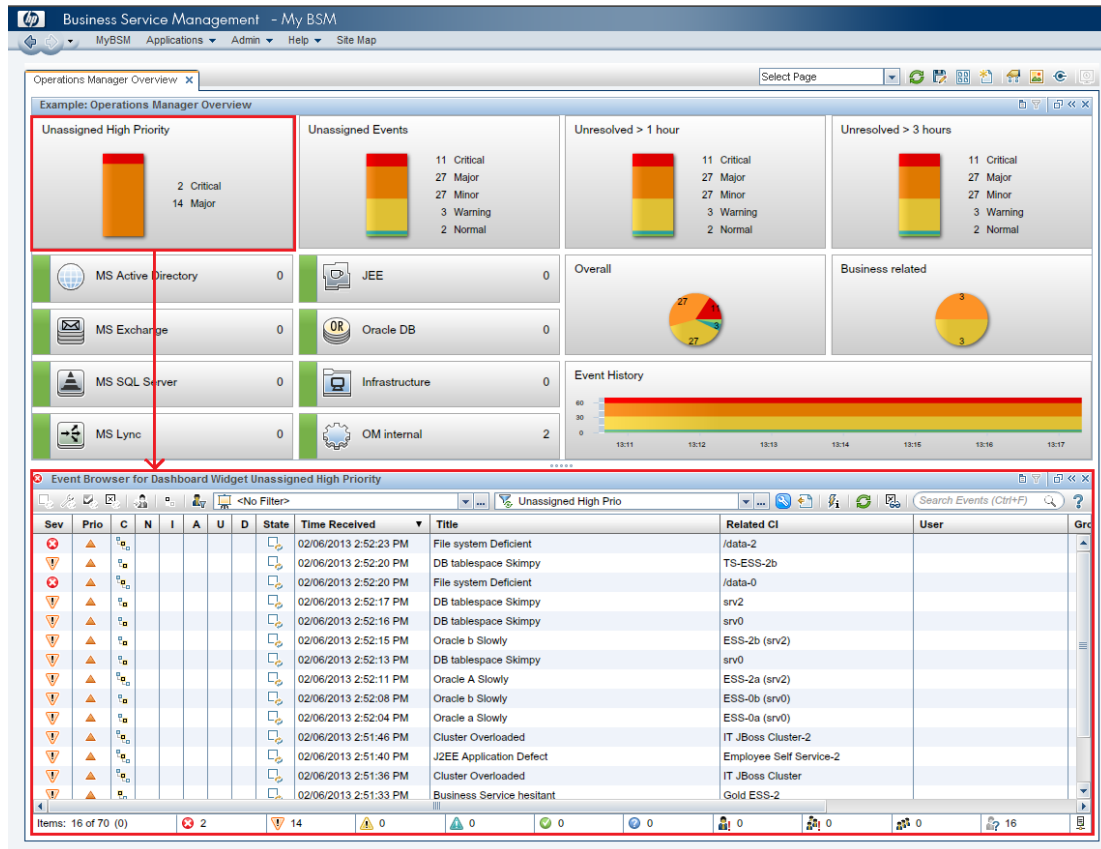
Combining Monitoring Dashboards with Other My Workspace Components

My OMi pages are collections of several components displayed together, and interacting with one another. Within a page, components can pass information to one another, so that one component can react to a change in another.

For example, you can combine the Monitoring Dashboard component with the Event Browser component or the Top View component. By clicking a widget, the context is passed to the Event Browser and Top View. The Event Browser reacts by displaying only events that match the event filter or view. Top View reacts by displaying the view associated with the widget.

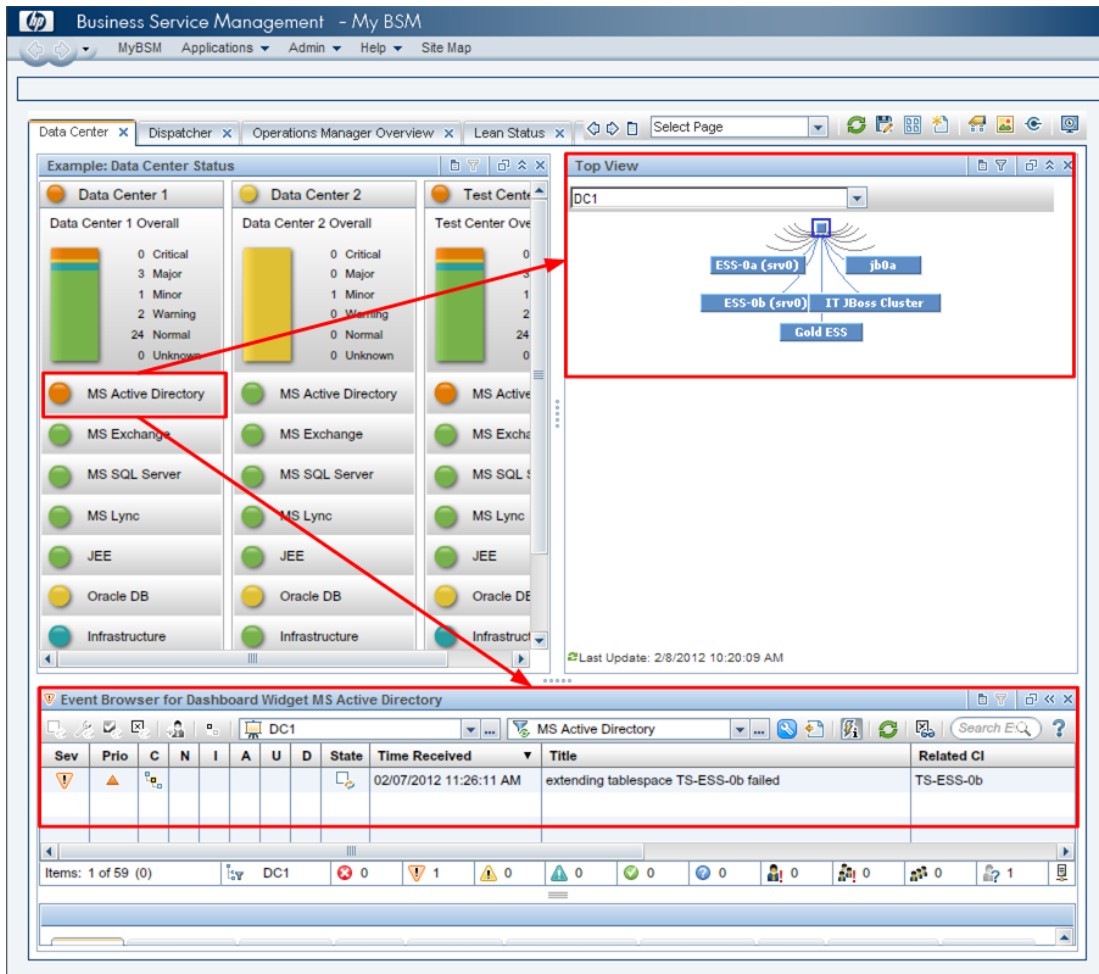
- Example: Monitoring Dashboard and Event Browser

Clicking the Unassigned High Priority widget causes the Event Browser to display only those events that match the Unassigned High Priority event filter.



- Example: Monitoring Dashboard and Top View

Clicking the MS Active Directory widget causes Top View to display the DC1 view associated with the widget, and causes the Event Browser to display only those events that match the MS Active Directory event filter.



- Context Wiring in My Workspace

The Monitoring Dashboard component sends the following wiring contexts to target components:

- **EventDashboardClickEvent.** The Event Browser reacts to the EventDashboardClickEvent context by displaying only those events that match the filter or view associated with the dashboard widget.
- **ViewChange.** The ViewChange context can be consumed by many components, for example the Top View.

For more information about wiring, see the OMi Administration Guide.

Types of Widgets

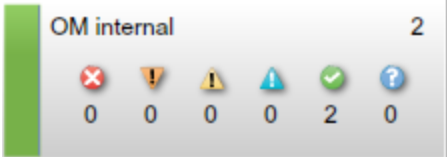
Monitoring Dashboards can include many different widget types. Each type enables you to quickly determine the status of the monitored area by displaying a color that reflects the severity of the most critical event (for example, red for the severity critical). The number of events per severity is also

shown.

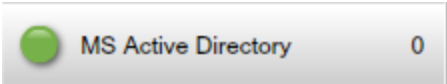
The following types of widgets can be incorporated into a Monitoring Dashboard:

- **Overview Widget (normal mode).** The number in the upper right-hand corner indicates the number of all events that match the filter and view.

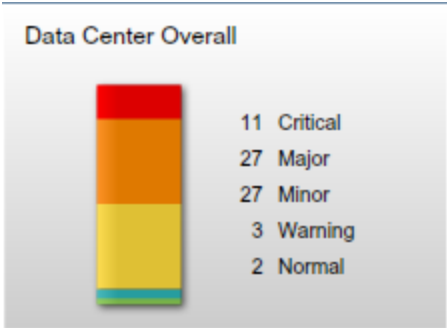
Overview widgets can be displayed in normal and compact mode. In compact mode, the severity icons and the corresponding numbers are hidden.



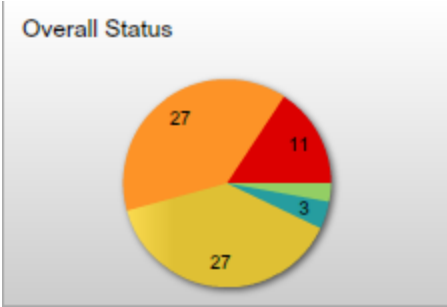
- **Simple Status Widget**



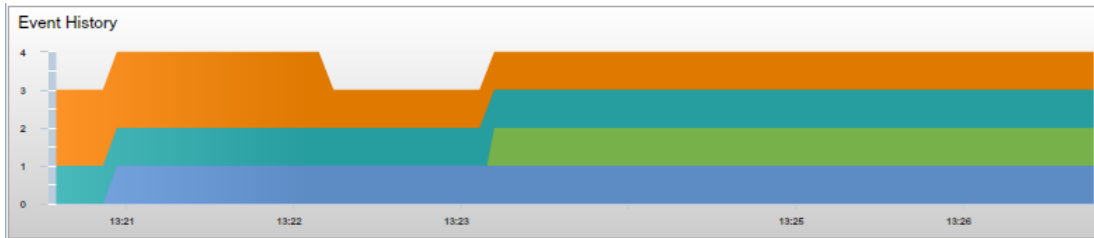
- **Stack Widget**



- **Pie Widget**

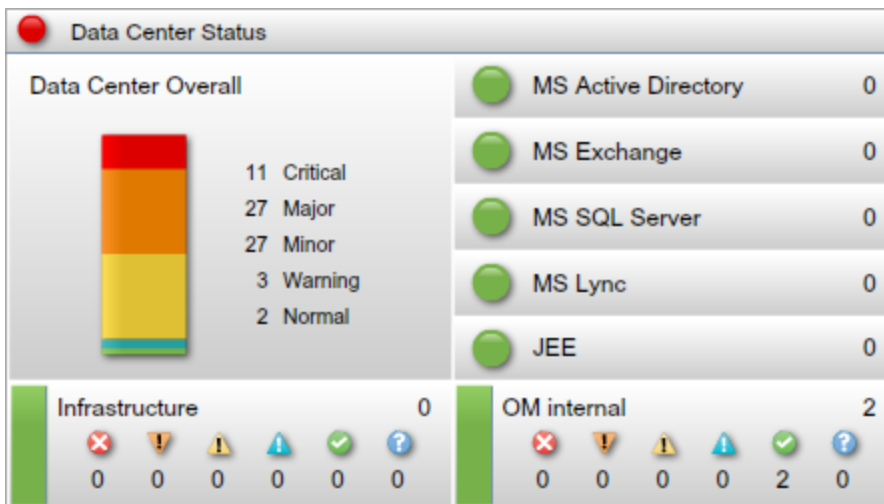


- **History Widget.** History widgets display the number of events per severity (y axis) against time (x axis).



- **Group Widget.** Group widgets group multiple widgets under a common heading (Data Center Status, in the example below).

The color of the "lamp" in the title bar indicates the severity of the most critical event in the group. If the widgets in the group do not display status information (for example, if no events match the filter), the group widget also does not show any status information.



Tasks

This section contains the following:

- ["How to Display the Monitoring Dashboard" below](#)
- ["How to Create a Monitoring Dashboard Page in My Workspace" on page 243](#)

How to Display the Monitoring Dashboard

Note: To display a user-defined My Workspace page, the administrator must grant users **View**

permissions in **Administration > Users > Users, Groups, and Roles**.

To display the Monitoring Dashboard:

1. **Go to Workspaces > My Workspace.**
2. Select one of the Monitoring Dashboard pages from the **Choose a Dashboard configuration** drop-down list.

If the drop-down list does not contain any Monitoring Dashboard pages, you must first create one as described in "[How to Create a Monitoring Dashboard Page in My Workspace](#)" on the next page.

To display the Monitoring Dashboard outside of My Workspace:

1. You can display Monitoring Dashboard pages in a Web browser outside of My Workspace using the following URL:

```
http://<server_name>.<domain_name>/opr-web/opr-event-dashboard
```

2. Select one of the Monitoring Dashboard pages from the **Choose a Dashboard configuration** drop-down list.

The selected Monitoring Dashboard page opens and displays in medium view. To change the view to compact or large, set the corresponding mode parameter as described below.

You can set the following parameters in the Monitoring Dashboard URL:

- **dashboardId.** ID of a Monitoring Dashboard. Enables you to access a Monitoring Dashboard directly. To display a specific Monitoring Dashboard, add the `dashboardId` parameter to the URL, for example:

```
http://<server_name>.<domain_name>/opr-web/opr-event-  
dashboard?dashboardId=<dashboard_id>
```

Tip: The monitoring dashboard ID is displayed in the dashboard's properties in the Dashboard Designer.

- **drilldown.** By default, when you click a widget in a standalone Monitoring Dashboard, a standalone Event Browser opens and displays the status of those events that match the criteria of the associated event filter and that are related to the configuration items included in the referenced view. You can disable event drilldown to the Event Browser by setting the `drilldown` parameter in the URL to `false`:

```
http://<server_name>.<domain_name>/opr-web/opr-event-dashboard?drilldown=false
```

To enable event drilldown, omit the parameter or set it to `true` (the default value).

- **compactMode.** Shows Monitoring Dashboards in a compact view by decreasing the font size.

Compact Monitoring Dashboards consume less display space. To enable compact mode, set the `compactMode` parameter in the URL to `true`:

```
http://<server_name>.<domain_name>/opr-web/opr-event-dashboard?compactMode=true
```

To disable compact mode, omit the parameter or set it to `false` (the default value).

- **largeMode.** Displays the Monitoring Dashboards using larger fonts, for example, for widget headlines. To enable large mode, set the `largeMode` parameter in the URL to `true`:

```
http://<server_name>.<domain_name>/opr-web/opr-event-dashboard?largeMode=true
```

To disable large mode, omit the parameter or set it to `false` (the default value).

How to Create a Monitoring Dashboard Page in My Workspace

1. Select **My Workspace** in the menu bar.
2. Create a new page.
3. *Optional:* Design the layout of the page.

For example, to display both the Monitoring Dashboard and the Event Browser in one page, split the page into two horizontal panes.

4. Open the Component Gallery and select the category **Event Management**. Select the **Monitoring Dashboard** component and drag it to your page.
5. Choose a dashboard configuration and click **OK**.

Note:

- To load dashboard configurations into My Workspace pages, the administrator must grant you view permission for Monitoring Dashboards in User Management:

Administration > Users > Users, Groups, and Roles

For details, see the OMi Administration Guide.

- Administrators create Monitoring Dashboards using the Dashboard Designer. For details, see the OMi Administration Guide.
- The OOTB Contents for OMi content pack provides several Monitoring Dashboard configurations that demonstrate how Monitoring Dashboards can help users to better monitor their environment. For details, see the OMi Administration Guide.

6. *Optional.* Add other components to your page, for example the Event Browser component.

The Monitoring Dashboard component includes the default wiring. You can modify this default wiring definition if required.

7. Click **OK**.
8. Save your page to the Page Gallery.

Troubleshooting

No matching event filter found for Dashboard Widget

If a widget in a Monitoring Dashboard displays the warning `No matching event filter found for Dashboard Widget`, the referenced event filter does not exist or is not shared.

No matching view filter found for Dashboard Widget

If a widget in a Monitoring Dashboard displays the warning `No matching view filter found for Dashboard Widget`, the referenced RTSM view does not exist.

More than one matching event filter found for Dashboard Widget

If a widget in a Monitoring Dashboard displays the warning `More than one matching event filter found for Dashboard Widget`, multiple filters have the same name, and the Monitoring Dashboard is unable to identify the filter to use with the widget.

No permission to clear view filter for Dashboard Widget

If a widget in a Monitoring Dashboard displays the warning `No permission to clear view filter for Dashboard Widget`, the user does not have permission to remove the view-based filtering in order to see all events. For more information about the `Clear View Filter` setting, see the OMi Administration Guide.

No permission to set view filter for Dashboard Widget

If a widget in a Monitoring Dashboard displays the warning `No permission to set view filter for Dashboard Widget`, the user does not have the permissions required for the referenced view. For more information about the assigning views to a user, see the OMi Administration Guide.

Wrong Dashboard configuration chosen

If you have selected a dashboard configuration but would like to change it, click the "Choose a new Dashboard..." option in the Monitoring Dashboard's context menu to reopen the **Choose a Dashboard configuration** drop down list.

Chapter 14: 360° View

This page provides a high-level overview of the status of CIs in a selected view. The page displays a hierarchy of CIs in a view, the KPIs assigned to each CI, and their KPI statuses.

When you select a CI within the Hierarchy component you can see its detail links. When you click the detail links, you can access the following components: Business Impact, Health Indicators, Alerts, and Changes and Incidents.

This page is taken from the Service Health application.

To access

Workspaces > Dashboards > 360° View

Tasks

This section includes:

- ["How to view the 360° View dashboard as a My Workspace Component " below](#)

How to view the 360° View dashboard as a My Workspace Component

The 360° View dashboard can be viewed as a My Workspace component.

For information on components, see ["Add components to a page" on page 223](#).

For information on My Workspace, see ["Monitoring Your Environment With My Workspace" on page 204](#).

For information on wiring, see ["How to Set Up Wiring Between Components" on page 231](#).

Chapter 15: KPI Over Time Dashboard

The KPI Over Time dashboard enables you to view the statuses and status summaries of selected KPIs and CIs over time. The dashboard lets you choose from a number of widgets to survey historical KPI status data and the health of the monitored environment at a glance.

To access

Workspaces > Dashboards > KPI Over Time

Learn More

This section includes:

- ["Working with the KPI Over Time Dashboard as a Page" below](#)
- ["Configuration Items Dialog Box" on the next page](#)
- ["Key Performance Indicators Dialog Box" on page 248](#)
- ["Types of Widgets" on page 248](#)
- ["Working with the KPI Over Time Dashboard as a Component" on page 249](#)

Working with the KPI Over Time Dashboard as a Page

The dashboard displays the status of each configuration item, and each instance of the attached key performance indicators (KPIs). Frequently used KPIs include unassigned and unresolved events and system, network, and software performance and availability. The dashboard provides KPI information for higher-level configuration items (CIs) such as Business Services, Application, and Business Processes CIs.

For example, an OMi user has set up monitoring for cloud environments in Europe, USA and Asia. CIs have been created to represent the top-level business services and the underlying cloud infrastructure.

System Performance, System Availability, Network Performance, and Network Availability KPIs are calculated for each environment. A view called 'My Cloud' has been created, which shows current KPI status.



The current KPI status of the cloud in Europe is red (critical). The OMi user fixes the problem, and decides to find out if there are more problems in Europe than in the other cloud environments.

The OMi user accesses the KPI Over Time dashboard, the 'My Cloud' view, and selects the three top level Cloud Europe, Cloud USA, and Cloud Asia CIs. The user then selects 1 month ago until present. The KPI Over Time dashboard shows the status of the 4 KPIs for each of the 3 CIs during the last month.

The OMi user now has information on Cloud Europe status compared to the other cloud environments.

- **Navigating the KPI Over Time Dashboard**

You can navigate historical data using the arrow buttons. You can select the time window displayed in the dashboard by selecting **day**, **week**, or **month**, while the **hour**, **day**, and **week** buttons let you select the amount of time to navigate by.

The  **Select Start Time** button provides easy access to specific points in time, and the  **Now** **Go To Present Time** button resets the dashboard to show the current date and time.

You can visually filter data shown in the widgets, which recalculate themselves based on the current selection context.

To reset the filter selection, click **Reset Filters**. To change the filter selection, click the filter or filters you want to remove.

- **Important Information**

The dashboard displays data only for CIs with persistent KPIs. For details, see the OMi Administration Guide.

Ensure that the **Save KPI data over time for this CI** option has been selected for the CI. For details, see the OMi Administration Guide.

The dashboard displays only the status of selected KPIs. Those KPIs may also have values in the RTSM but the dashboard does not show those values.

The context menu of all CIs except monitor CIs includes the **KPI Over Time Report** option.

Configuration Items Dialog Box

This dialog box enables you to select the CIs to be included in the KPI Over Time dashboard for the duration of a session. The dashboard provides information based on the selected CIs.

To display data when you access the KPI Over Time dashboard, click the  **Select**


Configuration Items button to open the CI dialog box.

Only CIs that meet the following criteria are available for selection:

- CIs with attached KPIs.
- CIs that are flagged to save KPI data over time (historical data). For information, see the OMi Administration Guide.
- CIs whose CIT attributes in the RTSM have the **Store KPI History For Over Time Reports** attribute value of **true**.


Key Performance Indicators Dialog Box

This dialog box enables you to select the KPIs to be included in the KPI Over Time dashboard, for the duration of a session. The dashboard provides information based on the selected KPIs.

To display key performance indicators for the CIs, click the  **Filter Key Performance Indicators** button. The **Key Performance Indicators** dialog box opens.

By default, all KPIs are selected. You can cancel the selection to exclude KPIs from the dashboard.

Types of Widgets

You can choose the following widgets as part of the KPI Over Time dashboard. To display the widgets, click the  **Select KPI Status Widgets** button. The **Widgets** dialog box opens.

- **Status by Configuration Item (heat map)**

The heat map widget displays KPI data for selected CIs through time intervals defined by the report granularity (the legend for the x-axis shows the time interval for each point). Each tile represents a period of time during the overall time frame.

The heat map can be filtered by clicking the dashboard header buttons, one or more tiles, or the timestamps at the bottom of the widget. You can click any time segment in the graph time footer to view all of the CI and KPI information for that period of time. Clicking heat map tiles allows you to filter data displayed by other widgets.

Each heat map tile displays the most critical KPI status during that time unit.

- **Status by Percentage (pie chart)**

The pie chart widget represents the sum of KPI instances for the CIs, and summarizes the statuses of KPIs over the selected time interval. The pie chart is divided into colored status slices. Each slice represents the percentage of time that a particular status was held by the KPIs. More critical statuses have precedence over less critical statuses occurring over the same time period.

- **Status Details (table)**

The table widget contains detailed information on the KPI status changes of each CI and is useful for detailed surveying.

- **OK Status Percentage (number)**

The OK status percentage widget shows the percentage of time in which all selected CIs and KPIs were in OK status, and provides a clear overview of uptime as a percentage of the monitored time window.

- **Not in OK Status Time (number)**

The not in OK status time widget shows the actual time during any of the selected CIs and KPIs were in Not OK status, and provides a clear overview of overall KPI downtime.

- **Trend (bar chart)**

Each column shows the percentage of OK status over time against all other statuses. For example, if the KPIs were in **OK** status for 80% of the time interval, and in **Warning** status for 20%, then the bar chart displays the 80% OK status.

- **Trend (sparkline)**

The sparkline shows the status trend of KPIs for selected CIs, based on a compilation of all statuses. A warning level line provides a quick reference to evaluate the overall status trend. When no filters are applied, the sparkline widget displays the trend of the most severe status shown in the heat map sparklines.

Working with the KPI Over Time Dashboard as a Component

The KPI Over Time dashboard can be viewed as a My Workspace component.


- For information on components, see ["Add components to a page" on page 223](#).
- For information on My Workspace, see ["Monitoring Your Environment With My Workspace" on page 204](#).
- For information on wiring, see ["How to Set Up Wiring Between Components" on page 231](#).

Tasks

This section contains the following:

- ["How to Display CIs and KPIs in the KPI Over Time Dashboard" below](#)

How to Display CIs and KPIs in the KPI Over Time Dashboard


1. Click the  **Select Configuration Items** button to open the CI dialog box. You can select CIs with KPI data and search or browse views.

Browse Views: The default mode for the **Configuration Items** dialog box, enabling you to select a view and CIs.



Search: Click the **Search** link to move to Search mode.

Only the CIs selected in the currently displayed view are saved for the dashboard filter when you click **OK**. If you select another view before clicking **OK**, all previous CI selections are discarded.

Select the CIs for which you want to show the KPI status over time. By default, the dashboard shows no data until CIs are selected. For more information, see "[Configuration Items Dialog Box](#)" on page 247.

2. *Optional.* Click the  **Filter Key Performance Indicators** button to open the KPI dialog box and select or deselect KPIs to display. For more information, see "[Key Performance Indicators Dialog Box](#)" on page 248.

By default, all KPIs for the selected CIs are preselected.

3. *Optional.* Click the  **Select KPI Status Widgets** button to open the widget dialog box and select one or more widgets. By default, the heat map is selected. For more information, see "[Types of Widgets](#)" on page 248.
4. *Optional.* To change the dashboard's refresh rate and display name, click the  button on the **Component Toolbar** and click **Preferences**.

Tip: When viewing the dashboard as a component, you can also change the widget selection in the **Preferences** dialog box.

5. You can visually filter data shown in the widgets, which recalculate themselves based on current selection context. To reset the filter selection, click **Reset Filters**. To change the filter selection, click the filter or filters you want to remove.

Chapter 16: Return On Investment Dashboard

This section describes the Return On Investment dashboard user interface that you use to monitor the effectiveness of your OMi installation.

To access

Workspaces > Dashboards > Return on Investment

Learn More

Return On Investment Overview

The Return on Investment Dashboard displays the proportion of events received by OMi that have been automatically handled against those that required intervention by operators. The higher the proportion of automatically handled events, the greater the contribution OMi is making to the management of your infrastructure. If the cost of manually handling a typical event is known, this value can be entered into OMi, based on which, the total cost saving achieved through OMi can be displayed. These statistics can be displayed for any specified time period within which OMi has been monitoring your IT environment.

OMi can be configured to handle events using a wide range of automation features, for example:

- Event suppression rules based on event filters. The events matching one of these rules are rejected from further processing. For details, see ["Event Suppression" on page 1](#).
- Duplicate event suppression detects duplicate occurrences of events and suppress such duplicates based on the event attributes, such as the event key, or where a set of configurable attributes of a new event have the same values as an existing event. For details, see ["Duplicate Event Suppression" on page 1](#).
- Changing the state of related events automatically is basic event correlation using close key patterns or health-contributing ETIs, which can be employed to change the lifecycle state of existing events to closed or resolved. For details, see ["Change the State of Related Events Automatically" on page 1](#)
- Stream-based event correlation (SBEC) uses rules and filters to identify commonly occurring events or combinations of events and helps simplify the handling of such events by automatically identifying events that can be withheld, removed or need a new event to be generated and displayed to the operators. For details, see ["Stream-Based Event Correlation" on page 1](#).
- Topology-based event correlation (TBEC) uses RTSM topology information to automatically determine relationships between events, highlighting the causal events as ones needing attention while suppressing symptom events. For details, see ["Topology-Based Event Correlation" on](#)

[page 1.](#)

- Automatic actions can be performed automatically and unattended on targets such as systems running an Operations Agent. Actions can trigger Operations Orchestration run books if the OMi-OO integration is configured. For details, see the *OMi - Operations Orchestration Integration Guide*.
- Time-based event automation functions can be used to further tune event processing, for example, by increasing an event's priority after a certain period of time or automatic, time-based restarting of failed actions. For details, see "[Time-Based Event Automation](#)" on [page 1](#).

Return On Investment User Interface

The Return on Investment Dashboard presents its information using the following features.

Pie Chart

A two-sector pie chart displays the proportion of events handled automatically by OMi compared with the events that were actually received in the Event Browser needing operation interaction, which helps you to immediately visualize the value that OMi is providing to your IT organization.

Total Number of Events

Displays the total number of events received by OMi from the IT environment during the selected time period.

Reduced by OMi

Displays the number of events handled automatically by OMi during the selected time period.

Stack Chart

The stack chart displays the ratio of automatically handled events in comparison with those handled by OMi operators divided into predetermined time periods. The granularity of these time periods reduces as the length of the overall time period is increased. Short time periods show one stack per hour, the stack granularity decreasing, for example, through days, weeks and months as the total time period is increased. In addition, a trace of the percentage of automatically handled events is superimposed on the chart.

Cost Saving

If Event Cost Saving Calculation is enabled in the Operations Management - Return On Investment Infrastructure Settings, and a value for the cost of manually handling a typical event is entered in OMi, the total cost saving achieved through OMi is displayed for the selected time period. The default value for costs per event and currency are set up in the Operations Management - Return On Investment Infrastructure Settings.

Tasks

["Configuring the ROI Cost Saving Calculation" on the next page](#)

["Using the ROI Dashboard" on the next page](#)

["Return On Investment Dashboard" on the previous page](#)

["Return On Investment Dashboard" on page 251](#)

["Return On Investment Dashboard" on page 251](#)

["Printing the ROI Dashboard" on the next page](#)

Configuring the ROI Cost Saving Calculation


To Configure the Return On Investment Cost Saving Calculation:

1. Open the Infrastructure Settings for Operations Management:


Administration > Setup and Maintenance > Infrastructure Settings

Go to the section:

Operations Management - Return On Investment

2. Open the **Enable Cost Saving Calculation** setting for editing () and set to true.
3. *Optional:* If you want to display the calculated cost saving being achieved by OMI, and you have a default value for manually handling an event for your organization, enter that value for under **Cost Per Event**. In addition, set the applicable currency appropriate for your geography under **Currency**.
4. Go to the Return On Investment Dashboard:

Workspaces > Dashboards > Return on Investment

5. Open the **Event Cost Savings** dialog ()
6. Select the **Display cost savings through Operations Manager i** in the report check box.
7. Select a value for the cost of handling an event. The available choices are:
 - **Use default value:**
Uses the value set in the **Cost Per Event** Infrastructure Settings under **Operations Management - Return On Investment**.
 - **Use custom value:**
Uses the value that you enter in the associated value field.
8. Click **OK**.

Using the ROI Dashboard

To Use the Return On Investment Dashboard:

1. Go to the Return On Investment Dashboard:

Workspaces > Dashboards > Return on Investment

2. Select a time period over which you want to display the return on investment data.
 - Use the **from** calendar to set the start date either by entering the date directly in the date field or selecting the date from the calendar with a mouse click. Alternatively, select the current date with the **Today** button.
 - Use the **to** calendar to set the end date either by entering the date directly in the date field or selecting the date from the calendar with a mouse click. Alternatively, select the current date with the **Today** button.

Note: The selected start and end dates are displayed in the calendars with a blue background. All other dates included in the time period selection are displayed with a gray background. The current date, if not selected, is displayed with a yellow background.

Printing the ROI Dashboard

To print the content of the dashboard:

1. Go to the Return On Investment Dashboard:


Workspaces > Dashboards > Return on Investment

2. Click the **Print** button ()

The currently configured ROI Dashboard is sent to the print application.

UI Reference

Dashboards Pane

UI Element	Description
	<p>Event Cost Savings: Opens the Event Cost Savings dialog from which you can enable and disable the displaying of the Cost Saving By OMi information in the Return On Investment dashboard.</p> <p>Note: Enable Cost Saving Calculation must be enabled in the Operations Management - Return On Investment Infrastructure Settings. The cost for handling an event (Cost Per Event) and the appropriate currency should also be specified.</p>
<p>Statistics for timeframe</p>	<p>Presents a summary of the time period selected over which to display the Return On Investment data.</p>
<p>Total Number of Events</p>	<p>Displays the total number of events received by OMi from the IT environment during the selected time period.</p>
<p>Reduced By OMi</p>	<p>Displays the number of events handled automatically by OMi during the selected time period.</p>
<p>Cost Savings By OMi</p>	<p>Displays the total cost saving achieved through OMi during the selected time period.</p> <p>Enable Cost Saving Calculation must be enabled in the Operations Management - Return On Investment Infrastructure Settings. The cost for handling an event (Cost Per Event) and the appropriate currency should also be specified.</p> <p>Display cost savings through Operations Manager i in the report must be selected in the Event Cost Savings configuration dialog.</p>
<p>Time Frame</p>	<p>from: Displays the selected start date for the return on investment calculation.</p> <p>to: Displays the selected end date for the return on investment calculation.</p> <p>Dates can be input directly in the to and from fields, by selecting the dates in the calendars or by using the Today button.</p> <p>The selected start and end dates are displayed in the calendars with a blue background. All other dates included in the time period selection are displayed with a gray background. The current date, if not selected, is displayed with a yellow background.</p>

Event Cost Saving Dialog

UI Element	Description
Display cost savings through Operations Manager i in the report	<p>Select this check box to enable displaying of the Return On Investment dashboard in the Operations Manager i user interface.</p> <div data-bbox="496 485 1370 663"><p>Note: Enable Cost Saving Calculation must be enabled in the Operations Management - Return On Investment Infrastructure Settings. The cost for handling an event (Cost Per Event) and the associated currency should also be specified.</p></div>
Use default value	<p>Select this option to use the value specified in the Cost Per Event setting under the Operations Management - Return On Investment Infrastructure Settings.</p>
Use custom value	<p>Select this option and specify an alternative value to override the value specified in the Cost Per Event setting under the Operations Management - Return On Investment Infrastructure Settings.</p>

Part IV: Operations Console

- **Event Perspective.** The Event Perspective page displays event-related information.
- **Health Perspective.** The Health Perspective page displays topological information and health indicators related to the selected event. This display enables you to simultaneously see events from different perspectives and helps you to better understand complex relationships and dependencies.

For example, you can view the following:

- List of active events.
 - Topological view of the CI related to the selected event.
 - Health indicators assigned to the objects, their state and value.
- **Performance Perspective.** You can generate graphs and tables to illustrate graphically how the monitored objects in the environment are performing. The graphs you generate show an overview of important performance metrics (for example, CPU and swap space utilization over time, memory page use, and availability).

You can choose from a variety of graph types and configure the details that you want to include in the graph, the time period to be used, and the display format (for example, graph, chart, or table). You can also display the same data in different forms using multiple tabs.

For details about the performance graphs, see ["Performance Graphing Overview" on page 261](#). For more information about how to refine the way in which the data is presented in graphs, see ["Types of Graphs" on page 263](#).

- **Discover OMi.** Enables you to explore OMi step-by-step, following predefined paths and learning OMi features along the way. The map begins with an interactive tutorial. Each step offers built-in information as well as links to additional resources, for example, the related UI page, online help, or videos. Discover OMi tracks your progress so that you are aware of the areas you have already visited. Note that progress is stored locally, and that deleting browser cookies (or clicking Reset States within the map) will delete your progress.
- **OMi Health Status.** The OMi Health Status page displays the health status information of the OMi deployment. To ensure efficient operations, OMi keeps track of the health of its components and reports problems so that you can take a corrective or preventive action.

Chapter 17: Event Perspective

The Event Perspective page helps you to better manage the events that occur in your IT environment.

The Event Perspective contains the following main panes:

- **View Explorer**

Displays the contents of the configuration item database and enables you to configure filters that determine how you view the contents of the database. For more information, see ["View Explorer Component" on page 185](#).

- **Event Browser**

Displays a detailed summary of all the events that occur in the operating environment you are monitoring. For more information, see ["Event Browser" on page 30](#).

- **Event Details**

Contains more detailed information about the selected event. Event details can be displayed as a pane below the Event Browser or as a popup window. For more information, see ["Event Details" on page 62](#).

- **Actions Pane**

Display, and execute tools, HPOM actions, and Run Books that can be executed on the selected events in the Event Browser. For details, see ["Tools" on page 197](#), ["Actions" on page 193](#), and ["Launching Operations Orchestration Run Books" on page 57](#).

The size of all panes can be manually modified. You can also use the **Expand** and **Collapse** buttons to alter the display formats to predefined settings. The **Restore** button reverts the associated pane to the default size.

Chapter 18: Health Perspective

The Health Perspective tab is used to display the health of related CIs in the context of events. The event selected in the Event browser determines what is displayed in the Health Top View and the selected CI in the Health Top View determines what is displayed in the Health Indicators pane.

In the Health Perspective tab, the following panes help you understand the health status of an object, show you which business rules and KPIs are being used, and how the health status of the selected object affects the health of related objects:

- **View Explorer**

Displays a list of all the objects in your monitored environment. For more information, see ["View Explorer Component" on page 185](#).

- **Event Browser**

Displays a list of the active events in your environment. For more information, see ["Event Browser" on page 30](#).

- **Health Top View**

The Health Top View pane in the Health Perspective tab displays a topological view of the configuration items affected by the event selected in the Event Browser pane. The view shows the relationships between the configuration items that represent the monitored objects and indicates their current health status. You can also use the Health Top View to see what affects the health of individual objects has on the health of other objects.

The Health Top View is designed to help investigate problems that require root cause analysis. For more information, see ["Health Top View Component" on page 152](#).

- **Health Indicators**

Displays a list of the KPIs and health indicators for the selected CI, used to calculate health-related information such as availability and performance of the selected configuration item. For more information, see ["Health Indicators" on page 120](#).

- **Actions Pane**

Display, and execute the tools, actions and Run Books that can be executed on the selected events in the Event Browser. For details, see ["Tools" on page 197](#), ["Actions" on page 193](#), and ["Launching Operations Orchestration Run Books" on page 57](#).

Health indicators (HI) and key performance indicators (KPI) are used to determine the health of an object. OMi calculates how severe the problems directly associated with the selected object are and combines this information with any additional information available about dependent objects. The combined data is passed to calculation rules that evaluate and set the KPIs that indicate the overall health of an object.

The color of an object displayed in the Health Top View is used to indicate its health, and the most critical status of any contributing objects. For example, green can be set to represent normal and red to represent critical. The color used depends on the view settings. Whatever you specify in the view settings contributes to the color of the CI.

For more information about HIs and KPIs, see ["Health Indicators" on page 120](#) and ["HI-Based KPI Calculations" on page 122](#).

Chapter 19: Performance Graphing Overview

Performance Graphing enables you to draw graphs and design custom graphs for configuration item types that you are monitoring. You can also compare multiple instances of a resource or an application on one or more Configuration Items (CIs).

The preformatted and custom graphs and reports help you perform the following:

- Evaluate the performance of monitored entities (such as applications, system, and network)
- Analyze usage trends
- Correlate usage
- Compare application and system performance

The following sections describe the different graphing functions:

Drawing Graphs

Performance Graphing enables you to draw graphs from pre-defined templates or create your own graphs for a selected CI. You can launch a performance graph from one of the following areas:

- **My Workspace Page**

You can add performance graphs to My Workspace. To view the graphs, drag and drop a graphing component while creating your My Workspace page. You can choose to draw predefined graphs using the Performance Graphing component. You can also create ad hoc graphs for a selected CI using the **Performance Graphs with Details** component. For more information, see ["Drawing Graphs in My Workspace" on page 266](#).

- **Performance Perspective Page**

Performance Perspective enables you to draw graphs from templates. You can also draw ad hoc graphs by selecting the required metrics for a selected CI. For more information, see ["Drawing Graphs from Performance Perspective" on page 268](#).

- **Event Browser Pane**

You can draw graphs from the Event Browser pane using **Show** option from the context menu. You can launch graphs that are available for a selected node, event, or the selected CI. For more information, see ["Drawing Graphs from OMi" on page 266](#).

- **View Explorer**

You can draw graphs for a selected CI from the View Explorer pane using the available context menu. For more information, see ["Drawing Graphs from OMi" on page 266](#).

Designing Graphs

Performance Graphing enables you to design customized graphs using the Design Wizard. The Design Wizard helps you create different types of graphs. You can design a graph from the following areas:

- **Performance Perspective Page**

Performance Perspective enables you to design a graph by selecting **Configure** from the **Options** menu of a drawn graph window. The Design Wizard window opens. For more information, see ["Editing Graphs" on page 270](#).

- **Event Browser Pane**

You can draw graphs from the Event Browser pane using **Configure** option from the context menu. The Design Wizard window opens. For more information, see ["Designing Graphs" on page 269](#).

- **View Explorer**

You can design a graph for a selected CI from the View Explore pane using the **Configure** option from the context menu. The Design Wizard window opens. For details, see ["Designing Graphs" on page 269](#).

- **Performance Graph Designer**

You can design a new graph template for a selected CI instance using the Performance Graph Designer.

For more information on designing a new graph template, see the "How to Launch the Performance Graph Designer" section in the OMi Administration Guide.

Note: For more information, see the OMi Administration Guide.

Managing Graphs

Graphing enables you to perform the following management-related functions.

- **Editing Graphs**

You can also edit out-of-box graph templates and save them as user-defined templates. For more information, see ["Editing Graphs" on page 270](#).

- **Assigning Graphs**

You can assign a graph family to a CI type.

- **Deleting Graphs**

You can also delete any graph that you have created. For more information, see ["Deleting Graphs" on page 271](#).

Types of Graphs

Performance Graphing has different graph types available. While designing or editing a graph, you can select the required graph type. The following table lists the available graph types.

Graph Type	Description
Line	Displays each metric as a line. Only Line Styles are valid for this graph type.
Bar	Displays vertical bars for each metric.
Area	Displays each metric as a line with data below the line filled with the same color. All metrics in this graph must have the same unit. This graph is also known as a filled line graph.
Mixed	Displays metrics that can be individually set as a line, area, or bar. Note: You cannot select the graph type as Mixed when drawing or editing a graph from the Design Graph.
Horizontal Bar	Displays horizontal bars for each metric.
Pie	Displays each metric as a portion of a circular pie chart.
Gauge	Displays a single automotive-type dial gauge for each metric.
Table	Displays the data in a table with columns for each metric, and rows for each record.
Horizontal Table	Displays a table with columns for each record and rows for each metric.
Capacity	Displays the metric value against its maximum value. Note: You cannot select the graph type as Capacity when drawing or editing a graph from the Design Graph.
Baseline	Displays the average values for a single metric for a typical week. All available data from the data source is used to generate this baseline. To calculate the baseline for a typical week, you must have more than seven days of data for the selected system. If there is a large volume of historical data, it may take a few minutes to calculate. Note: You cannot select the graph type as baseline when drawing or editing a graph from the Design Graph.

Baseline Graphs

A baseline graph is useful in identifying patterns in the utilization of a resource.

When you specify a baseline graph, eight graphs are drawn. The first graph in the series is a **Typical Week** graph that displays the average values of a metric, organized by days of the week, and by hours of the day. In addition, there are seven graphs, one for each day of the week. Each of these displays the expected daily high and low values for the metric as opposed to the actual metric value. In the daily graphs, the blue line indicates the range of the values that are expected at any particular hour of that day. The expected values are determined by examining all past data for the system and calculating statistics for every hour of every day of the week. The blue lines typically display the range where 80% of the data points are expected to fall. The red line displays the actual data for each hour of the day.

Overview of Graphs

Performance Graphing is organized using a graph family tree, which consists of the following:

- **Family**

Refers to the group that organizes the graphs.

- **Category**

Refers to the sub-groups of graphs that are logically grouped within the family.

- **Name**

Uniquely identifies a graph definition.

Default Graphs

A default graph in a graph family contains the most important metrics to measure the performance of any resource or application. You can map graph families or categories to a CI. When you launch a graph for a CI that has a graph family or category associated with it, the default graph from the graph family or category is drawn. A graph family can have one or more default graphs. If a graph family does not have a default graph, the first graph in the family or category is selected.

Data Sources

A data source is an agent or an agent component that monitors an entity or an element on which it is deployed. However, HP SiteScope enables data collection without the deployment of an agent.

Performance Graphing validates the data source set for the **Monitored_by** attribute in RTSM and collects data only from the listed data sources. For example, if a CI is monitored only by SiteScope, then Performance Graphing collects data only from SiteScope data sources. If no value is set for the **Monitored_by** attribute, Performance Graphing tries to connect to the HP Operations agent data source.

The data sources continuously collect data about the monitored elements and store it in the data store for future use. Performance Graphing enables you to visualize this historical data stored in the persistent data stores.

Performance Graphing supports the following data sources:

- HP Performance Agent
- HP Operations Agent
- SiteScope (agentless)
- Sitescope RTM
- BSM Connector

Note: The Real-Time Metric Access component of the HP Operations agent (11.00) provides you with real-time access to performance data for a monitored element.

Metrics

A metric is a measurement that gives an indication of the operational health and performance of a resource. It is a parameter or a set of parameters that can be used to monitor and measure the health, performance, and availability of a monitored resource.

Performance Graphing enables you to visualize this data in a graphical or tabular format. A drawn graph consists of data points available for the selected metrics. A metric class is a set of related metrics grouped together based on the type of data it reports.

The metric values collected by the HP Operations Agent and HP Performance Agent provide information about the monitored systems: processes, applications, transactions, CPU, file system, disk, network interface, and logical systems. These details indicate operational efficiency and health of the monitored system. In addition, various Smart Plug-ins (SPIs) supplement these agents to provide in-depth information about different applications running on these managed systems.

SiteScope collects metrics from different systems without the help of the agent software. Metric values collected by HP SiteScope provides information on the server health, availability of a URL, Web service, database, or application servers. These collected parameters indicate the availability and performance of the IT infrastructure.

BSM Connector integrates data collected by third-party systems (typically, enterprise management systems) in OMi. The metrics collected by BSM Connector provide information about the systems and applications monitored by the third-party software. Performance Graphing supports BSM Connector 9.20 and later.

Managing Graphs - Workflow

Along with out-of-box graph templates, you can also design custom graphs. Using the Design Wizard, you can create your own graph templates to display the required data. You can also edit the existing graph definition of a standard template and save it as a user-defined template. It enables you to map graph families or categories to configuration item types.

For more information, see the "Performance Graph Mappings" section in the OMi Administration Guide.

You can use the Performance Graphs component to draw graphs from the templates. The Performance Graphs component also enables you to draw graphs by making changes to the selected CIs or views. For more information, see "[Drawing Graphs in My Workspace](#)" below.

You can also draw ad hoc graphs from the Performance Perspective page. For more information, see "[Drawing Graphs from Performance Perspective](#)" on page 268.

Drawing Graphs in My Workspace

You can add Performance Graphs as a component while creating My Workspace. You can use the Performance Graphs component to draw graphs from templates for a selected CI. You can also create your own graphs by selecting the required metrics for a CI.

Perform the following to add Performance Graphs to My Workspace:

1. Click **New Page** button in the Page Management tool bar.
2. Click **Split** button. You can split the layout area into a number of vertical or horizontal panes.
3. Click **Add Component** icon. Double-click **Performance Graphs** or **Performance Graphs with Details** from the **Component Gallery** window, to place it in one of the panes.

Alternatively, click **Component** button in the Page Management tool bar. Select **Performance Graphs** or **Performance Graphs with Details** from the component gallery and drag it to any area on the page.

4. Select **View Explorer** from the component gallery and drag it to any area on the page.

You can use the Performance Graphs component to draw graphs from the templates. The **Performance Graph with Details** component enables you to launch the Performance pane, and draw graphs from templates or create your own ad hoc graphs.



Drawing Graphs from OMi

You can draw graphs from a set of predefined templates or design your own graph templates. You can draw a graph in one of the following ways.

To draw a graph from the View Explorer pane:

1. Right-click the CI for which you want to draw a graph.
2. From the menu options, select **Show > Performance Graphs (CI)** to draw a graph for the selected CI.



Select **Show > Performance Graphs (Neighborhood)** to draw graphs for the selected CI and the neighborhood CIs.

A new window opens showing the default graphs for the selected CI. The Configuration Items Tree and Selection Panel are collapsed by default. Click  to expand the Configuration Items Tree and click  to expand the Selection Panel.

For Neighborhood graphs, a new window opens showing the only the default graphs for the first selected CI. The Configuration Items Tree lists the selected CI and the neighboring CIs. The Graph Selection Panel is collapsed by default. To draw graphs for the neighborhood CIs, select the required CIs and draw the graphs.

To draw a graph from the Event Perspective tab:

1. Right-click the event for which you want to draw a graph in the **Event Browser** pane.
2. From the menu options, select **Show > Performance Graphs (Neighborhood)** or **Performance Graphs (CI)**.

A new window opens showing the default graphs for the selected CI. The Configuration Items Tree and Selection Panel are collapsed by default. Click  to expand the Configuration Items Tree and click  to expand the Selection Panel.



Note: If you are drawing a graph for a CI with multiple instances, make sure the value of the parameter `Maximum Instances` is configured accordingly. While drawing a graph, only as many instances as the value specified for this parameter are displayed. If the number of instances are more than the value of this parameter, the extra instances are excluded from the graph.

For more information, see the "Performance Graphing Infrastructure Settings Manager" section in the OMi Administration Guide.

When you launch a graph for an event, the default graph of each family or category is displayed in a new browser window. If a graph family or category does not have a default graph, the first graph in the family or category is selected. There are a different options that you can use to perform a detailed analysis on the drawn graph. For more information, see ["Options for Drawn Graphs" on page 275](#).

The number of graphs drawn depends on the attributes which is a part of the graph template such as the value of `Metrics per graph`, the graph type configured in the graph templates, and number of CIs. See ["Graph Attributes - List and Description" on page 297](#) and keywords (as they appear in the graph template).

To modify your selection of graph for a selected CI:

1. Select a graph type from the list of Predefined Graphs.
2. Click **Draw Graphs** . The selected graph is drawn.
3. Click **Clear Selections** , to cancel all the previous selections.

Drawing Graphs from Performance Perspective

You can launch graphs from predefined graph templates or create ad hoc graphs by selecting the required metrics for a selected CI. You can draw a graph from the Workbench page in one of the following ways.

To draw graphs from Graph templates:


1. From the Configuration Items Tree, select the CI for which you want to draw graphs.

Note: Select only one CI from the tree view to draw graphs. If you select more than one CI, the system displays an error stating that a related data source could not be found.

2. From the Performance pane, select **Predefined Graphs** tab. This tab displays a list of predefined graphs based on the CI that you select.

Depending on the CI you select, the default graphs are pre-selected.

If you do not want to draw the pre-selected graphs, click **Clear Selections** .

3. Select a graph or graphs from the list of Predefined Graphs. You can select more than one graph from the list by pressing the **CTRL** key and selecting the graphs.
4. Click **Draw Graphs** .

The graphs are drawn in the Drawn Graphs pane.

To draw ad hoc graphs:

1. From the **Configuration Items Tree**, select the CI, for which you want to draw graphs. The Metrics tab on the Performance pane displays the following:
 - **Metric Classes** - Displays the list of available metric classes and is displayed only if there is more than one metric class.
 - **Instances** - Instances pane is displayed only when you select a multi-instance metric class. It lists all the available instances for a metric class.
 - **Metrics** - Metrics pane displays the list of metrics corresponding to the selected or available

metric class.



For more information on the vCenter metrics and different logging levels, refer the VMware documentation.

2. Select the required metric class. The Metrics box displays the list of numeric metrics belonging to that class.
3. Drag and drop one or more metrics from the metric list onto the Drawn Graphs pane. The graph is drawn for the selected metrics.

You can drag and drop any number of metrics and draw graphs.

Note: You cannot drag and drop RTM metrics onto a non RTM graph window and vice versa. The graph for the metrics will not be drawn.

To modify your selection of graph for a selected CI:

1. Select a graph type from the list of Predefined Graphs.
2. Click **Draw Graphs** . The selected graph is drawn.
3. Click **Clear Selections** , to cancel all the previous selections.

Designing Graphs

You can design graphs using the Design Wizard, and save as customized templates. You can use these customized templates to draw graphs. You can also draw ad hoc graphs using the Design Wizard. You can launch the Design Wizard in one of the following ways.

To design a graph from the View Explorer pane:


1. Right-click the CI for which you want to design a graph.
2. Select **Configure > Performance Graphs**. The Design Wizard window opens.

To design a graph from the Event Perspective tab:

1. Right-click the event for which you want to design a graph.
2. Select **Configure > Performance Graphs**. The Design Wizard window opens.

To design a graph from the Performance Perspective:

You can also launch the Design Wizard from the following areas in the Performance Perspective page:


- From a drawn graph window, click **Options > Configure**. The Design Wizard window opens.
- From a table graph window, click  (**Configure**) icon. The Design Wizard window opens.

The Design Wizard takes you through a series of steps required to design a graph. For more information, see ["Graph Attributes Tab" on page 284](#).

Editing Graphs

Performance Graphing enables you to edit a graph that you have created. You can also edit out-of-the-box graph templates and save them as user-defined graph templates with different names.

To edit a graph template:

1. Open the Performance Graphs Manager:
Administration > Operations Console > Performance Graph Mappings
2. From the **Available Graph Families** pane, select the graph that you want to edit.
3. Click **Edit**  button or right-click the graph and select **Edit Graph Template: Launch Designer**. The Launch Performance Graph Designer window opens.
4. Select a CI Instance from the list and click **Next**. Launch Parameters displays the list of parameters available for the CI instance you selected.
5. Click **Finish**. The ["Graph Attributes Tab" on page 284](#) opens.

To edit a drawn graph:

1. Select **Options > Configure** from the graph window. The Design Wizard window opens.
For more information, see ["Special Attributes Tab" on page 293](#).
2. Click **Preview** to view the modified graph.
3. Click **Back to Design** to view the Design Wizard. If you have modified the graph by adding or removing metrics, launch the Design Wizard again by selecting **Options > Configure** from the graph window.

Note: If you have more than one drawn graph appearing in the Performance pane, the **Configure** option of each drawn graph invokes a Design Wizard for the selected graph.

To edit graphs, you must be logged in as an Administrator. For information about the user roles, see the "Users" section in the the OMi Administration Guide.


Deleting Graphs

You can delete any graph that you have created, but you cannot delete out-of-the-box graphs.

To delete a graph:

1. Open the Performance Graphs Manager:

Administration > Operations Console > Performance Graph Mappings

2. From the **Available Graph Families** pane, select the graph that you want to delete.
3. Click **Delete Item** . The graph is deleted.

Note: A graph family without any graphs is deleted.

To delete graphs, you must be logged in as an Administrator. For information about the user roles, see the "Users" section in the the OMi Administration Guide.

Performance Graphing User Interface

This section includes:

- ["Performance Perspective Graphical User Interface " on the next page](#)
- ["Options for Drawn Graphs" on page 275](#)
- ["DrillDown to Process" on page 278](#)
- ["Table Graph Window " on page 282](#)
- ["Graph Export Dialog Box" on page 283](#)
- ["Graph Design" on page 284](#)
- ["Graph Attributes Tab" on page 284](#)
- ["Metric List Tab" on page 288](#)
- ["Select Metrics Window" on page 288](#)
- ["Metric Properties Window" on page 289](#)
- ["Special Attributes Tab" on page 293](#)

- ["Save Graphs Dialog Box" on page 296](#)
- ["Graph Attributes - List and Description" on page 297](#)
- ["Date Range Panel " on page 300](#)

Performance Perspective Graphical User Interface

To access	Workspaces > Operations Console > Performance Perspective
Important information	The section aims to help you become familiar with Performance Perspective tab. The Performance Perspective page enables you to draw graphs from templates and also create ad hoc graphs by selecting required metrics.
Relevant tasks	"Managing Graphs - Workflow" on page 266
See also	"Performance Graphing Overview" on page 261

In this section you can find information about the following panes:

- ["View Explorer" below](#)
- ["Performance Pane" below](#)

View Explorer

The View Explorer pane displays a list of CIs in a tree view. You can create your own views. In Performance Graphing, select only one CI from the tree view to draw graphs. If you select more than one CI, the system displays an error stating that a related data source could not be found.


For information about the View Explorer, see ["View Explorer Component" on page 185](#).

Performance Pane

The Performance pane enables you to draw and view performance graphs for a selected CI. You can draw a pre-defined graph for a CI or draw a graph from the list of available metrics.

The following tables explains the tabs available in the Performance pane.

UI Elements	Description
Predefined Graphs	Displays a list of graph templates based on the CI selected in the View Explorer pane.

UI Elements	Description
Metrics	<p>Displays the following information:</p> <ul style="list-style-type: none">• Data Sources - lists the data sources available for the selected CI. If the monitored node has only one data source, this data is not displayed.• Metric Classes - lists the metric classes available for the selected data source. If the selected data source has only one metric class, this data is not displayed.• Instances - lists the instances available for the selected multi-instance metric class.• Metrics - lists the metrics available for the selected metric class <p>You can use the Refresh () icon available in the Metrics tab to refresh a data source. Select a data source and click the Refresh button. When you refresh a data source, all the available metric classes, instances (if any), and metrics are refreshed.</p> <p>You can also use the button to refresh an RTM data source manually.</p>

Drawn Graphs Window

All drawn graphs are displayed in the Drawn Graph window of the Performance pane. For more information on the user interface elements in the Drawn Graphs window, see ["Options for Drawn Graphs" on page 275](#).

The Drawn Graph window displays the following:

- Legends for the metrics that enable you to hide or show the graphs for the metrics.
- Name of the node from which the data source is collecting data.
- Metric name, metric value, and the timestamp of the metric.

Note: When using the SiteScope or BSM Connector data source, if you have a CI monitoring 5 minutes data and there are multiple data points within the duration, the graph shows only the last data received with the duration.

Following are the functions available for drawn graphs:

Compare Metrics from Different CIs

1. Select a CI. The available metrics and predefined graphs for the chosen CI appears. Drag and drop a metric from the Metrics pane. The graph is drawn in the Performance pane.
2. Select the second CI with which you want to compare. Select the same metric from the metrics pane. Drag and drop the metric to the previously drawn graph to compare the data across CIs.

For example, select a metric BYCPU_TOTAL_UTIL from two CIs. You can now compare the total CPU utilization data from nodes associated with the two CIs.

Remove Metric

Right-click the metric name from the legend and select remove. The corresponding line representing the metric is removed from the graph and will no longer appear in the legend.

Add Metric

Drag and drop a metric into a drawn graph window. The new metric is displayed in the graph and will be listed in the legend.

Hide Metric

Click the metric name from the legend in the graph window. The legend of the metric is disabled and the graph of the metric does not appear in the graph window.

Show Metric

Click the disabled metric from the legend. The legend of the metric is enabled and the graph of the metric is displayed again on the graph window.

Copy Metrics from One Graph to Another

You can drag a metric from one graph and add it to another. The target graph will display the newly added metric.

Pull Out Metric from a Graph

You can drag a metric from one graph and drop it into the empty space in graph panel area. A new graph is drawn with the metric which you selected.

Move Graphs

Click the top bar of the drawn graph and drag to move or rearrange the drawn graphs order.

Resize Graphs

Place the cursor at the bottom right corner of the drawn graph window and click and drag to resize the

window.

Options for Drawn Graphs

To access	Workspaces > Operations Console > Performance Perspective
Important information	The following additional options are available to perform a more detailed analysis after you draw a graph.
Relevant tasks	For instructions to draw a graph, see "Drawing Graphs from OMi" on page 266 .




This section provides information to interpret the contents of graphs and use the available features and functionality to change the content.

- ["Graph Selection Icons" below](#)
- ["Drawn Graphs Window" below](#)
- ["Options Menu" on the next page](#)
- ["Graph Window Options" on page 277](#)
- ["Zoom-In Data in Drawn Graph" on page 277](#)

Graph Selection Icons

The Predefined Graphs tab displays a list of graphs, graph families, and categories associated with the selected CI. The default graphs in the graph families or categories and the CIs used are selected by default.

The following table lists the functions available in the Predefined Graphs tab.

UI Elements	Description
	Draw Graphs: Draws graphs for the selected CI.
	Clear Selection: Clears the selections in the tab.
	Refresh: Refreshes the Predefined Graphs list.

Drawn Graphs Window

The following table lists the elements available in the title bar of the Drawn Graph window.

UI Elements	Description
Collapse (<<)	Click this icon to collapse the Predefined Graphs and Metrics tabs.
Expand (>>)	Click this icon to show the Predefined Graphs and Metrics tabs. This icon is available only when you have already collapsed the tabs.
Options	Displays the menu options for the drawn graphs. For more information on the elements available in the Options menu, see "Options Menu" below .


Options Menu

The following table lists the elements available from the **Options** menu in the title bar of the Drawn Graph window.

UI Elements	Description
Tooltips	Select this option if you want to enable the tooltips the drawn graphs. When selected, hovering the mouse on the graph area of a drawn graph opens a text box displaying the actual value of the data point and the time interval of the selected data. When disabled, no pop-up window is displayed.
Date Range Panel	Select this option to open the Date Range Panel. Using the Date Range Panel, you can quickly change the duration for which the graph is drawn. Use this option to drag and drop a metric and draw a reference graph. The reference graph helps you understand the correlation between different metrics. You can also customize the graph to view granular data for a selected unit of time.
Navigation Panel	Select this option to display the navigation panel in the graph window. This option is available only for graphs displaying near-real time data.
Close All Graphs	Select this option to close all open graph windows simultaneously.
Load Favorites	Select this option to open the graphs that you have saved as Favorites.
Delete Favorites	Select this option to remove the saved favorite(s) from the list. For more information, see Deleting a Favorite .
Save as Favorite	Select this option to save a drawn graph(s) as favorite. For more information, see Saving as Favorite .
Help	Click this option to view the help content for the current page.
Export as PDF	Click this option to export all the drawn graphs into a PDF document.

Graph Window Options

The following table lists the options available in the Graph window.

UI Elements (A-Z)	Description
Metric Legend	<p>Click the Metric Legend buttons to show or hide the corresponding graphs of the metric.</p> <p>To remove a metric from a graph, right-click the Metric Legend button and select Remove. The corresponding graph and the legend are removed from the graph window.</p>
	<p>Auto Refresh On/Off: If Auto Refresh option is enabled, the data in drawn graph is refreshed at a specific interval, depending on the value specified for refresh rate in the graph template.</p>
< >	<p>Prev/Next: Performance Graphing provides the Prev and Next buttons to navigate to adjacent time intervals based on the value specified for <code>points every</code> while drawing a graph. For more information, see "Specifying Points Every Value" on page 286.</p>
>> <<	<p>Prepend/Append: Performance Graphing provides the Append and Prepend buttons to append or prepend data for adjoining time intervals based on the value specified for <code>points every</code> while drawing a graph. For more information, see "Specifying Points Every Value" on page 286.</p>
Options > Configure	<p>Select this option to open the Design Wizard.</p>
Options > View as Table	<p>Select this option to view the data as a table.</p>
Options > Export	<p>Select this option to export graphs to formats such as TSV, CSV, XLS, and XML. For more information, see "Graph Export Dialog Box" on page 283.</p>
Options > Navigate	<p>Select this option to select the start and end date from the Time Settings dialog box. The data in the drawn graph is refreshed to display the data for the selected period. If you select the Apply to all graphs check box, the data in all the drawn graphs are refreshed.</p>
Options > Launch Real Time	<p>Select this option to draw the real time graph for the selected graph. The graph opens in a new graph window.</p> <p>From the Real Time graph, you can launch a Near Real Time graph by selecting Options > Launch Near Real Time.</p>

Zoom-In Data in Drawn Graph

After you draw a graph, you can zoom-in to view data points for a smaller time period and zoom-out to

reset and view the original graph. Zooming-in or zooming-out enables you to adjust the summarization levels.


- To zoom-in, click and drag the mouse to a rectangular area on the graph from left to right.
- To zoom-out, click and drag on the graph from right to left. When you zoom-out a graph, the graph is reset to its previous state.

You can zoom-in up to multiple levels. Every zoom-out reverts to the previous state of the graph.

Note: This option is available only for image graphs. However, this option is not available for pie, gauge, table, and forecast graphs, and graphs drawn for Real-Time Measurement data sources.

Saving as Favorite

To save drawn graphs as a favorite, follow the steps:

1. Draw the required graphs. For more information, see "[Drawing Graphs from Performance Perspective](#)" on page 268.
2. Click  (**Save as Favorite**) in the Performance pane. The Save as Favorite dialog box opens.
3. Type the name of the group in the **Enter Favorite Name** field.

Note: If you are adding new graphs to an existing favorite list, select the required Favorite from the drop-down list.

4. Click **Save** to save the favorite list.

Click **Cancel** if you do not want to save the graphs to any lists.

Deleting a Favorite

To delete a saved favorite, follow the steps:

1. Select **Delete Favorites** from the **Options** menu. The Delete Favorites dialog box opens.
2. Select the favorite to be deleted from the list of favorites available in the **Favorites** box.




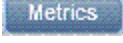


To select multiple favorites, press the **CTRL** key and select the required favorites.

3. Click **Delete**. The system displays a confirmation message asking to delete the selected favorites.
4. Click **Yes** to confirm. The Favorites pane do not show the removed favorites.

DrillDown to Process


The Drill Down to Process option shows you the process information corresponding to the drawn graph. Click **Options > DrillDown to Process**. The **Time Settings** dialog box opens. Drag and set the time period for which you want to view the process data. The DrillDown to Process data appears.

The following table lists the icons and features available in the DrillDown to Process box.

Features	Description
Lock Column	Select this option to lock one or more columns in the table graph. This option enables you to view the locked columns as you navigate across columns using the horizontal scroll bar. When you select the Lock Column check box, by default, the first column is locked for viewing. To add another column, drag and drop an unlocked column before the thick column border that separates locked and unlocked columns. The thick column border indicates the range of columns that are locked.
 (Table Highlights)	Click this icon to open the Table Highlights dialog box. You can set the attributes based on which rows in the Process Drill Down table must be highlighted. For more information, see "Using Table Highlights" below .
 (Table Filter)	Click this icon to open the Table Filters dialog box. You can set the attributes based on which rows in the Process Drill Down table must appear. For more information, see "Using Table Filters" on the next page
 (Export)	Use this option to export the data from table in CSV, TSV, Excel, or XML format.
 (Metrics)	Click this icon to add or remove metrics from the Process Drill Down table. For more information, see "Selecting Metrics" on page 281 .
 (Configure)	Click this icon to open the Design Graph dialog box. For more information, see "Graph Design" on page 284 .
 (Auto Refresh On/Off)	If Auto Refresh option is enabled, the data is refreshed at a specific interval, depending on the value specified for refresh rate in the graph template.

Using Table Highlights

You can highlight cells in the table by specifying conditions based on the metric value. To highlight cells, perform the following steps:

1. Click () **Table Highlights** icon. The Table Highlights dialog box opens.
2. Select the required metric based on which the cells must be highlighted, from the drop down list.
3. Select the required comparison symbol from the list of symbols available. For more information on the comparison symbols, see ["Comparison Symbols" on the next page](#).
4. Type the value to be compared against the metric in the text box.

5. Select a color from the color palette to highlight the cells.
6. Click **Add**. The highlight condition is added to the Conditions table.

To remove an added condition, select the condition and click **Remove**.

To remove all the added conditions, click **Remove All**.

7. Click **OK**. The Table Highlights dialog box closes.

The values matching the condition set is highlighted in the table .


Comparison Symbols

The following table lists the comparison symbols available in the Table Highlights dialog box.

Comparison Symbol	Description
<=	Less or Equal
>=	Greater or Equal
!=	Not Equal
!~	Not Like (text with leading or trailing ".*" expressions)
=	Equal
~	Like (text with leading or trailing ".*" expressions)
<	Less
>	Greater

Using Table Filters

You can use the Table Filters in the table to filter and view data in the table. To filter rows, perform the following steps:


1. Click () **Table Filters** icon. The Table Filters dialog box opens.
2. Select the required metric based on which the cells must be filtered, from the drop down list.
 - a. Select the required comparison symbol from the list of symbols available. For more information on the comparison symbols, see "[Comparison Symbols](#)" above.
3. Type the value to be compared against the metric in the text box.
4. Select either **AND** or **OR** to apply multiple conditions.

- **AND** - filters the rows that satisfy the first condition you set and the row that satisfies the following conditions as well.
 - **OR** - filters the rows that satisfy either the preceding or the following conditions.
5. Click **Add**. The filter condition is added to the Conditions table.
 6. Click **OK**. The Table Filters dialog box closes.

The table displays only the rows matching the set filter conditions.

Updating Filter Conditions

To update a filter condition in the Table Filters dialog box, perform the following steps:


1. Click () **Table Filters** icon. The Table Filters dialog box opens.
2. Select the filter condition to update from the list of conditions in the table. The filter values are updated in the preceding fields.
3. Update the values as required.
4. Click **Update**. The filter condition is updated in the table.


To remove any added condition, select the condition and click **Remove**.



To remove all the added conditions, click **Remove All**.

Selecting Metrics

You can use the Metrics window to select the list of metrics to display in the Process DrillDown table. To select the metrics, perform the following:

1. Select the metric to display from the list of **Available Metrics**.
2. Click . The metric moves to the **Metrics to Display** list.

To remove any existing metric from the Process DrillDown table, select the metric from the **Metrics to Display** list in the Metrics window. Click . The metric moves to the **Available Metrics** list.

3. Use the  and  icons to order the metrics to display in the required order.
4. Select **Lock the first column** checkbox if you want to lock the first column in the Process DrillDown table.








- Click **OK**. The Metric window closes and the Process DrillDown table is updated with the selected metrics.

Table Graph Window

A table graph enables you to view granular data in the numeric format. This section describes in detail the information displayed in the Table Graph window. To view the graph as a table, draw a graph and select **Options > View as Table** from the graph window.

Note: If you have a Date metric in the Table Graph window, the values in the column are not internationalized.

The Table Graph window displays the following elements:

UI Elements	Description
Lock Column	Select this option to lock one or more columns in the table graph. This option enables you to view the locked columns as you navigate across columns using the horizontal scroll bar. When you select the Lock Column check box, by default, the first column is locked for viewing. To add another column, drag and drop an unlocked column before the thick column border that separates locked and unlocked columns. The thick column border indicates the range of columns that are locked.
 (Table Highlights)	Click this icon to open the Table Highlights dialog box. You can set the attributes based on which rows in the table must be highlighted. For more information, see "Using Table Highlights" on page 279 .
 (Table Filter)	Click this icon to open the Table Filters dialog box. You can set the attributes based on which rows in the table must appear. For more information, see "Using Table Filters" on page 280 .
	Export: Use this option to export the data from table in CSV, TSV, Excel, and XML format.
 (Configure)	Click this icon to open the Design Graph dialog box. For more information, see "Graph Design" on page 284 .
	Auto Refresh On/Off: If Auto Refresh option is enabled, the data is refreshed at a specific interval, depending on the value specified for refresh rate in the graph template.
	Prev/Next: Performance Graphing provides the Prev and Next buttons to navigate.
	Sort Metric Columns: Use this option to sort the data in the metric columns in ascending or descending order.

Specifying the Order of Metric Columns

You can specify the order of the metric columns, based on which data in the columns must be sorted. To specify the order, perform the following:

1. Select the metric based on which the data must be sorted.

The value **1** appears corresponding to the metric specifying the order.

2. Move the cursor to the next metric that must be considered while sorting data and click on the ▲ or ▼ icon to set the order.

Note: This option is enabled only when there are two or more metrics.

3. Repeat step 2 till you have sorted all the required metrics in order.

The number corresponding to each metric represents the order specified.

Note: To reset the order, click on any metric name and the order is set to **1**. You can specify the order again.

4. Click ▲ or ▼ icon corresponding to the metric that has the order **1** to view the data in ascending or descending order.

Graph Export Dialog Box

You can export drawn graphs to one of the following formats: TSV, CSV, Excel, and XML. To export graphs, draw a graph and select **Options > Export** from the graph window. The Export from a Graph window opens.

The Graph Export dialog box includes the following elements:

UI Elements	Description
Cancel	Click Cancel to close the dialog box and return to the drawn graph page.
OK	Click OK to export the data in the selected format.
Type	Select the format in which you want to export the graph.

Note: If you are selecting a Microsoft Excel or a TSV graph, you must configure the browser settings to display Microsoft Excel and TSV files. For more information on browser settings, see "[Unable to View Graph in Certain Formats \(XLS/TSV\)](#)" on page 302.

Graph Design

To access	Click Options > Configure from a drawn graph.
Important information	Graphing enables you to design custom graphs using the Graph Design feature. You can create your own graph templates to display the required data. You can also edit the existing graph definition of an out-of-the-box template and save it as a user-defined template.
Relevant tasks	"Designing Graphs" on page 269
See also	"Managing Graphs - Workflow" on page 266

Graph Design consists of the following:

- ["Graph Attributes Tab" below](#)
- ["Metric List Tab" on page 288](#)
- ["Special Attributes Tab" on page 293](#)

Graph Attributes Tab

To access	From the menu options, select Configure > Graph Attributes
Important information	From the Graph Attributes tab, you can specify the graph attributes while designing a graph and save it as a template for later use.
Relevant tasks	"Designing Graphs" on page 269.
See also	<ul style="list-style-type: none"> • "Managing Graphs - Workflow" on page 266 • "Graph Design" above

The following elements are included:

UI Elements	Description
Title	Type a name for the graph. This name will be displayed in the title bar of the drawn graph. Alternatively, you can also use any of the "Substitution Variables" on page 292 as a title.

UI Elements	Description
Description	Enter a general description of what the graph represents. <div style="background-color: #f0f0f0; padding: 5px;"> <p>Note: A description of each graph appears as a tooltip when you mouse hover on the graph names in the Selection panel.</p> </div>
Graph Type	Select the type of graph you want to design from the drop-down list. Click here for a list of "Types of Graphs" on page 263 with descriptions.
Duration	Specify the time duration for which you want to design the graph. Enter the number and specify the unit of time. You can specify time duration in minutes, hours, days, and weeks. If you select "all", all the data gathered by the data source and logged in the agent log files is included in the graph.
Points Every	Use the Points Every (POINTS EVERY) setting to control how much data is to be summarized in each point on the graph and hence determine the granularity (number of data points) of data on the graph. For more information, see "Specifying Points Every Value" on the next page .
Limit Number of Points	Enter the number of records (table graph) or data points (for image graph) which you want to view on the graph at a time. The default value is 100. If the graph contains more data points, the Prev and Next buttons are enabled, so that you can navigate to view all the data points. The number of points also depends on the graph type which you have selected: <ul style="list-style-type: none"> • For a table graph, the default value for number of rows can be configured by the software administrator. However, the value specified while designing a graph template overrides the default value and the value is saved in the graph template. • If you are designing a pie graph or a gauge graph, Limit Number of Points is set to one by default. You cannot change this value. The recommended value for maximum number of points is 1000 for a graph. If you select a value greater than this, it will take a long time for the graph to appear.
Make graph default selected on CI selection	When you select the check box, the graph which you design will be the default graph in the family or category to which it belongs. <div style="background-color: #f0f0f0; padding: 5px;"> <p>Note: A graph family or category can have one or more default graphs.</p> </div>
Preview	Click Preview to preview the graph.
Save/Save As	Click Save or Save As to save your graph. The Save Graph window opens.
Cancel	Click Cancel to exit the window without saving.
Help	Click Help to view the help content for the current wizard page.

Specifying Points Every Value

Use the Points Every (POINTSEVERY) option to control how much data is to be summarized in each point on the graph. You can use the Points Every option to determine the granularity (number of data points) on the graph. The default value is Auto. You can select from the following options:

- "Auto" below
- "5 minutes" on the next page
- "15 minutes" on the next page
- "30 minutes" on the next page
- "hour" on the next page
- "3 hours" on the next page
- "6 hours" on the next page
- "12 hours" on the next page
- "Day" on the next page
- "Unsummarized" on the next page

Auto

Selecting this option automatically selects the value to display the data points within the configured limit. If you select Auto, Graphing automatically summarizes the data based on the date range that you have specified to a level that would make the graph easy to read. If the combination of Date Range and Points Every settings results in too many points, the Points Every value is automatically adjusted to display all of the requested data in one page. In addition, Graphing also provides the **Append** and **Prepend** buttons to increase the data points that you can view on a single page.

- Click **Append>>** to view data for the next set of data points, in addition to the data you are currently viewing.
- Click **Prepend<<** to view data for the previous set of data points, in addition to the data you are currently viewing.

If you click **Append** or **Prepend**, Graphing adds additional data to the graph which you are currently viewing. The number of points displayed is same as the data points which appear in the initial graph, but the duration is doubled. For example, if you are viewing data for the previous one month, and you click **Prepend**, you can view the data for the previous two months.

All the data points are displayed in the same page. The Points Every setting is reset by Graphing to make the data readable. When all the data available is displayed, the Append and Prepend buttons are disabled.

Example for Append/Prepend:

When the combination of the date range and Points Every settings is one week of data from 1/1/2009 to 8/1/2009 with points every one hour, if you Click Append/Prepend additional one week of data is displayed in the same page. You can see two weeks of data with points every three hours.

Example for Auto:

For example, if you have specified the Duration as 12 hours, the graph displays this data for 12 hours and the summarization is automatically set by Graphing to accommodate this data within one page.

Note: In case of Image Graphs, based on the value set for **limit number of points**, summarization interval is decided by Graphing when 'points every' is selected as auto. The behavior of the **Next/Prev** button is different if 'points every' is selected as auto, unlike the behavior when 'points every' is specified as any other value other than auto from the drop-down. When auto is selected, you can view data for the duration which you have specified, in the same graph, with summarization interval specified by the Graphing. The **Next/Prev** options displays the graph from the next and previous duration with the same points every (summarization) value.

5 minutes

Displays one data point for every five minutes of the specified duration.

15 minutes

Displays one data point for every fifteen minutes of the specified duration.

30 minutes

Displays one data point for every thirty minutes of the specified duration.

hour

Displays one data point for every one hour of the specified duration.

3 hours

Displays one data point for every three hours of the specified duration.

6 hours

Displays one data point for every six hours of the specified duration.

12 hours

Displays one data point for every twelve hours of the specified duration.

Day

Displays one data point for every day of the specified duration.

Unsummarized

Data is not summarized. The raw data collected by the data source for the specified duration is displayed. Any value set in Graphing does not affect the summarization.




Note: If the points every value is anything other than auto, and if the data in the chosen time range cannot be fit into a single graph or table, the graph or table uses more than one page and **Prev** and

Next buttons are enabled. Click **Prev** to move to the previous page and **Next** to go to the next page to view all the data. The **Append/Prepend** options are disabled when you set **Points Every** is set to anything other than **auto**.

Metric List Tab

To access	From the menu options, select Configure > Metric List
Important information	The Metric List tab enables you to design a graph and save it as a template for later use.
Relevant tasks	"Designing Graphs" on page 269.
See also	<ul style="list-style-type: none"> • "Managing Graphs - Workflow" on page 266 • "Graph Design" on page 284

The following elements are included:




UI Elements	Description
 New Item	Opens the Select Metrics window. For more information, see "Select Metrics Window" below .
 Edit Item	Select a row and click this icon to edit the metric properties. The "Metric Properties Window" on the next page opens.
 Delete Item	Select a row and click this icon to delete the row.
Preview	Click Preview to preview the graph.
Save/Save As	Click Save or Save As to save your graph, the Save Graphs dialog box opens.
Cancel	Click Cancel to exit the Design Wizard without saving.
Help	Click Help to view the help content for the current wizard page.

Select Metrics Window

To access	From the menu options, select Configure > <Metric List tab> and click New Item
------------------	---


Relevant tasks	"Designing Graphs" on page 269.
See also	"Managing Graphs - Workflow" on page 266

It includes the following elements (unlabeled user interface elements are shown in angle brackets):

UI Elements	Description
<Metric classes tree>	The metric classes tree displays a list of metric classes and metrics belonging to each class that are available on the data source. The list of metrics appears when you expand the metric class name. The window displays the metrics corresponding to the selected CI.
 (Expand)	Click to expand the metric classes tree.
 (Collapse)	Click to collapse the metric classes tree.
 (Restore to Default)	Click to remove all the selections.
OK	Click OK after you complete the selection. The list of selected metrics now appears in a tabular form on the Metric Properties tab of the Design Wizard.
Cancel	Click to cancel the changes and close the window.

Metric Properties Window

You can configure the way a particular metric appears on the graph.

Important information	To change the properties of a metric, perform the following tasks: <ol style="list-style-type: none"> 1. Select the metric from the table. 2. Click  Edit Item, the Metric Properties window opens. <p>Note: You cannot specify a color for the metric.</p>
Relevant tasks	"Designing Graphs" on page 269
See also	"Managing Graphs - Workflow" on page 266

The following elements are included:

UI Elements	Description
Metric Name	You can edit the name of the metric.
Label	<p>Enter a label for the metric. The label identifies this metric on the graph or table. The label can be modified for one metric at a time. The label can be a literal string, or it can contain references to special substitution variables.</p> <ul style="list-style-type: none"> • @@[LABEL] - The metric label is specified by the data source. For example, (CPU %). If a label is not specified by the data source, then the metric name is used. • @@[METRIC] - The metric name. For example, (GBL_CPU_TOTAL_UTIL) • @@[CLASS] - The metric class. For example: (GLOBAL) • @@[SYSTEM] - The node name supplying the metric. For example: (mysys.net.com) • @@[DATASOURCE] - The data source for this metric. For example: (PA, EPC) • @@metric - The value of the metric from the same data source and class. For example: @@BYDSK_DEVNAME will label the metric with the value of the BYDSK_DEVNAME metric. If the BYDSK_DEVNAME metric value were "0", Disk @@BYDSK_DEVNAME would produce a label of Disk 0. <p>Example: @@[SYSTEM]:@@[CLASS]:@@[METRIC] might produce a label like "mysys.net.com:GLOBAL:GBL_CPU_TOTAL_UTIL"</p> <div style="background-color: #f0f0f0; padding: 5px;"> <p>Note: Graphs that contain only one metric will automatically display the system name for the metric label, when multiple nodes are selected. If you do not specify a label, Graphing uses the default metric label specification; that is, any label supplied by the data source for the metric, or the metric name.</p> </div>
YAxis	<p>Specify whether you want the Y-axis of the graph to appear on the left hand side or right hand side from the drop-down list.</p> <div style="background-color: #f0f0f0; padding: 5px;"> <p>Note: This option is available only for graph types <i>Line</i>, <i>Area</i> and <i>Mixed</i>. For all other graph types, the option <i>Right</i> does not appear in the drop-down list.</p> </div>

UI Elements	Description
Line Style	<p>You can select a line style from the list. This option is available only if you select the graph type as Line .</p> <p>You can choose from the following line styles:</p> <ul style="list-style-type: none"> • Solid • Dotted • Dashed • Dash-dotted • Dash-dot-dotted
Width	You can specify the width of the Line Style.
Color	Click the icon to select a color for displaying the metric in the graph.
Reset	Click the button to reset the color to White.
Metric Filter	<p>You can specify a condition to filter metrics:</p> <ul style="list-style-type: none"> • Metric name - Select the metric for which you want to apply the filter. • Comparison symbol - Select a comparison symbol. For more information, see list of "Comparison Symbols" on the next page. • Value - Type a value to compare. • Add - Click Add to apply the metric filter. • AND/OR - Use the logical operators AND or OR, to specify multiple filters. • Update - To modify the condition you specified, select the filter condition, modify the conditions and click Update. • Remove - To remove a filter condition, select the filter condition and click Remove. • Remove All - Click Remove All to delete all the filter conditions.
Help	Click Help to view the help content for the current wizard page.
Cancel	Click Cancel to exit without saving the changes.
OK	Click OK to save all the changes and exit from this window. The Graph Design Wizard - Metric Selection page opens.

Comparison Symbols

The following elements are included (unlabeled UI elements are shown in angle brackets>):

Symbol	Description
=	Equal to
<	Less than
>	Greater than
~	Like (textual comparison with leading or trailing "." expressions)
!=	Not Equal
!~	Not Like (textual comparison with leading or trailing "." expressions)
<=	Less than or Equal to
>=	Greater than or Equal to

Note: While specifying strings or expressions for filters, use regular expressions. For example, `.*C.*` instead of `*C*`.

The like comparisons such as "`~`" and "`!~`" are textual comparisons that allow wild cards. When you select these symbols, specify a valid regular expression value; for example, specify `APP_NAME~.*xyz.*` to select data where the application name contains the text "xyz".

Substitution Variables

The following variables can be used for Graph titles or subtitles. The actual values will replace these variables in the drawn graphs:

Variable	Description
<code>@@[SYSTEM]</code>	Displays the name of the system for which the graph is drawn.
<code>@@DATERANGE</code>	Displays the duration for which the graph is drawn. (For example, 7days).
<code>@@POINTSEVERY</code>	Displays the time summarization for each data point. (For example, points every 10 minutes).
<code>@@STARTTIME</code>	Displays the start time in a drawn graph.
<code>@@STOPTIME</code>	Displays the end time in a drawn graph.

Variable	Description
@@metric	<p>Displays the value of a metric. (For example, if you use @@APP_NAME, the title or subtitle will include the value of the metric, that is the name of the application.</p> <p>Note: Use this parameter, only when a single instance of a metric is drawn in a graph. If there are multiple instances in a single graph, then all the instance names will be appended to the title or subtitle name.</p>

Special Attributes Tab

To access	From the menu options, select Configure > Performance Graphs > Special Attributes
Important information	The Special Attributes tab enables you to specify the special attributes while designing a graph.
Relevant tasks	"Designing Graphs" on page 269
See also	<ul style="list-style-type: none">• "Managing Graphs - Workflow" on page 266• "Graph Design" on page 284

Select the following options based on the graph type selected:

- ["Special Attributes for Image Graphs" below](#)
- ["Special Attributes for Tables" on the next page](#)
- ["Comparison Symbols" on page 296](#)

Special Attributes for Image Graphs

The following elements are available if you select the graph type as Line, Area or Bar graph:

UI Elements (A-Z)	Description
Left Y Axis	<ul style="list-style-type: none"> • Label - Specify a label for Y-axis appearing on the left side. • Minimum - Specify minimum value for points on the left side Y-axis. If left blank, the initial scale of the axis will automatically be adjusted to accommodate the values in the graph. • Maximum - Specify maximum value for points on the left side Y-axis. If left blank, the initial scale of the axis will automatically be adjusted to accommodate the values in the graph.
Right Y Axis	<p>Label - Specify a label for Y-axis appearing on the right side. This enables you to specify a label for the right side of the graph to identify the right hand Y-axis. This field does not appear unless at least one metric has the "Right Y-axis" selected from the Metric Properties Window.</p> <p>Minimum - Specify minimum value for points on the right side Y-axis. If left blank, the initial scale of the axis is automatically be adjusted to accommodate the values in the graph.</p> <p>Maximum - Specify maximum value for points on the right side Y-axis. If left blank, the initial scale of the axis is automatically adjusted to accommodate the values in the graph.</p>
Effects	<p>Stacked: If you are designing an area or bar graph, select the Stacked option to stack one metric on top of the other metrics in the graph. The "Stacked" effect makes it easier to view the overlapping data.</p> <div data-bbox="394 1213 1369 1293" style="background-color: #f0f0f0; padding: 5px; margin-top: 10px;"> <p>Note: The Effects option is available only for the bar and area graphs.</p> </div>
Preview	Click Preview to preview the graph.
Save/Save As	Click Save or Save As to save your graph, The Graph Design Wizard - Save Graphs page opens.
Cancel	Click Cancel to exit the design wizard.
Help	Click Help to view the help content for the current wizard page.

Special Attributes for Tables

The following options are available when you select the graph type as table. It enables you to highlight a cell in a table based on its content so that the records can be accessed easily. You can also set conditions to filter the contents from a table based on the metric value. The following elements are included:

UI Elements (A-Z)	Description
Table Filters	<p>Select the metric for which you want to set a filtering condition. Select a value from the available "Comparison Symbols" on the next page and type a value to compare against the metric. For example, 50.</p> <p>AND/OR - Use the logical operators AND or OR, to specify multiple filters.</p> <p>Add - Click Add to apply the metric filter.</p> <p>Update - To modify the condition you specified, select the filter condition, modify the conditions and click Update.</p> <p>Note: The metrics added in Graph Design Wizard - Metric Properties tab are listed for filtering.</p>
Table Highlights	<p>Select the metric for which you want to highlight from the drop-down list. Select a Comparison Symbol and enter value to compare against the metric.</p> <p>Select a color for highlighting the rows from the color palette.</p> <p>Add - Click Add to apply the metric filter.</p> <p>Update - To modify the condition you specified, select the filter condition, modify the conditions and click Update.</p> <p>Note: The metrics added in the Graph Design Wizard - Metric Properties tab are listed for filtering.</p>
Remove	<p>Select any table highlight or filter condition, and click Remove. The table highlight or filter condition is deleted and will no longer appear when you preview or draw the graph.</p>
Remove All	<p>Click Remove All to delete all the filter conditions that is specified.</p>
Preview	<p>Click Preview to preview the graph.</p>
Save/Save As	<p>Click Save or Save As to save your graph, The Graph Design Wizard - Save Graphs page opens.</p>
Cancel	<p>Click Cancel to exit the design wizard.</p>
Help	<p>Click Help to view the help content for the current wizard page.</p>

Example for Table Highlight:

If you select the metric GBL_CPU_TOTAL_UTIL and > (greater than) as the comparison symbol, and 4 as a value to compare against the metric and color as red from the color palette, when you preview or draw the graph, you can see the cells with records satisfying the condition you set; that is GBL_CPU_TOTAL_UTIL>4 highlighted in red.

Comparison Symbols

Listed below are the comparison symbols which you can use while specifying a condition to highlight or filter a table:

Comparison Symbols	Description
=	Equal to
>	Greater than
<	Less than
>=	Greater than or Equal to
<=	Less than or Equal to
!=	Not Equal to
!~	Not like

Note: When specifying interest reason for table filters and table highlights, do not use the wildcard expressions such as *C*. Use a regular expression, for example, .*C*.

Save Graphs Dialog Box

To access	From the menu options, select Configure > Performance Graphs
Relevant tasks	"Designing Graphs" on page 269
See also	"Managing Graphs - Workflow" on page 266

The following elements are included:

UI Elements (A-Z)	Description
Cancel	Click Cancel to close the dialog box.
Category	Enter the name of the graph category. (This is optional, graphs can be grouped directly under a family.)
Help	Click Help to view the help content for the current wizard page.
Family	Enter the name of the graph family.
Name	Enter a name for the graph.
OK	Click OK and modify the graph name.

UI Elements (A-Z)	Description
Save	Click Save to save the graph.
Save As	Click Save As to save the graph with a different name.

Tip: The name can be a combination of alphabets, numbers, and special characters and space. In case you use special characters other than #, -, or _, the following error message appears:

The name can only contain a combination of alphabets, numbers and the special characters: #, -, _ and space.

If the family name and category already exist, the Graphing automatically populates the Family, Category, and Name fields text boxes with the names when you type the first few alphabets.

Graph Attributes - List and Description

To access	Workspaces > Operations Console > Performance Perspective
Important information	<p>The following table lists all graph attributes, keywords (as they appear in the graph template), and their descriptions. The table also details the way Graphing handles conflicting parameters defined in different default graph templates.</p> <p>Note: A software administrator can configure parameters specific to Performance Graphing. For more information, see the "Performance Graphing Infrastructure Settings Manager" section in the OMi Administration Guide.</p>
Relevant tasks	"Designing Graphs" on page 269
See also	"Managing Graphs - Workflow" on page 266

The following table lists the available elements:


UI Elements (A-Z)	Description
Auto-Refresh	The interval at which the Performance Graphing Component can refresh the drawn graphs automatically so that the graph is updated with the latest data. Performance Graphing Component enables this option if any of the selected graph templates has the option enabled.

UI Elements (A-Z)	Description
Date range	<p>Range of date and time to include in the graph. If you do not specify any values for DATERANGE: the default date value (that is, duration of 7 Days, ending Now) is used. If you specify "all" for date range, all the data collected in the data source will be used in graphing.</p> <p>Performance Graphing chooses the value of date range as "ALL" if any of the selected graph templates contain the value "All". However, if none of the default graphs templates contain the value ALL, the Performance Graphing Component chooses the maximum value from all the graph templates.</p>
Graph type	<p>For a list of graph types supported by the Graphing, see "Types of Graphs" on page 263.</p> <p>If the graph type is specified as table or Gauge in any of the graph templates then a separate graph is drawn for each of these graph types.</p>
Left-axis and right-axis max	<p>The maximum value on the right (optional) Y-axis.</p> <p>The maximum value on the left (default) Y-axis. For the Gauge graph type, the parameter will be the maximum value on the gauge scale.</p> <p>Performance Graphing takes the maximum from all the values in the default graph template.</p>
Left-axis and right-axis min	<p>The minimum value on the left (default) Y-axis. For the Gauge graph type, this parameter is the minimum value on the gauge scale.</p> <p>The minimum value on the right (optional) Y-axis.</p> <p>Performance Graphing takes the minimum values from all the values in the default graph template.</p>
Left-axis title and right-axis title	<p>Specifies the label for the left Y-axis.</p> <p>Specifies the label for the right Y-axis.</p> <p>Performance Graphing combines all available values from the selected graph templates.</p>


UI Elements (A-Z)	Description
LineStyle	<p>This specification is valid only when the GRAPHTYPE is solid line. You can select from the following values:</p> <ul style="list-style-type: none"> • Solid • Dotted • Dashed • Dashed-dotted • Dash-dot-dotted <p>Performance Graphing takes the value from the last metric.</p>
LineWidth	<p>The number of pixels wide to draw the line for this metric. This specification is valid only when the GRAPHTYPE is line and the LINESTYLE is solid. The default value is 2.</p> <p>Performance Graphing takes the value from the last metric.</p>
Metrics filter	<p>A data filter that is applied to the data. Data records that do not meet the filter specifications will not be used in the final calculation. Performance Graphing combines all available values based on classes from the selected graph templates.</p>
Metrics per graph	<p>The maximum number of metrics on a single graph. The default is eight.</p> <p>Performance Graphing chooses the maximum value specified from all the selected graph templates.</p> <p>Example:</p> <p>If there are two graphs associated with the chosen CI, out of which one has metrics per graph as eight and other has twelve, the Performance Graphing chooses the value as twelve.</p> <div style="background-color: #f0f0f0; padding: 10px; margin-top: 10px;"> <p>Note: The metrics per graph in the resulting graphs also depends on the value configured by a software administrator for the parameter Metrics Per Graph. For more information, see Performance Graphing Infrastructure Settings Manager.</p> </div> <div style="background-color: #f0f0f0; padding: 10px; margin-top: 10px;"> <p>Note: The metrics per graph in the resulting graphs also depends on the value configured by a software administrator for the parameter Metrics Per Graph. For more information, see the "Performance Graphing Infrastructure Settings Manager" section in the OMi Administration Guide.</p> </div>





UI Elements (A-Z)	Description
Number of points	<p>The number of data points to be displayed on a graph. This value is used to summarize the data for each data point and to fit the graph in a single window, when POINTSEVERY value is set to auto. For other POINTSEVERY values, Performance Graphing determines the number of (data points and time intervals) for each graph and provides options to view the next or previous set of data points or intervals. For line, area, and table graphs, the default value is 100. You are not required to specify a number for Pie and Gauge graph types.</p> <p>It is recommended that you do not to set the value to more than 1000 as this might impact the performance of the application. Performance Graphing chooses the maximum value available from all the selected graph templates.</p>
Points every	<p>Determines the granularity (number of data points) on the graph. This value is used in conjunction with the NUMBEROFPOINTS value to determine the level of summarization to use. Performance Graphing chooses the value Auto if any of the selected graph templates contain the value for points every as Auto. However, if none of the graph templates has the value Auto, the Performance Graphing chooses the minimum value from all graph templates. For more information, see "Specifying Points Every Value" on page 286.</p>

Date Range Panel

The Date Range Panel option enables you to view the data for specific time periods. To access the Date Range Panel, select **Options > Date Range Panel** from the Drawn Graphs window. You can also view the panel by clicking  in the Drawn Graphs window.

The following table lists all the options available to customize a graph.

UI Element (A-Z)	Description
Show Date Range Panel ()	Click to view the Date Range Panel.

UI Element (A-Z)	Description
Last <Unit of time>	<p>Select a unit of time from the list to view granular data for that period of time. The options available are:</p> <ul style="list-style-type: none"> • Hour • Day • Week • Month <p>For example, if you select the value Hour, Performance Graphing draws the graphs for the last one hour.</p>
Range	<p>Select the time range from the list. The options available are:</p> <ul style="list-style-type: none"> • Months in Year • Weeks in Month • Days in Week • Hours in Day <p>By default, a Range value is displayed based on the unit of time selected.</p> <p>For example, if you select last hour from the list, the Range list displays hours in a day.</p>
	<p>Choose a time frame: Select a start date and end date from the Time Settings dialog box to view data for that period. The start date and end date values range between the earliest and the latest time stamps available in the data source.</p>
	<p>Previous: Select Previous to view the data for the adjacent unit of time. For example, if you select last hour from the list, you can use the Previous Hour option to view data for that period.</p> <p>In the same way, you can view adjacent data for any unit of time.</p>
	<p>Next:Select Next to view the data for the adjacent unit of time. For example, if you select last hour from the list you can use the Next Hour option to view data for that period.</p> <p>In the same way, you can view adjacent data for any unit of time.</p>
	<p>Adjust to a unit of time: Use this option to move the slider to a unit of time you select from the Unit of time list. For example, if you select an hour from the list, you can use adjust to an hour and the slider moves to show data for an hour</p>

UI Element (A-Z)	Description
All	Select this option to apply the changes made within the date range panel to all the drawn graphs. If you do not select this option, the changes apply only to the selected graph and the selected graph appears highlighted.
Hide Date Range Panel (↗)	Click to hide the Date Range Panel.

Troubleshooting and Limitations

This section provides help in troubleshooting problems relating to performance graphs.

- ["Unable to View Graph in Certain Formats \(XLS/TSV\)" below](#)
- ["Graph Drawn to Compare Same Metrics of Different CIs for RTSM does not Display Data" on the next page](#)
- ["Unable to Move Table Graph window" on the next page](#)
- ["Real-Time Graph Window Stops Receiving Updates" on the next page](#)
- ["Window Title is not getting updated" on page 304](#)
- ["Predefined graphs are not listed when NIC is selected" on page 304](#)
- ["Unable to design graph when Design Wizard is launched from Table graph" on page 304](#)
- ["The Data Sources list is not getting refreshed until the drawn graph window is closed for disabled monitors." on page 304](#)

Unable to View Graph in Certain Formats (XLS/TSV)

You must check if the option to download files in the Microsoft Excel and TSV format is enabled in the browser security settings. To check the browser settings, perform the following tasks:

1. Select **Internet Options** from the **Tools** menu of Internet Explorer. The **Internet Options** window opens.
2. Click the **Security** tab. Check if the security level in your browser settings is set to high. Make

sure the Internet icon is selected and click Custom Level. The **Security Settings** window opens.

3. Scroll down to the Downloads section and select the **Enable** option under **File Download**.
4. Click **OK** and close the Internet Options window.
5. Open the **Control Panel** and double-click **Folder Options**.
6. Click the **File Types** tab to display the registered file types.
7. Select **the XLS** file format and TSV file format from the Registered file types list, and then click the **Advanced** button. The **Edit File Type** window opens.
8. Click to clear the **Confirm Open After Download** check box.
9. Click **OK**.

Graph Drawn to Compare Same Metrics of Different CIs for RTSM does not Display Data

This happens when the CIs, of which the metrics are compared, do not have the system time set as per the time zone of the region. For the graph to display data, make sure that the system time is set to the time zone of the region where the CIs are located.

Unable to Move Table Graph window

If you drag and drop the Table Graph window header (from **Options > View as Table**) beneath the top frame of the browser, you cannot move it again. As the top bar of the Table Graph window is beneath the browser frame, you cannot close the window also. To use the Performance Graphing again, perform the following:

1. Resize the Table Graph window using the  icon at the bottom right corner of the window.

You need not resize the window if the **Options** menu is visible in the Performance Pane title bar.

2. Click **Options > Close All Graphs**.

All the drawn graphs and the Table Graph window close.

Real-Time Graph Window Stops Receiving Updates

A graph drawn with metrics obtained from the RTM data source stops receiving updates if the HP Operations agent (or the RTM component of the agent) on the node that hosts the RTM data source stops running.

The graph window title bar shows the following message when the HP Operations agent or the RTM component stops working:

RTM data source is not responding

When the HP Operations agent (or the RTM component of the agent) starts running on the node again, the graph window starts showing the updated graph and restores the original window title.

Window Title is not getting updated

When you open the Design Wizard or draw a graph from the View Explorer pane, a new window opens but the window title is not updated. This happens only when you are using the Internet Explorer (IE) version 8 or above. The title is updated properly when you are using IE 7 or Mozilla Firefox browsers. Perform the following to resolve the problem in the IE 8 or above browsers:

1. Select **Tools > Internet Options**. The Internet Options window opens.
2. Click **Security** tab.
3. Ensure that the appropriate zone is selected and click **Custom level....** The Security Settings - Trusted Sites Zone window opens.
4. Navigate to the Miscellaneous section and select **Enable** corresponding to the option **Allow script-initiated windows without size or position constraints**.
5. Click **OK**.
6. In the Internet Options window click **Apply** and then **OK**. Restart your browser.

Predefined graphs are not listed when NIC is selected

When you select the MAC address of an NIC as a CI from the View Explorer, the corresponding predefined graphs are not listed. This is because while creating the Performance Graph Mappings, the NIC name is mapped to the predefined graphs and not the MAC address. Instead, you can select the corresponding host to view the predefined graphs.

Unable to design graph when Design Wizard is launched from Table graph

When you open the Design wizard from a table graph, by default, the system opens a preview table graph. So the Design graph window goes behind the preview and you cannot use the window. Close all the table graphs to use the Design wizard and you can open the table graph in a different browser for reference.

The Data Sources list is not getting refreshed until the drawn graph window is closed for disabled monitors.

This happens when the monitor for a metric currently being displayed on the Drawn Graph pane is disabled from the SiteScope server. Even if you click **Refresh**, the disabled metrics is still visible on the Drawn Graphs pane. To resolve this issue, close all the graphs and then click **Refresh**.

Chapter 19: OMi Health Status

The OMi Health Status tab displays the health information of the OMi deployment. To ensure efficient operations, OMi keeps track of the health of its components and reports problems so that a corrective or preventive action can be taken.

OMi Health Status contains the following panes that provide the health status of OMi self-monitored components, display a list of related events and show how the health status of the selected object affects the health of the related objects in a view:

- **Monitoring Dashboard - OMi Health Status**

The health status of each OMi object is displayed using the following widgets: simple status, pie, and history. Each widget references an OMi area for which the health-related information is displayed or provides an overall health status summary of all self-monitored objects.

Widgets enable you to quickly determine the status of the monitored area by displaying a color that reflects the severity of the most critical event (for example, red for the severity critical). The number of events per severity is shown as well.

Each widget references an event filter and a view, and only displays the status of those events that match the filter criteria and are related to the configuration items included in the referenced view. When you click a widget, the information on the related OMi self-monitored area is passed to the Event Browser and the Top View components. As a result, the Event Browser displays only the matching events and the Top View displays the view associated with the widget.

For more information on widgets and monitoring dashboards, see "[Monitoring Dashboards](#)" on [page 237](#).

The following widget group is part of the **OMi Server** self-monitored area of the OMi Health Status monitoring dashboard:

- **Event Processing**

This widget displays the status information on the health of the event processing. It monitors a number of OMi log files, including the log files for the OMi Marble Status Calculation and the processing of the OMi Sonic Bus queue. The events displayed in the Event Browser are created for the monitored log file entries with the severity ERROR.

- **Job Handling**

This widget displays the status information on the health of the deployment jobs. The critical events displayed in the Event Browser may relate to various job deployment issues, for example, failed policy templates transfer from the OMi server to monitored nodes, or the problems with transferring the assignment information from nodes to the server.

■ **OMi Server Processes**

This widget displays the status information on the health of the OMi server processes. The events displayed in the Event Browser result from monitoring the OMi Nanny process log file, as well as from monitoring if the Nanny process itself is up and running.

Note: The OMi Nanny process monitors all processes running on an OMi system. If an OMi process fails, Nanny restarts it automatically and records this information to a separate log file.

■ **OMi Server Infrastructure**

This widget displays the status information on the health of the OMi server infrastructure (resulting from monitoring the disk IO operations and space utilization of the system).

The status indicator next to **OMi Server** combines all statuses displayed by related widgets. It takes the most critical status as the overall status indication (for example, if a critical issue is detected in one area, the indicator color changes to red).

The following widget group is part of the **HP Operations Agent** self-monitored area of the OMi Health Status monitoring dashboard:

■ **Agent Health**

This widget provides the status information on the health of the HP Operations Agent. The events displayed in the Event Browser are generated from internal messages sent by the agent (they may include agent communication problems and failed processes).

■ **Agent Connectivity**

This widget provides the information on the HP Operations Agent connectivity status. The events displayed in the Event Browser are related to the agent's heartbeat checking: if no heartbeat event is received from the agent within the configured interval, an event indicating a problem is created.

The **History** chart is a status-trend widget that displays the number of events per severity against time.

The **Overall** chart is a pie-chart widget that gives an at-a-glance overview of the severity of all events occurred over a certain period of time. It is divided into colored status slices, each slice representing a number of events having a critical, warning, or normal state.

Note: The widget selected in Monitoring Dashboard - OMi Health Status determines which events are displayed in the Event Browser and which view is selected as the Top View.

• **Event Browser**

Displays a detailed summary of the events that occur in the OMi self-monitored environment. The list of events is updated dynamically based on the widget selection in the Monitoring Dashboard - OMi Health Status. For more information, see ["Event Browser" on page 30](#).

- **Top View**

Displays a topological view of the configuration items (CIs) affected by the events displayed in the Event Browser pane. The view shows the relationships between the CIs that represent the monitored objects and indicates their current health status. The color of an object displayed in the Top View takes the most critical status of the contributing objects: if at least one critical issue is detected, the entire CI is marked red. (The color used depends on the view settings. For example, you can set green for a normal and red for a critical state.)

Two views that are integrated with the OMi Self-Monitoring are **OMi Deployment** and **OMi Deployment with HP Operations Agent**.

For more information on the Top View, see ["Top View Component" on page 172](#).

Note: The size of all panes on the OMi Health Status tab can be manually modified. You can use the **Expand** and **Collapse** buttons to change the display formats to the predefined settings or open each pane in a new window.

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Just add your feedback to the email and click send.

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