



# Operations Manager i

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## OMi User Guide

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# 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 213](#).
- **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 Dashboard" on page 244](#).
  - **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 256](#).
  - **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 257](#).

- **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 263](#).
- **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 270](#).
  - **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 271](#).
  - **Performance Perspective.** The Performance Perspective page enables you to create and customize performance dashboards. For details, see ["Performance Perspective" on page 273](#).

# 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 by using this menu, for example, account or password information. You can also log out of OMi by using the user menu.

The **Help** menu takes you to OMi 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.

You can hide the breadcrumbs by clicking the  **Collapse** button to the left of the **Help** menu. Click  **Expand** to show them again.

## Chapter 2: Logging into OMi

This section provides instructions for logging into OMi.

### Learn More

This section includes:

- ["Accessing OMi" below](#)
- ["Requirements" below](#)
- ["Autocomplete " below](#)

#### 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, Single Sign-On (SSO) in OMi is disabled. 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 Installation and Upgrade Guide*.

#### Autocomplete

The major browsers have each decided to ignore autocomplete=off in web forms.

Internet Explorer: <http://blogs.msdn.com/b/ieinternals/archive/2013/09/24/internet-explorer-11-changelist-change-log.aspx>

Firefox: [https://bugzilla.mozilla.org/show\\_bug.cgi?id=956906](https://bugzilla.mozilla.org/show_bug.cgi?id=956906)

As a result, when logging in to OMi you may, depending on your browser configuration, be prompted to remember your login credentials.

If you are an end user of OMi and do not wish to have your login credentials remembered, they need not be; indicate when prompted by your browser that you do not wish to have your login or password information saved by the browser. Often you can instruct your browser not to prompt you in the future for this site.

It is often possible to configure your browser to not prompt you to remember passwords at all, if you wish to disable this ability entirely. This can often be configured either in the browser itself or via corporate IT policy. Refer to your browser documentation or contact your System Administrator for more details.

## 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:

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

where

`<server_name>` and `<domain_name>` represent the Fully Qualified Domain Name (FQDN) of the OMi server (for example, `https://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.

**Note:** If the Logon Banner feature is enabled, at this point a disclaimer that your work will be monitored for attack prevention might appear. To confirm this notification and to proceed to the log-on page, click the **OK** button.

2. On the log-on page, enter your log-on 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 17](#). The login name cannot be changed.


**Note:** The password is configured in the configuration wizard.

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 **Log Out** on the  user menu.

# Tips and Troubleshooting

## Login Troubleshooting

To resolve login issues, reference the possible login failure causes in the following table by 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 Causes	Solutions
LI001	OMi failed to connect to the application server running on the gateway server. This may be due to: <ul style="list-style-type: none"><li>• The application server being down.</li><li>• Problems with the OMi service.</li><li>• The port required by the application server being used by another application.</li></ul>	<b>Solution 1:</b> Close all applications on the gateway server machine and restart the machine.  <b>Solution 2:</b> 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).
LI002	The application server running on the	Restart OMi.

Error No.	Problem/Possible Causes	Solutions
	gateway server is not responding or is not installed correctly.	
LI003	The management database is corrupted (for example, if a user record was accidentally deleted from the database).	Try logging in as a different user, or ask the OMi administrator to create a new user for you.
LI004	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>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 <i>OMi Administration Guide</i>.</p>
LI005	<p>The OMi login fails or hangs. This may be due to:</p> <ul style="list-style-type: none"> <li>• An inability to connect to the management database.</li> <li>• The current user does not have access rights to a profile.</li> <li>• Authentication strategy has not been set/configured correctly.</li> </ul>	<p>Ensure that the connection to the management database is healthy:</p> <ol style="list-style-type: none"> <li>1. In the web browser, type <code>https://localhost:29000</code> to connect to the JMX console.</li> <li>2. Click the link <b>System &gt; JMX MBeans &gt; Topaz &gt; Topaz:service=Connection Pool Information</b>.</li> <li>3. Locate <b>java.lang.String showConfigurationSummary()</b> and click <b>Invoke</b>.</li> <li>4. In <b>Active configurations in the Connection Factory</b>, find the appropriate row for the management database.</li> <li>5. Verify that columns <b>Active Connection</b> and/or <b>Idle Connection</b> have a value greater than <b>0</b> for the management database.</li> <li>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.</li> </ol> <p><b>Solution 3:</b> Ensure that the user has appropriate permissions to access OMi. For details on roles and permissions, see the <i>OMi Administration Guide</i>.</p> <p><b>Solution 4:</b> Verify that an authentication strategy has been configured correctly. For details on</p>

Error No.	Problem/Possible Causes	Solutions
		authentication strategies, see the <i>OMi Administration Guide</i> .




## 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 \(HTML\)](#)" on page 103.
4. Click **Apply** to save your changes.

## Chapter 4: 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" on the next page](#)
- ["Notifications" on the next page](#)

### Event Sources

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

- HPE Software applications:
  - OM for UNIX
  - OM for Windows
  - HPE Network Node Manager i (NNMi)
  - SiteScope
  - HPE 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 OM 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-events` tool to close, delete, and archive events. The events in HPOM remain unaffected.

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

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 OM.

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, OM).

## 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
<b>NoImpact</b>	<i>Lowest</i>	<i>Lowest</i>	<i>Low</i>	<i>Low</i>	<i>Medium</i>	<i>Medium</i>
<b>Low</b>	<i>Lowest</i>	<i>Lowest</i>	<i>Low</i>	<i>Low</i>	<i>Medium</i>	<i>Medium</i>
<b>MediumLow</b>	<i>Low</i>	<i>Low</i>	<i>Low</i>	<i>Medium</i>	<i>Medium</i>	<i>High</i>
<b>Medium</b>	<i>Medium</i>	<i>Low</i>	<i>Medium</i>	<i>Medium</i>	<i>High</i>	<i>High</i>
<b>MediumHigh</b>	<i>High</i>	<i>Medium</i>	<i>Medium</i>	<i>High</i>	<i>High</i>	<i>Highest</i>
<b>High</b>	<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" below](#)

### 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 76](#).

For more information about the icons used in the Event Browser, see ["Event Browser \(HTML\)" on page 103](#). 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 by using the Event Browser.
- An external user or application changes event attributes by using the Northbound Interface.
- OM 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 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
- OM 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](#)


## Chapter 5: 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 in, the Event Browser displays the latest events in accordance with the way you configured the Event Browser. For example, when you log in again, 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 by using the  **Show/Hide Event Details Pane** 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" below](#)
- ["Date Formats" on the next page](#)
- ["Event Closing and Archiving Tools" on page 29](#)

## 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 event 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 86](#).

**Note:** The Event Browser cannot display unresolved and closed events at the same time. To view closed events, see ["Viewing Closed Events" on page 56](#).

**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 is displayed in the view selection field.

## 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 Singapore

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.

## Event Closing and Archiving Tools

You can close and archive events using the following command-line tools:

- **opr-close-events**  
See the OMi Extensibility Guide for more information.
- **opr-archive-events**  
See the OMi Extensibility Guide for more information.

## UI Reference

This section includes:









- ["Event Browser Icons, Buttons, and Context Menus" on the next page](#)
- ["Event Browser Columns" on page 37](#)
- ["Closed Events Browser" on page 42](#)
- ["Keyboard shortcuts" on page 42](#)






## 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 User Actions).

The Performance Dashboards 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 Dashboard infrastructure setting **Context Menu Check**.











UI Element (A-Z)	Description
	<b>Reopen:</b> Sets the lifecycle status for the selected events to Open. The events can now be assigned to users for investigation and resolution.
	<b>Work On:</b> Sets the lifecycle status for the selected events to In Progress, indicating that the underlying problems of the events are under investigation.
	<b>Resolve:</b> Sets the lifecycle status for the selected events to Resolved.
	<b>Close:</b> Sets the lifecycle status for the selected events to Closed.
	<b>Assign To:</b> Opens the Event Assignment dialog box, enabling you to assign the selected events to a specific user or user group.
	<p><b>Relate Events:</b> 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 <a href="#">Relating Events Manually</a> and <a href="#">Creating Correlation Rules from Manually-Related Events</a>.</p>
	<p><b>Show Events Assigned to Me:</b> 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 <b>Show Events Assigned to Me</b> is selected, a confirmation of the selected mode is displayed in the information bar.</p>
	<b>Browser Options:</b> 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

UI Element (A-Z)	Description
	event). For more information, see <a href="#">"Configuring the Event Browser" on page 44.</a>
	<b>Export Event List:</b> 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.
	<b>Show/Hide Event Details Pane:</b> 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 by using the <b>Show &gt; Event Details</b> context menu item or double-click the event.
	<b>Refresh:</b> 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><b>Show/Hide Closed Events:</b> Displays the Closed Events Browser Configuration dialog box used to specify the time period for the closed events to be displayed in the Closed Events Browser. Click <b>OK</b> and the Closed Events Browser displays the closed events of the selected CI over a specified time period.</p> <p>If you want active events to be displayed along with closed events, apply filtering according to the time when the event was received, and then select the <b>Include active events</b> check box.</p> <p>Click the  <b>Hide Closed Events</b> button to return to the Event Browser.</p> <p>When <b>Show Closed Events</b> is selected, a notification is displayed in the information bar, indicating the type of displayed events, the time period that is used for filtering the displayed events, and the creation time of the event list.</p>
<b>&lt;No Filter&gt;</b>	<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 <b>&lt;No Filter&gt;</b>.</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> <p><b>Note:</b> The Event Browser View Selector is disabled in locked Event Browser pages so that only events associated with a preselected view are displayed.</p> <p><b>Tip:</b> Can be combined with the Search Events feature.</p>
<b>...Browse</b>	Opens the <b>Select a View</b> dialog box, enabling you to select the view that you want



UI Element (A-Z)	Description
<b>Views</b>	<p>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 <i>OMi Administration Guide</i>.</p> <p><b>Note:</b> 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><b>Note:</b> The <b>Browse Views</b> 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 from which you can manage views.</p> <p>For more information about views, see <a href="#">"Views" on page 201</a>.</p>
<Select an event filter>	<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 <b>&lt;No Filter&gt;</b>.</p> <p>The five most recent selections are displayed at the top of the list.</p> <p><b>Tip:</b> Can be combined with the Search Events feature.</p>
...Manage Event Filters	<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 <a href="#">"Event Filters" on page 86</a>.</p>
<Search Events>	<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> <p><b>Note:</b> You can enable or disable the use of regular expressions in the Search Events field by clicking <a href="#">[*] Enable/Disable Regular Expressions</a>. When it is enabled, you can, for example, also search for multiple strings at once by using the pipe symbol ( ): bottleneck problem error.</p>



UI Element (A-Z)	Description
<b>Add Annotation</b>	<p>Opens the Create New Annotation dialog box for all selected events. The annotation is associated with all selected events on saving.</p> <p>For more information about annotations, see <a href="#">"Annotations" on page 71</a>.</p>
<b>Close and Reset Health Indicator</b>	<p>Sets the lifecycle status for the selected events to <code>Closed</code> 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.</p>
<b>Configure &gt; Event Type Indicators</b>	<p>Opens the Indicators manager in a new window. You need the appropriate authorization to access the Indicators manager and other Administration features.</p>
<b>Configure &gt; Integration Policies</b>	<p>Opens the Policy Management UI in a new window.</p>
<b>Configure &gt; Performance Dashboards</b>	<p>If available, opens the OMi Performance Dashboard page in a new window. The OMi Performance Dashboard page enables you to create and configure a performance dashboard. For more information, see <a href="#">"Performance Pane" on page 275</a>.</p>
<b>Configure &gt; Policy</b>	<p>Opens the Policy Editor enabling you to edit policy templates. Only the policies present in the Monitoring Automation policy inventory can be opened for editing.</p> <p><b>Note:</b> You must re-deploy the policies modified in the Policy Editor launched from the Event Browser; automatic re-deployment of updated policies is not possible.</p> <p>For information on how to deploy policy templates, see the <i>OMi Administration Guide</i>.</p>
<b>Configure &gt; Monitoring</b>	<p>Opens the Assignments and Tuning UI by using the CI ID of the related CI, which results in displaying a list of all assignments for the particular CI. For more information, see the <i>OMi Administration Guide</i>.</p>
<b>Configure &gt; Tools</b>	<p>Opens the Tools manager in a new window. You need the appropriate authorization to access the Tools manager and other Administration features.</p>
<b>Configure &gt; View Mappings</b>	<p>Opens the View Mappings manager in a new window. You need the appropriate authorization to access Administration features.</p>
<b>Items</b>	<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</p>

UI Element (A-Z)	Description
	<p>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"> <li> — Critical</li> <li> — Major</li> <li> — Minor</li> <li> — Warning</li> <li> — Normal</li> <li> — Unknown</li> </ul> <p><b>Note:</b> 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 <a href="#">"Configuring the Event Browser" on page 44</a>.</p> <p>Usually, this is the same as the severity status of the original event, for example as received from OM.</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> <ul style="list-style-type: none"> <li> — Event assigned to logged-on user</li> <li> — Event assigned to one of the groups that the logged-on user is a member of.</li> <li> — Events assigned to other users</li> <li> — Event assignment not known</li> </ul> <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>
<b>Launch &gt; Custom Actions</b>	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.
<b>Launch &gt; Run Books</b>	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.
<b>Launch &gt;</b>	Only available when multiple events are selected. Opens the Run Tool wizard which

UI Element (A-Z)	Description
<b>Tool</b>	you use to select a tool from a list of those configured for the CI type associated with the selected events.
<b>Launch &gt; Tools</b>	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.
<b>Recalculate Priority</b>	Manually recalculates the priorities for selected events in the Event Browser.  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.
<b>Select All</b>	Selects all events displayed in the Event Browser.  <b>Note:</b> You can copy the details of any selected events to the clipboard by using the key combination <b>CTRL + C</b> . Use <b>CTRL + V</b> 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.
<b>Show &gt; Application Summary Report</b>	If available, the Application Summary report is displayed for the selected event created by BPM.
<b>Show &gt; BPM Performance Analysis Report</b>	If available, the BPM Performance Analysis report is displayed for the selected event created by BPM.
<b>Show &gt; BPM Triage Report</b>	If available, the BPM Triage report is displayed for the selected event created by BPM.
<b>Show &gt; Business Service Impact For Related CI</b>	Opens a new window and displays the Business Service Impact for CI associated with the selected event.
<b>Show &gt; Changes For Related CI</b>	Displays information about the most recent changes to the CI related to the selected event.  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.  By default, actual changes and incidents are shown for the past week. The requests










UI Element (A-Z)	Description
	for change area shows the changes planned during the previous week, and those that are planned for the coming week.
<b>Show &gt; Closed Events (Node)</b>	<p>Displays the Closed Events Browser with closed events that are associated with the host system where the selected event occurred.</p> <p>Click the  <b>Hide Closed Events</b> button to return to the Event Browser.</p>
<b>Show &gt; Closed Events (Related CI)</b>	<p>Opens the Closed Events Browser Configuration dialog box in which you can configure a filter for the closed events that you want to see. The Closed Events Browser displays the closed events that are associated with the CI related to the selected event. See also <a href="#">"Viewing Closed Events" on page 56</a>.</p> <p><b>Tip:</b> To include the child CIs of the selected closed event's related CI, make sure the following prerequisites are met:</p> <ul style="list-style-type: none"> <li>• The Event Browser option <b>Include child CIs in CI filter</b> is selected. See <a href="#">"Configuring the Event Browser" on page 44</a>.</li> <li>• A view in the View Explorer is selected. Only child CIs in the currently selected view are considered in the filter. If no view is selected, the <b>Include child CIs in CI filter</b> option has no effect.</li> </ul> <p>Click the  <b>Hide Closed Events</b> button to return to the Event Browser.</p>
<b>Show &gt; Event Details</b>	Opens the event details for an event in a pop-up window and displays all available information about the event.
<b>Show &gt; Event in Source Manager</b>	Opens the event in the source manager user interface connected using the OpsCx.
<b>Show &gt; External Details</b>	Opens the event in the external application that is responsible for managing the event.
<b>Show &gt; Filtered Browser (Node)</b>	Displays only events that concern the Node CI to which the selected event is related.
<b>Show &gt; Filtered Browser (Related CI)</b>	<p>Opens a new Event Browser window that displays events associated with the selected CI only.</p> <p><b>Tip:</b> To include the child CIs of the selected event's related CI, make sure the</p>





UI Element (A-Z)	Description
	<p>following prerequisites are met:</p> <ul style="list-style-type: none"> <li>The Event Browser option <b>Include child CIs in CI filter</b> is selected. See <a href="#">"Configuring the Event Browser" on page 44</a>.</li> <li>A view in the View Explorer is selected. Only child CIs in the currently selected view are considered in the filter. If no view is selected, the <b>Include child CIs in CI filter</b> option has no effect.</li> </ul>
<b>Show &gt; Performance Dashboard (CI)</b>	If available, displays performance dashboards for the selected CI in a new window.
<b>Show &gt; RUM Event Summary Report</b>	If available, the RUM Event Summary report is displayed for the selected event created by RUM.
<b>Show &gt; RUM Performance Analysis Report</b>	If available, the RUM Performance Analysis report is displayed for the selected event created by RUM.
<b>Show &gt; RUM Triage Report</b>	If available, the RUM Triage report is displayed for the selected event created by RUM.
<b>Show &gt; Source Manager Policies</b>	Opens the event in the Policy Management OpsCx user interface.
<b>Show &gt; Related Events</b>	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.
<b>Transfer Control to</b>	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 Columns

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
	<ul style="list-style-type: none"> <li>• <b>Select All Events/Clear All Event Selection:</b> Click to select or clear all event check boxes. If there is a partial selection and you clear the Event Browser header check box, all check boxes will be cleared. For more information on selection check boxes, see <a href="#">"Configuring the Event Browser" on page 44</a>.</li> </ul>
<b>A</b>	<p><b>Automatic Action:</b> Indicates if an automatic action is attached to the event and describes its status using the following icons:</p> <p> — Not run automatic action available for event</p> <p> — Automatic action is running</p> <p> — Automatic action executed successfully</p> <p> — Automatic action failed to execute successfully</p>
<b>C</b>	<p><b>Correlation:</b> 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> <p> — Event is a <i>cause</i> in a correlation</p> <p> — Event is a <i>cause</i> in one correlation and a <i>symptom</i> in another</p> <p> — Event is a <i>symptom</i> in a correlation</p> <p>For details about correlated events, see <a href="#">"Related Events" on page 76</a>.</p>
<b>D</b>	<p><b>Duplicate Count:</b> Indicates how many duplicate events exist (for example, 2 or 3).</p>
<b>I</b>	<p><b>Instructions:</b> 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>
<b>N</b>	<p><b>Annotations:</b> 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> <p> — Event has annotations</p> <p>For more information about annotations, see <a href="#">"Annotations" on page 71</a>.</p>
<b>O</b>	<p><b>Owned in HPOM:</b> Indicates whether the event is owned by a user in OM (Y). If the event is owned by an OM 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>
<b>R</b>	<p><b>Received in Downtime:</b> Event received from a CI during a time period when the CI</p>

UI Element (A-Z)	Description
	was in downtime (scheduled to not be available).
<b>T</b>	<b>Control Transferred:</b> Indicates if the responsibility for the associated event was transferred to an external manager.
<b>U</b>	<p><b>User Action:</b> 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>
<b>Application</b>	<b>Application:</b> Application that caused the event to occur.
<b>Category</b>	<b>Category:</b> 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 OM.
<b>CI Hint</b>	<b>CI Hint:</b> Information that helps to resolve the related CI, for example, Service name in OM event.
<b>CI Type</b>	<b>CI Type:</b> Configuration item type associated with the event.
<b>Company</b>	<b>Company:</b> A default custom attribute that is configured in the <b>Available Custom Attributes</b> infrastructure setting (in <b>Administration &gt; Setup and Maintenance &gt; Infrastructure Settings &gt; Applications &gt; Operations Management - Custom Attribute Settings</b> ).
<b>Core ID</b>	<b>Core ID:</b> Host system where the event occurred.
<b>Customer</b>	<b>Customer:</b> A default custom attribute that is configured in the <b>Available Custom Attributes</b> infrastructure setting (in <b>Administration &gt; Setup and Maintenance &gt; Infrastructure Settings &gt; Applications &gt; Operations Management - Custom Attribute Settings</b> ).
<b>Description</b>	<b>Description:</b> Optional information about the event in addition to the event's original title and the text captured from the event source.
<b>ETI</b>	<p><b>Event Type Indicator:</b> 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>WebAppState 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>

UI Element (A-Z)	Description
	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.
<b>Event Age</b>	<b>Event Age:</b> 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.
<b>External ID</b>	<b>External ID:</b> ID of the event assigned by the external manager.
<b>Group</b>	<b>Assigned Group:</b> Name of the group to which the selected event is assigned.
<b>ID</b>	<b>ID:</b> ID of the event. Same as the ID of the message in OM if it is forwarded to OMi.
<b>Manager</b>	<b>Manager:</b> A default custom attribute that is configured in the <b>Available Custom Attributes</b> infrastructure setting (in <b>Administration &gt; Setup and Maintenance &gt; Infrastructure Settings &gt; Applications &gt; Operations Management - Custom Attribute Settings</b> ).
<b>Node</b>	<b>Node:</b> Host system where the event occurred. The link opens the CI Properties dialog box of the CI.
<b>Node Hint</b>	<p><b>Node Hint:</b> Information used to identify node CI. For example, the hostname in OM used to find host in the RTSM:</p> <ul style="list-style-type: none"> <li>• DNS name of the originating server.</li> <li>• Node ID of the originating server.</li> </ul>
<b>Object</b>	<b>Object:</b> Device such as a computer, printer, or modem.
<b>Originating Server</b>	<b>Originating Server:</b> Management server that initially forwarded the original event along the chain of servers configured in a flexible management environment.
<b>Prio</b>	<b>Priority:</b> Priority assigned to the selected event (for example, Low, Medium, or High).
<b>Region</b>	<b>Region:</b> A default custom attribute that is configured in the <b>Available Custom Attributes</b> infrastructure setting (in <b>Administration &gt; Setup and Maintenance &gt; Infrastructure Settings &gt; Applications &gt; Operations Management - Custom Attribute Settings</b> ).
<b>Related CI</b>	<p>Name of the impaired configuration item where the event occurred.</p> <p>If the Related CI includes a subcomponent, it is displayed as follows: Related CI: Subcomponent. For example, Server1: CPU1.</p>
<b>Related CI Hint</b>	<b>Related CI Hint:</b> Event information used to identify the CI related to the event.
<b>Sending</b>	<b>Sending Server:</b> Last server in the OM flexible management chain that forwarded




UI Element (A-Z)	Description
<b>Server</b>	the event to OMi.
<b>Sev</b>	<p><b>Severity:</b> Severity assigned to the selected event. Usually, this is the same as the severity status of the original event, for example, received from OM. The following icons indicate event severity status:</p> <ul style="list-style-type: none"> <li> — Critical</li> <li> — Major</li> <li> — Minor</li> <li> — Warning</li> <li> — Normal</li> <li> — Unknown</li> </ul> <p><b>Note:</b> 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 <a href="#">"Configuring the Event Browser" on page 44</a>.</p>
<b>Solution</b>	<b>Solution:</b> Text field used to document solutions to help operators solve the problem indicated by the event.
<b>Source CI</b>	<b>Source CI:</b> Node where the monitoring agent or probe is running that generated the selected event.
<b>Source CI Hint</b>	<b>Source CI Hint:</b> Information used to identify the source CI.
<b>State</b>	<p><b>Lifecycle State:</b> Point in the event lifecycle that the selected event has reached:</p> <ul style="list-style-type: none"> <li> — Open</li> <li> — In Progress</li> <li> — Resolved</li> <li> — Closed</li> </ul> <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>
<b>Subcategory</b>	<b>Subcategory:</b> Name of the logical subgroup (category) to which the event belongs (for example, Oracle (database), Accounts (security), or Routers (network)).

UI Element (A-Z)	Description
<b>Time Created</b>	<b>Time Created:</b> Date and time when the event was created.
<b>Time First Received</b>	<b>Time First Received:</b> Date and time when OMi first received notification of the event.
<b>Time Received</b>	<b>Time Received:</b> Date and time when the (last duplicate) event was received.
<b>Time State Changed</b>	<b>Time Lifecycle State Changed:</b> Date and time when the last lifecycle state change took place.
<b>Title</b>	<b>Title:</b> Brief summary of the event.
<b>Type</b>	<b>Type:</b> Type of message in OM. String used to organize different types of events within an event category or subcategory.
<b>User</b>	<b>Assigned User:</b> 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 OM user, the user name is displayed with the prefix OM: , for example, OM:Database Operator.

## Closed Events Browser

You can view a list of closed events based on the specified search criteria, either for all closed events or for a selected CI. All Event Browser actions relevant to closed events can be accessed from the Closed Events Browser. In addition, you can view the active events along with the closed events.

<b>To access</b>	<b>Workspaces &gt; Operations Console &gt; &lt;select a perspective&gt;</b>  Then click the  <b>Show Closed Events</b> button.
<b>Important information</b>	The maximum number of events that can be displayed in the Closed Events Browser can be configured in the Infrastructure Settings Manager.
<b>Relevant tasks</b>	For more information about viewing closed events, see " <a href="#">Viewing Closed Events</a> " on <a href="#">page 56</a> .

## Keyboard shortcuts

You can use keyboard and/or mouse shortcuts to facilitate working with the Event Browser (HTML) component. You can use these shortcuts to interact with events.

With focus on a certain event, you can use the following keyboard and/or mouse shortcuts:

Keyboard and/or mouse shortcut	Description
Arrow keys (Up Arrow or Down Arrow)	Move to the next or previous event and select it.
Click	Select an event.
Ctrl+A	Select all events.
Ctrl+click on a selected event	Deselect the event.
Ctrl+click on an unselected event	Add an event to the existing selection.
Ctrl+Shift+Home or End	Extend the current selection to the beginning or end of the event list.
Ctrl+Shift+click	Select a block of events from the focused event until the current target. Previously selected events are kept.
Ctrl+Spacebar or Ctrl+click	Select or unselect the focused event.
Ctrl+Up Arrow or Down Arrow	Move focus to the previous or next event.
Shift+Home or End	Go to the very beginning or end of the displayed events and select them.
Shift+Spacebar or Shift+click on an unselected event	Select events from the last focused event until the current target.
Shift+Spacebar or Shift+click on an event within a selected block	Unselect events until the current target.
Shift+Up Arrow or Down Arrow	Expand your selection by one row up or down.
Spacebar	Select the focused event.

## 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.

## OM for Windows User Names are Truncated When Messages are Forwarded

By default OM 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

### 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 ["Columns" on page 109](#).

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. On the **Other** tab, configure any of the following additional options:
  - **Play sound notification for new events.** Enables sound notification for new events.
  - **Compact view for events: Minimize height of rows and smaller font size.** Enables the compact view for events displayed in the Event Browser. The height of rows is minimized and the text size is decreased. Use this option if you want more events to be displayed at once.
  - **Include child CIs in CI filter.** Enables filtering events by the selected CI and any of its child CIs.
  - **Show selection check boxes.** Adds a check box next to each event that enables selecting and clearing the selection of multiple blocks of events. Selection check boxes also enable the following functionality:
    - Hold down the **Shift** key while clicking the right mouse button to extend the last action (select or clear check box) from the last clicked event to the current clicked event. For example, if you select or clear a check box and hold down the **Shift** key while selecting or clearing another event, all events in between will be selected or cleared.
    - Click the check box in the event browser columns header to select or clear all check boxes.

If there is a partial selection and you clear the header check box, all check boxes will be cleared.

- Click an event row (not the check box) to clear other selections and select this event only.
- **Color event background in accordance with the event's severity.** Applies a colored event background that represents the severity of 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 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.


**Note:** The event browser option **Compact view for events** is not available for configuration by administrators because it is a user-specific setting.

5. Click **OK**.

## Filtering by Views and View-Based Authorization

You can limit the set of events displayed in the Event Browser by 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 76](#).

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 [How to Create Correlation Rules from Manually-Related Events](#).
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 OM 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.

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 54](#)

### 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
	<b>Use as Cause:</b> Selects the event to be used as the cause event.
	<b>Open Event Details:</b> Opens the event details for the selected event in a pop-up window.
	<b>Select All Events:</b> Selects all events in the Select Events pane.
	<b>Unselect All Event:</b> Clears all events in the Select Events pane.
<b>Create</b>	Enables the creation of a new correlation rule based on the selected events.
<b>CI Type</b>	Configuration item type associated with the event.
<b>Description</b>	Brief description of the correlation rule.
<b>Enhance</b>	If valid, enables the selection of an existing correlation rule to be modified.
<b>Event Title</b>	Title of the selected event.
<b>Include</b>	Enables you to select or clear events from the available list.
<b>Indicator</b>	Indicator associated with the event.
<b>Indicator</b>	State of the indicator associated with the event.

UI Element (A-Z)	Description
<b>State</b>	
<b>Name</b>	<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><b>Note:</b> May be disabled for certain locales (for example ja_JP, zh_CN, ko_KR).</p>
<b>Selected Events for Creating or Enhancing</b>	Events that you selected to be the symptoms of the cause event on which the correlation rule is based.
<b>Use as Cause</b>	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
<b>Active</b>	Used to enable or disable the rule during runtime. By default it is disabled.
<b>Description</b>	Brief description of the correlation rule.
<b>Display Name</b>	Display name of the selected correlation rule used in the graphical user interface.
<b>Name</b>	<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><b>Note:</b> May be disabled for certain locales (for example ja_JP, zh_CN, ko_KR).</p>
<b>Time Window</b>	<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.
<b>Rule Topology Pane</b>	
<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.
<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.
<b>Layout</b>	Selects alternative ways of viewing the Rule Topology diagram. There are three options to choose from: Hierarchical, Circular, and Concentric Radial.
<b>Levels</b>	Selects the depth of topology levels displayed in the Rule Topology diagram.

UI Element (A-Z)	Description
<b>Zoom</b>	Controls the size of the displayed Rule Topology diagram.
<b>Symptoms and Causes Pane</b>	
	<b>Delete Item:</b> Deletes the selected indicator from the list of indicators included in the correlation rule as either a symptom or a cause.
<b>CI Type</b>	Name of the configuration item type to which the listed indicator is assigned.
<b>Indicator</b>	Name of the indicator referenced in the selected correlation rule.
<b>Indicator State</b>	Name of the indicator state referenced in the selected correlation rule.
<b>Type</b>	Indicates if the indicator is defined as a symptom or a cause in the selected correlation rule.
<b>Indicators Pane</b>	
	Refreshes the contents of the Indicators list. Use if new indicators becomes available while you are working.
	<b>Group Indicator by Type:</b> Toggles between a list containing all indicators and a list divided into health indicators and event type indicators.
	<b>Add as a Cause:</b> Sets the selected indicator state as a cause for the configuration item type selected in the Rule Topology pane.
	<b>Add as a Symptom:</b> 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 HPE 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 HPE 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 a list of closed events based on the specified search criteria. This information can help you better understand long-standing problems. In addition, you can view the active events along with the closed events.

From the Closed Events Browser, you can change the lifecycle state of any displayed event, for example, to Open.



To access

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

## Learn More

### Closed Events

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

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 the *OMi Extensibility Guide*.

Closed events can also be archived automatically.

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 Closed Events" below](#)
- ["How to View Active Events Along with Closed Events" on the next page](#)
- ["How to View the Closed Event History of a CI or Node" on page 59](#)

### How to View Closed Events

1. In the Closed Events Browser Configuration dialog box, select whether to base filtering on the

time when the event was received or when the lifecycle state was changed to closed.

2. Specify the time period for which you want to display history. Select a predefined period:

- **Last hour**
- **Last 24 hours**
- **Last 3 days**
- **Last 7 days**
- **Last 14 days**

Alternatively, select **Select a custom range**, specify a custom time range, and click **Apply**.

3. *Optional.* Select an event filter from the list to further reduce the number of events in the selected range.

**Note:** The following warning indicates that the selected event filter cannot be used with closed events, for example because it contains matches or not matches operators:

The selected filter cannot be applied to closed events.

To create another filter or modify an existing one, click the Browse (...) button, which opens the Manage Event Filters side panel. For information about filters, see ["Event Filters" on page 86](#).

4. The number of closed events in the selected range is displayed at the bottom of the Closed Events Browser Configuration dialog box.

Click **OK** to close the dialog box and display the Closed Events Browser containing the closed events that match the specified time period and filter.

To change the time period, click **Reconfigure** in the Closed Events Browser and modify your selections in the Closed Events Browser Configuration dialog box.

To clear or change the event filter, select **<No Filter>** or another filter from the event filter drop-down list.

**Tip:** Click the  **Hide Closed Events** button to return to the Event Browser.

## How to View Active Events Along with Closed Events

To display active events along with closed events in the Closed Events Browser, follow these steps:

1. In the Closed Events Browser Configuration dialog box, select **Received** from the drop-down list

so that filtering is based on the time when the event was received.

2. Select the **Include active events** check box.
3. Specify the time period for which you want to display history.
4. *Optional.* Select an event filter from the drop-down list to further reduce the number of events in the selected range.

The number of closed and active events in the selected range is displayed at the bottom of the Closed Events Browser Configuration dialog box.

5. Click **OK** to close the dialog box and display the Closed Events Browser containing the closed and active events that match the specified time period and filter.

## How to View the Closed Event History of a CI or Node

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

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

**Workspaces > Operations Console > <select a perspective>**

2. *Optional.* To include the child CIs of the selected closed event's related CI, make sure the following prerequisites are met:
  - The Event Browser option **Include child CIs in CI filter** is selected. See ["Configuring the Event Browser" on page 44](#).
  - A view in the View Explorer is selected. See ["View Explorer Component" on page 179](#).

Only child CIs in the currently selected view are considered in the filter. If no view is selected, the **Include child CIs in CI filter** option has no effect.

3. Right-click the event for which you want to see the event history and select from the context menu:
  - **Show > Closed Events (Node)** for closed events that are associated with the host system where the selected event occurred.
  - **Show > Closed Events (Related CI)** for closed events that are associated with the CI related to the selected event.
4. In the Closed Events Browser Configuration dialog box, specify the time period for which you want to display history.

Click **OK** to close the dialog box and display the Closed Events Browser containing the closed events that match the specified time period and filter.

For more information on working with the Closed Events Browser Configuration dialog box, see ["How to View Closed Events" on page 57](#).

Alternatively, right-click one or more selected CIs in the View Explorer and select **Show > Closed Events**. The Closed Events Browser displays all events that are associated with one of the selected CIs or nodes.

## 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 by 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)

**Note:** The content of the exported event list in .csv format is separated by semicolons.

- 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 by 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 74](#)
- ["Related Events" on page 76](#)
- ["History" on page 79](#)
- ["Resolver Hints" on page 80](#)
- ["Instructions" on page 82](#)
- ["Forwarding" on page 83](#)

## 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 OM.
- **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, for example:

```
<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
	<b>Save:</b> Saves the changed values.
	<b>Undo changes:</b> Discards the changed values.
<b>Assigned Group</b>	Name of the group to which the selected event's assigned user belongs.
<b>Assigned User</b>	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 OM user, the user name is displayed with the prefix OM:, for example, OM:Database Operator.
<b>Category</b>	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 OM message group.
<b>Control Transferred</b>	Indicates if the responsibility for the associated event is escalated to a higher-level manager.
<b>Duplicate Count</b>	Number of duplicate events associated with the selected event.
<b>Event Type Indicator</b>	<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, Web application state:Slow).</p> <p>WebAppState is the name of the event type indicator. The corresponding label is Web application state, which is shown in the General tab. The level of the current ETI value is Slow.</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>
<b>ID</b>	ID of the selected event. The event reports an event that occurred in the operational environment.
<b>Lifecycle State</b>	<p>Point in the event lifecycle that the selected event has reached:</p> <p> — Open</p>



UI Element (A-Z)	Description
	 — In Progress  — Resolved  — Closed <p>To change an event's lifecycle status, select a lifecycle state from the list and click <b>Save</b>. 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"> <li>• Message = acknowledged; Lifecycle state = Resolved</li> <li>• Message = owned; Lifecycle state = In Progress</li> <li>• Message = neither acknowledged nor owned; Lifecycle state = Open</li> </ul>
<b>Node</b>	Host system where the event occurred. Use the link or  button to open the CI Properties dialog box of the CI.
<b>Priority</b>	<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 <b>Save</b>.</p>
<b>Related CI</b>	<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>
<b>Severity</b>	<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> <p> — Critical</p> <p> — Major</p> <p> — Minor</p> <p> — Warning</p> <p> — Normal</p> <p> — Unknown (Cannot change severity to Unknown).</p> <p><b>Note:</b> You can also configure the Event Browser to apply a background color to</p>

UI Element (A-Z)	Description
	the event that represents the severity of the event. For details, see <a href="#">"Configuring the Event Browser" on page 44</a> .
Source CI	Host system where the monitoring agent or probe is running that generated the selected event.  Use the link or  button to open the CI Properties dialog box of the CI.
Subcategory	Name of the logical subgroup (category) to which the event belongs (for example, Oracle (database), Accounts (security), or Routers (network)).
Time Created	Date and time when the selected event was created.
Time First Received	Date and time when OMi first received notification of the selected event.
Time Received	Date and time when the selected event was received. (In case of duplicate events, the date and time the last duplicate event was received.)
Time State Changed	Date and time when the last lifecycle state change took place.
Title	Brief description of the nature of the selected event.

## 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
	<b>Save:</b> Saves the changed values.
	<b>Undo changes:</b> Discards the changed values.
<b>Application</b>	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 OM.  Examples of Application attributes are Oracle, and OS.
<b>Close Events with Key</b>	String used to automatically acknowledge duplicate events.

UI Element (A-Z)	Description
<b>Description</b>	Optional information about the original event in addition to the event's original title and the text captured from the event source.
<b>Key</b>	Key associated with the original OM event. It is an identifier used to identify the message policy. Used for duplicates and for Close Events with Key.
<b>Object</b>	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 OM.  Examples of Object attributes include <code>orainst</code> , <code>C:</code> , <code>/dev/spool</code> .
<b>Received in Downtime</b>	Indicates whether an event was received from a CI during a time period when the CI was in downtime (scheduled to not be available).
<b>Skip Duplicate Suppression</b>	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.
<b>Solution</b>	Text field used to document solutions to help operators solve the problem indicated by the event.
<b>Type</b>	String used to organize different types of events within an event category or subcategory (for example, <code>users</code> or <code>applications</code> , <code>accounts</code> , and <code>security</code> ).

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

## Actions

Events from OM 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

OM 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 \(HTML\)" on page 103](#).

## Tasks





### Related Tasks

- ["How to Run an Event-Related Action" on page 190](#)
- ["How to Launch a Custom Action" on page 191](#)

## UI Reference

### Event Details Actions Tab

UI Element (A-Z)	Description
Action	Action specification summary.

UI Element (A-Z)	Description
<b>Node</b>	Target system where the action can be run.
<b>Start</b>	Starts the action on the CI associated with the selected event.
<b>State</b>	<p>Describes the status of the available action. The following states are used:</p>  — Available  — Running  — Succeeded  — Failed
<b>Stop</b>	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 \(HTML\)](#)" on page 103.

### Tasks

This section includes:


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

#### 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** 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 <b>OK</b> to save the annotation.
	Opens the Modify Annotation dialog box. You can edit the annotation text in the Text field. Click <b>OK</b> to save the annotation.
	Opens the Delete Annotation dialog box. Click <b>Yes</b> to delete the annotation.
<b>Text</b>	Content text of the annotation.
<b>Time Created</b>	Date and time when the selected annotation was added to the event.
<b>User</b>	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](#)
- ["OM 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 OM. 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.

### OM Trouble Ticket and Notification Flags


Policies configured in OM 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 by using Forwarding Rules or notifications sent by 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 **Create New 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 <b>OK</b> to save the custom attribute.
	Opens the Modify Custom Attribute dialog box. You can edit the custom attribute.  Click <b>OK</b> to save the custom attribute.

UI Element (A-Z)	Description
	Opens the Delete Custom Attribute dialog box. Click <b>Yes</b> to delete the custom attribute.
<b>Name</b>	Name of the selected custom attribute defined for the selected event.
<b>Value</b>	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 22](#).


## Tasks

### Related Tasks

[Relating Events Manually](#)


## UI Descriptions

### Event Details Related Events Tab

UI Element (A-Z)	Description
	<p>Removes the relationship between events.</p> <p>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.</p>
<Severity>	<p>Severity assigned to the related event.</p> <p><b>Tip:</b> For a short explanation of the icons used to indicate event severity, check the tooltip.</p>
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><b>Relate:</b> 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>
<b>Severity</b>	<p>Severity assigned to the related event.</p> <p><b>Tip:</b> For a short explanation of the icons used to indicate event severity, check the tooltip.</p>
<b>Title</b>	<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 by using the <b>Relate</b> button.</p>
<b>Related CI</b>	Name of the impaired configuration item where the event occurred.
<b>Time Received</b>	Date and time when the original event associated with the related event was received from OMi.
<b>State</b>	Lifecycle state of the event (for example, Open, In Progress, or Resolved).
<b>Assigned User</b>	Name of the user who is responsible for solving the related event's underlying problem.
<b>Correlation Rule</b>	Link to the correlation rule used to create the potential relationship.
<b>Rule Weight</b>	<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 OM synchronization, if the event is modified by a data synchronization from OM.
- 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
<b>Actions</b>	Descriptions of the changes made to the event.
<b>Modification Time</b>	Date and time when the associated change was made to the event.
<b>Modified By</b>	User who made the associated change to the event.
<b>&lt;Search field&gt;</b>	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
<b>ETI Resolution</b>	<b>ETI Resolution Hint:</b> Original string provided by the external manager, for example,



UI Element (A-Z)	Description
	<p>in a custom message attribute from OM. 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 OM 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>
<b>Node</b>	<p>Information used to identify the host system in the RTSM associated with the selected event:</p> <ul style="list-style-type: none"> <li>• <b>Node Hint:</b> Hostname used to find a node in the RTSM</li> <li>• <b>DNS Name:</b> DNS name of the originating system</li> <li>• <b>IP Address:</b> IP address of the originating system</li> <li>• <b>Core ID:</b> ID of the originating system</li> </ul>
<b>Related CI</b>	<p>Name of the impaired configuration item where the event occurred.</p> <ul style="list-style-type: none"> <li>• <b>Related CI Hint:</b> Event information used to identify the CI related to the event</li> <li>• <b>HPOM Service ID:</b> Service ID used to identify the service related to the event</li> </ul>
<b>Related CI Resolution Info</b>	<p>Information associated with the selected event:</p> <ul style="list-style-type: none"> <li>• <b>Matched Hints Count:</b> 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"> <li>◦ <b>Related CI Hint</b> — includes colon-separated list of CI hints and must include the host identifier.</li> <li>◦ <b>HPOM Service ID</b> — Service ID, in conjunction with object and application, used to identify the service related to the event.</li> <li>◦ <b>ETI Hint</b> — 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.</li> </ul> </li> <li>• <b>Status:</b> Provides information about the matches used for related CI resolution. Displays information about the match: <ul style="list-style-type: none"> <li>◦ <b>Success</b> — Confirms a successful match and displays the hint used.</li> <li>◦ <b>Unsuccessful CI resolution</b> — Displays the hint that could not be resolved or</li> </ul> </li> </ul>

UI Element (A-Z)	Description
	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> .
<b>Source CI</b>	Information used to identify the CI in the RTSM that is the source of the event associated with the selected event:  <b>Source CI Hint:</b> Description of an OMi event attribute used to find the CI in the RTSM

## 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 Details, select the **Instructions** tab.

## Learn More

### Instructions

#### Setting up 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 by using external instruction interfaces. To retrieve the instructions generated externally, you must specify the instruction interface name and the parameter string in the Policy Editor for the associated policy.

**Note:** By default, only events from OM for Windows or OM for UNIX or Linux sources can populate the instructions tab in the Event Perspective. To extend OMi to include other event

sources, such as SiteScope or Operations Connector, to populate the instructions tab, see the *OMi Extensibility Guide*.

## Accessing instructions

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 OM 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
<b>Instructions</b>	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  **Refresh** button in the Forwarding tab.

For example, if your organization uses HPE Service Manager as a central service desk, you can transfer control of events from the Event Browser to HPE 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. HPE 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, open the Event Synchronization Settings in **Administration > Setup and Maintenance > Infrastructure Settings > Applications > Operations Management**. 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.
<b>Assigned Group</b>	Group assigned to the event by the external manager.
<b>Assigned User</b>	User assigned to the event by the external manager.
<b>External ID</b>	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.
<b>External Server</b>	Node on which the external manager is hosted.
<b>Lifecycle State</b>	Lifecycle state assigned to the event by the external manager.
<b>Priority</b>	Priority assigned to the event by the external manager.
<b>Severity</b>	Severity assigned to the event by the external manager.
<b>Transfer Status</b>	Status of the Transfer Control request. The possible states are: <ul style="list-style-type: none"><li>• <b>Cancel Requested</b> — For a transfer control request that is still in the queue for processing, a request was made to cancel the transfer of control.</li><li>• <b>Forwarded</b> — Control of the selected event was transferred to the selected external server.</li><li>• <b>Queued</b> — Request to transfer control of the selected event is in the queue for processing.</li></ul>
<b>Transfer Forwarding Rule</b>	Forwarding rule used to transfer control of an event to an external application.
<b>Transfer</b>	User who transferred control of an event to an external application.

UI Element (A-Z)	Description
Initiated By	
Type	<p>Specifies how an event forwarded to a certain server is handled. The options include:</p> <ul style="list-style-type: none"><li>• <b>Notify</b> — Target server receives original events but no further updates</li><li>• <b>Notify and Update</b> — Target server receives original events and all further updates</li><li>• <b>Synchronize</b> — Target server receives original events and all further updates and sends back all updates</li><li>• <b>Synchronize and Transfer Control</b> — Target server receives original events and updates and sends back all updates. Ownership of the event is transferred to the other server. Only OMi users with special permission are allowed to close the event after control is transferred, for example, an Administrator.</li></ul> <p>This option is available only if Enable synchronize and transfer control is enabled on the selected connected server. An operator may manually transfer control via the context menu of the Event Browser.</p> <p><b>Note:</b> 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 <i>OMi Administration Guide</i>.</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 Manage Event Filters side panel or the filter selection drop-down box. The active filter remains on display in the filter selection drop-down box.

## Learn More

This section includes:








- "Event Filter Manager UI" below
- "Filter Availability" on the next page
- "Sharing Filters" on the next page
- "Filters for Closed Events Browsers" on the next page
- "Regular expressions" on the next page

## Event Filter Manager UI





You can create, edit, and duplicate filters using the Manage Event Filters side panel, available from the Event Browser.

Click ... **Manage Event Filters** or  **Configure** to open the Event Filter Manager.

Use these buttons to manage your event filters as follows:

-  Refresh the list of event filters.
-  Create a new event filter.
-  Edit an existing event filter. You can also double-click an event filter to open the Edit Filter side panel.
-  Duplicate an existing event filter. The Create Filter side panel opens with already predefined values, based on the filter you choose to duplicate.
-  Delete an event filter. The filter will be permanently deleted for all users that the filter is shared with.
-  Preview the events that will match the filter once it is applied in the Event Browser. The preview opens in a separate browser window.
-  Restore a modified predefined filter to its original state.

Additionally, the following icons show you, at a glance, the current state of your filters:

-  Unshared event filter. Only the user that created the filter, or the user that unshared a previously shared filter, can see and apply it.
-  Shared event filter. Everyone that is specified in the **Share this filter** section can see and apply the filter, including the user that created the filter.
-  Predefined filter. They cannot be deleted.
-  Modified predefined filter.

## 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, or users that have permissions for a specific event filter category. For details, see ["Sharing Filters" below](#).

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 active and closed events at the same time.

## Sharing Filters

When creating or editing an event filter, you can enable the **Share this filter** option if your administrator assigned you the permission to share event filters. You can share the filter either with all OMi users, or users that have permission for a specific event filter category.

Administrators can enable users to share event filters, and assign a user's or a group's role permissions to view filters shared with specific event filter categories. They can also add additional categories. For more information, see the *OMi Administration Guide*.

## Filters for Closed Events Browsers

When investigating closed events using the Closed Events Browser, you specify the time period of interest and optionally an event filter to further reduce the number of events in the selected range. Not every event filter can be applied to closed events. Filters that contain `matches` or `not matches` operators cannot be applied. Only closed events with the specified filter criteria are loaded from the database.

**Note:** When the **Include active events** check box is selected, the active events are also filtered along with the closed events.

## Regular expressions

When adding a condition to a filter, 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.

**Note:** The Groovy match operator `"==~"` is used to evaluate the regular expressions. The match operator is similar to Java regular expressions, but requires an exact match. Some examples:

- `"\d+"` matches any string consisting of digits only
- `"\d{4}"` matches strings consisting of exactly four digits
- `".*\d{4}"` matches strings ending in four or more digits
- `".*\d{4}.*"` matches strings containing four or more digits anywhere
- `"abc"` only matches the exact string `"abc"`

Some additional examples of regular expressions are listed below:

- `.*Down`

To match a title that ends with the word `Down` (for example `Interface Down`, or `Connection Down`).

- `OpsCx|SiS|Internal`

To match one of the following categories: `OpsCx`, `SiS`, or `Internal`.

- `^KM\d+.*`

To match a title that starts with the abbreviation `KM` and any number of digits.

- `^\d{5,10}.*`

To match a title that contains between 5 and 10 digits in the beginning.

- `(?s).*monitorID.*`

To match an Original Data field (or any multi-line field) that contains the string `monitorID`. The `(?s)` inline modifier is required to treat the field like a single line.

- `^Automatic assignment of *.[template|aspect].*`

To match a title that contains the string `"Automatic assignment of <any text>"` followed by the string `"template"` or `"aspect"` and more text after that.

## Tasks

This section includes:

- ["How To Filter Events by Views" below](#)
- ["How To Filter Events by Configuration Items" below](#)
- ["How To View and Apply Event Filters" on the next page](#)
- ["How to Define Event Filters" on page 92](#)

### 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 items 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 View Explorer, select a view from the drop-down list.
  - 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.

#### 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 or a CI Explorer, for example, the Event Perspective or the Health Perspective:

**Workspaces > Operations Console > <select a perspective>**

If you are using the View Explorer, select a view from the drop-down list.

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. If you are using the CI Explorer, select the desired configuration item from the list, or select more items by using the Multiple Selection button.

The Event Browser displays only the events that are related to a CI selected in the View Explorer or the CI 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 or the CI 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 Events Browser, click ... **Manage Event Filters** or  **Configure**. The Manage Event Filters side panel opens containing a list of available event filters.

3. Select the event filter you want to apply.
4. *Optional.* Click  **Edit**, modify the selected filter and click **Save**.
5. Click  **Close** or outside the side panel to enable the 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 Event Filters

In this task, you learn how to set up an event filter for the Event Browser or the Closed Events Browser using the Manage Event Filters side panel.

1. From the Event Browser or the Closed Events Browser, click ... **Manage Event Filters** or  **Configure**. The Manage Event Filters side panel opens containing a list of available event filters.
2. Click  **New**.
3. Enter a name and (optionally) a description for the new filter.
4. Click **+ Add condition** to add an expression to the filter.

Start assembling a filter by choosing a category, for example *Description*, selecting the matching criteria, for example *equals*, and specifying the text string that the description should equal. Click  **OK** to save the expression.

5.

**Note:** There are two basic types of filters: string filters and prespecified 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. For more information, see "[Regular expressions](#)" on page 88.



*Optional.* Deselect **case sensitive** for the expression to differentiate between lower and upper case.

- **Defining a prespecified filter:**

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

You can select one or more of the available options.

For a list of all available filters and their definitions, see ["Event Filter Elements" on page 95](#).

6. *Optional.* Select an expression and click  **Wrap in operator** to wrap the expression in an OR or AND operator. Add, or drag and drop other expressions underneath the operator to modify the expression dependency as required.
7. Repeat steps 5 to 7 to specify additional filtering components to the filter specification.
8. *Optional.* Enable **Share this filter** and specify if you want to share the filter with all other users or only users that have permission for a specific event filter category. For details, see ["Sharing Filters" on page 88](#).
9. Click **Save**.
10. *Optional.* Select the newly created event filter and click  **Preview Matching Events**. 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.

## 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 a filter is displayed in the Event Browser Filter applied list and Select a view 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.

## Event Filter Elements

When editing or creating filters in the Manage Event Filters side panel, multiple elements are displayed that you can use either individually or in combination to filter events. By using the operators OR and AND you can combine the filter elements in any way required for your purpose.

For more information about the event filter elements, see the following sections:

- ["General Filter Elements" below](#)
- ["Dates Filter Elements" on the next page](#)
- ["Additional Event Properties Filter Elements" on page 97](#)
- ["Advanced Properties Filter Elements" on page 98](#)

### General Filter Elements

The General category displays the filter elements listed in the following table.

UI Element (A-Z)	Description
<b>Assigned To</b>	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 Unassigned.
<b>Category</b>	Category of event that you want to use as a filter option, for example: DB, Storage, System, or WebApp.

UI Element (A-Z)	Description
<b>Correlation</b>	<p>Select the desired option to search for all events, only top level events, or only cause events:</p> <p><b>All events:</b> includes events correlated as symptoms of other events.</p> <p><b>All top level events:</b> includes all events that do not have a cause assigned.</p> <p><b>All cause events:</b> includes all events that are root cause events. They cannot be symptoms of another cause event.</p>
<b>Description</b>	Description of an event as displayed in the contents of the original event's description field.
<b>Lifecycle State</b>	<p>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.</p> <p><b>Note:</b> The Event Browser (HTML) cannot display closed events. To view closed events, see <a href="#">"Viewing Closed Events" on page 56</a> in the Event Browser.</p>
<b>Priority</b>	Searches for events that match the specified priorities, for example: None, Low, or Medium. Multiple priorities can be selected.
<b>Severity</b>	Selects an event severity to use as a filter option. Multiple severities can be selected.
<b>Subcategory</b>	Name of the event subcategory to which the events you are looking for belong.
<b>Title</b>	Title of the events you are looking for.
<b>Type</b>	Type of event you want to display with the filter.

## Dates Filter Elements

The Dates category displays the filter elements listed in the following table.

UI Element (A-Z)	Description
<b>Time Changed</b>	<p>Specifies a point in time relative to the current time used to filter events. Events can be selected using the following operators:</p> <ul style="list-style-type: none"> <li>• <b>is not older than</b></li> <li>• <b>is older than</b></li> <li>• <b>after</b></li> </ul>



UI Element (A-Z)	Description
	<ul style="list-style-type: none"> <li>• <b>before</b></li> </ul> <p>The time period can be specified in minutes, hours, days, or weeks.</p> <p><b>Note:</b> 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>
<b>Time Created</b>	Specifies the dates and times between which the events you are searching for occurred.
<b>Time First Received</b>	Specifies the dates and times between which OMi first received notification of the events you are searching for.
<b>Time Received</b>	<p>Specifies the dates and times between which the events you are searching for were received.</p> <p>In case of duplicate events, the dates and times between which the last duplicate events were received.</p>
<b>Time State Changed</b>	Date and time when the last lifecycle state change took place.

## Additional Event Properties Filter Elements

The Additional Event Properties category displays the filter elements listed in the following table.

UI Element (A-Z)	Description
<b>Application</b>	Selects events linked to the named application.
<b>Custom Attribute</b>	<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>
<b>Event Type Indicator</b>	Enables you to filter by Event Type Indicator (ETI).
<b>Event Type Indicator Value</b>	Enables you to filter by Event Type Indicator (ETI) value.

UI Element (A-Z)	Description
<b>Has Annotations</b>	Selects events based on whether or not they have annotations.
<b>Key</b>	Selects events that contain a reference to the named key.
<b>Node Type</b>	Selects events of a specific node type, or events that are derived from a specific node type.
<b>Object</b>	Selects events that are related to a named object, as specified in the original OM message.
<b>Original Data</b>	<p>Original event text as captured from HPE Operations Agents before being formatted into an OM message.</p> <p>Contains information about the original input before being normalized by HPE Operations Agent policies into a message. Typically, the information available includes node name, message group, application, object, severity, and message text.</p>
<b>Related CI Type</b>	<p>Selects the option to search for events that are related to the specified CI type. The dedicated operators for filtering CI types are:</p> <ul style="list-style-type: none"><li>• <b>equals:</b> Related CI matches a specified CI type</li><li>• <b>is derived from:</b> Related CI is derived from the specified CI type</li></ul>
<b>Solution</b>	<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>
<b>Source CI Type</b>	<p>Selects the option to search for events that are a child of the specified CI type. The dedicated operators for filtering CI types are:</p> <ul style="list-style-type: none"><li>• <b>equals:</b> Related CI matches a specified CI type</li><li>• <b>is derived from:</b> Related CI is derived from the specified CI type</li></ul>
<b>Subcomponent ID</b>	Selects events that have (or do not have) the specified subcomponent ID.

## Advanced Properties Filter Elements

Additional, advanced properties are available as filter elements if you click **Show complete list** in the filter selection. You can later click **Show categorized list** to exclude the advanced properties and return to the categorized selection of filter elements.

UI Element (A-Z)	Description
<b>Automatic Action Call</b>	Selects events with the specified Automatic Action Call.
<b>Automatic Action Status</b>	Selects events that exhibit any of the specified Automatic Action Statuses. The possible statuses are: <ul style="list-style-type: none"> <li>• Available</li> <li>• Running</li> <li>• Succeeded</li> <li>• Failed</li> <li>• None</li> </ul>
<b>CI Resolution - Number of Hints</b>	Selects events with the specified number of CI Resolution Hints.
<b>CI Resolution - Number of Matched Hints</b>	Selects events with the specified number of matched CI Resolution Hints.
<b>CI Resolution Quality Metric</b>	Selects events with the specified CI Resolution Quality Metric.
<b>CI Resolution Status</b>	Selects events with the specified CI Resolution Success Status.
<b>Close Key Pattern</b>	Selects events with the specified Close Key Pattern. An event with this pattern closes all events whose key attribute matches the string.
<b>Control Transferred</b>	Selects events for which control was transferred to an external server or not transferred to an external server.
<b>Control Transferred - Web service hostname</b>	Selects events for which control was transferred to an external server with the specified web service hostname.
<b>Correlation Rule ID</b>	Selects events with the specified Correlation Rule ID.
<b>Correlation Type</b>	Selects events with the specified Correlation Type. The possible types are: <ul style="list-style-type: none"> <li>• Manually related</li> <li>• TBEC</li> <li>• NNMi</li> <li>• SBEC</li> </ul>
<b>Duplicate Count</b>	Selects events with the specified number of duplicates.

UI Element (A-Z)	Description
<b>ETI Hint</b>	Selects events with the specified ETI Resolution Hint.
<b>External ID</b>	Selects events with the specified External ID.
<b>Has Custom Attributes</b>	Selects events that have or do not have custom attributes.
<b>Instruction Available</b>	Selects events that have or do not have available 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.
<b>Instruction Interface Name</b>	Selects events with the specified instruction interface name.
<b>Instruction Parameter String</b>	Selects events with the specified instruction parameter string.
<b>Log Only</b>	Selects events which are generated under conditions matching (or not matching) a log only exception rule. Events that match this rule are retained but automatically closed.
<b>Matched Policy Condition Name</b>	Selects events with the specified policy condition name.
<b>Matched Policy Name</b>	Selects events with the specified policy name.
<b>Matched Policy Type</b>	Selects events with the specified policy type. You can specify one or multiple policy types.
<b>Node Hint</b>	Selects events with the specified Node Hint.
<b>Number of Symptoms</b>	Selects events with the specified number of symptoms. Symptoms are events that occur as a result of another event, as part of a correlation rule.
<b>Operations Manager Service ID</b>	Selects events with the specified Operations Manager Service ID.
<b>Originating Server - Core ID</b>	Selects events based on the core ID of the originating server.
<b>Originating Server - Hostname</b>	Selects events based on the host name of the originating server.
<b>Originating Server - IP Address</b>	Selects events based on the IP address of the originating server.
<b>Owned in HPOM</b>	Selects events based on whether or not they are owned in Operations

UI Element (A-Z)	Description
	Manager.
<b>Received as Notify</b>	Selects events based on whether or not they are received as notify-only events via an event forwarding rule.
<b>Received On CI Downtime</b>	Selects events which were received during downtime or not received during downtime.
<b>Related CI Hint</b>	Selects events with the specified Related CI Hint.
<b>Sending Server - Core ID</b>	Selects events based on the core ID of the sending server.
<b>Sending Server - Hostname</b>	Selects events based on the host name of the sending server.
<b>Sending Server - IP Address</b>	Selects events based on the IP address of the sending server.
<b>Skip Duplicate Suppression</b>	Selects events based on the whether or not duplicate suppression is inactive.
<b>Source CI Hint</b>	Selects events with the specified Source CI Hint.
<b>Sourced From - Connected Server</b>	Selects events that originate from one of the Connected Servers. The servers listed are those that are set up in <b>Administration &gt; Setup and Maintenance &gt; Connected Servers</b> .
<b>Sourced From - External ID</b>	Selects events that originate from an external source, identified by its external ID.
<b>Sourced From - External URL</b>	Selects events that originate from an external source, identified by its external URL.
<b>Sourced From - Hostname</b>	Selects events that originate from an external source, identified by its host name.
<b>User Action Call</b>	Selects events with the specified User Action Call.
<b>User Action Status</b>	Selects events that exhibit any of the specified User Action Statuses. The possible statuses are: <ul style="list-style-type: none"> <li>• Available</li> <li>• Running</li> <li>• Succeeded</li> <li>• Failed</li> <li>• None</li> </ul>

## 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.

## Chapter 6: Event Browser (HTML)

The Event Browser (HTML) 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.

Selecting an event in the Event Browser (HTML) displays the event's properties in the Event Details pane and the Event Details (HTML) side panel (toggle the visibility of the Event Details (HTML) side panel by using the  **Show Event Details** button).

To access

You can create your own pages and include this component. For details, see ["How to Set Up My Workspace" on page 229](#).

## Learn More

This section includes:

- ["Filters" on the next page](#)
- ["View Permissions" on the next page](#)
- ["Automatic Assignment of Events to Users" on the next page](#)
- ["Lifecycle Management" on page 105](#)

- ["Date Formats" on the next page](#)
- ["Event Closing and Archiving Tools" on page 106](#)

## Filters

**Filtering by CIs.** When you select a configuration item in the CI tree, OMi automatically applies a filter to the Event Browser (HTML) so that only those events are displayed that are related to the selected configuration item.

**Filtering by views.** By selecting one of the available views, you display a subset of the available events filtered to include only the events with related CIs included in the view. The setting is independently stored for each Event Browser (HTML) instance.

**Filtering by events.** Filtering the Event Browser (HTML) content helps you to focus on the most useful information. For example, you can filter the displayed events according to severity, assigned user, event category, or lifecycle state. The active Event Filter is displayed in the event 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 86](#).

**Note:** The Event Browser (HTML) cannot display closed events. To view closed events, see ["Viewing Closed Events" on page 56](#) in the Event Browser.

## 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*.

- **Locked views.** It is possible to disable the selection of views in the Event Browser (HTML) by configuring a My Workspace Event Browser (HTML) 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*.

## Automatic 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 sort the columns of the Event Browser (HTML) according to the assigned users, click the User or Group column header.



## Lifecycle Management

The Event Browser (HTML) 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:** 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 (HTML).

**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 Resolved 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 (HTML) 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 Singapore

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.

## Event Closing and Archiving Tools

You can close and archive events by using the following command line tools:

- `opr-close-events`

For more information, see the *OMi Extensibility Guide*.

- `opr-archive-events`

For more information, see the *OMi Extensibility Guide*.



## Tasks

This section includes:




- ["How to manage columns in the Event Browser \(HTML\)" below](#)
- ["How to assign an event to a user or user group" on the next page](#)

### How to manage columns in the Event Browser (HTML)


You can configure the Event Browser (HTML) to display only the columns that you are interested in. All changes are saved to your user account. The next time you log in, the Event Browser (HTML) displays the latest events in accordance with the way you configured the Event Browser (HTML).

1. To open the Options side panel, click  **Options** in the Event Browser (HTML).
2. From the column list on the left, select the columns that you want to display in the Event Browser (HTML), and click  **Add to Displayed Columns**.



For a description of available columns, see ["Columns" on page 109](#).

3. From the column list on the right, select any columns that you do not want to display in the Event Browser (HTML), and click  **Remove from Displayed Columns**.
4. Select columns and rearrange their display positions by clicking  **Move Up** and  **Move Down**.


The first column item in the list is displayed as the first column on the left in the Event Browser (HTML). Subsequent column items are placed progressively to the right in the order of their position in the column list.

**Tip:** To pin a column to the Event Browser (HTML), select it, and click  **Pin**. You can pin multiple columns. After pinning multiple columns, you can rearrange their display positions.

To unpin a column, select it, and click  **Unpin**.

5. Select the columns you want to sort by in the Column Sorting section. Change the sorting order of the columns by clicking  **Change to Ascending Order** or  **Change to Descending Order**.
6. Click **Save**.

## How to assign an event to a user or user group

1. Open the Event Browser (HTML).
2. Select the event that you want to assign to a user or a user group.
3. Open the Change Assignments dialog box in one of the following ways:
  - If the Event Details (HTML) side panel is not visible, click  **Show Event Details**. In the Event Details (HTML) side panel, click **Assignment**.
  - Right-click the event to open the event context panel and click **Assignment**.
4. Select the user group to which you want to assign the selected event (for example, Database Experts or Application Server Operators).
5. 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.

6. Click **OK**.





## UI Descriptions

This section includes:

- ["Icons and buttons" below](#)
- ["Columns" on the next page](#)
- ["Event context panel" on page 114](#)
- ["Event Details \(HTML\)" on page 116](#)
- ["Keyboard shortcuts" on page 117](#)

### Icons and buttons








UI Element	Description
<Select	Opens a list from which you can select one of the available views.

UI Element	Description
<b>a view&gt;</b>	<p>On the first load of the Event Browser (HTML) no view is selected. Once you have selected a view, that view is preselected when you reopen the Event Browser (HTML).</p> <p>If you have appropriate permissions, you can deselect the view by selecting <b>&lt;No Filter&gt;</b>.</p> <p>The five most recent selections are displayed at the top of the list.</p> <p><b>Note:</b> Selecting views in the Event Browser (HTML) is disabled in locked Event Browser (HTML) pages so that only events associated with a preselected view are displayed.</p>
<b>&lt;Select a filter&gt;</b>	<p>Enables you to select one of the available event filters. You can deselect the filter by selecting <b>&lt;No Filter&gt;</b>. The five most recent selections are displayed at the top of the list.</p> <p>Once you have selected a filter, that filter is preselected when the Event Browser is reopened.</p>
	<p><b>Configure:</b> Opens the Manage Event Filters side panel, enabling you to select the event filter that you want to apply.</p> <p>From the Manage Event Filters side panel, you can also create an event filter, test, edit, or delete an existing event filter.</p> <p>For more information about event filters, see <a href="#">"Event Filters" on page 86</a>.</p>
	<p><b>Show Event Details:</b> Toggles the visibility of the Event Details (HTML) side panel. You can also open the Event Details for an event in a pop-up window by double-clicking the event.</p>
	<p><b>Options:</b> Opens the Options side panel for the current Event Browser (HTML) tab. You can modify and set display options (for example, to hide or display columns, pin or unpin columns, or change the display order of the columns). For more information, see <a href="#">"How to manage columns in the Event Browser (HTML)" on page 107</a>.</p>
	<p><b>Open menu:</b> Opens the event context panel for the event. Hover over an event to show this icon.</p>






## Columns

The following table lists the columns that are included in the Event Browser (HTML) pane. For the full column name, check the tooltip.











UI Element (A-Z)	Description
<b>A</b>	<b>Automatic Action:</b> Indicates if an automatic action is attached to the event and

UI Element (A-Z)	Description
	<p>describes its status using the following icons:</p> <ul style="list-style-type: none"> <li> — Automatic action available for event</li> <li> (spinning) — Automatic action is running</li> <li>✓ — Automatic action executed successfully</li> <li>✗ — Automatic action failed to execute successfully</li> </ul>
<b>C</b>	<p><b>Correlation:</b> 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"> <li> — Event is a <i>cause</i> in a correlation</li> <li> — Event is a <i>cause</i> in one correlation and a <i>symptom</i> in another</li> <li> — Event is a <i>symptom</i> in a correlation</li> </ul> <p>For details about correlated events, see <a href="#">"Related Events" on page 76</a>.</p>
<b>D</b>	<p><b>Duplicate Count:</b> Indicates how many duplicate events exist.</p>
<b>I</b>	<p><b>Instructions:</b> 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>
<b>N</b>	<p><b>Annotations:</b> Indicates how many annotations the event has. Annotations are comments or observations relating to the associated (or a similar) event.</p> <p>For more information about annotations, see <a href="#">"Annotations" on page 71</a>.</p>
<b>O</b>	<p><b>Owned in HPOM:</b> Indicates whether the event is owned by an Operations Manager user. If the event is owned by an OM user, the user name is displayed with the prefix OM:, for example, OM:Database Operator in the User column.</p>
<b>R</b>	<p><b>Received in Downtime:</b> Event received from a CI during a time period when the CI was in downtime (scheduled to not be available).</p>
<b>T</b>	<p><b>Control Transferred:</b> Indicates if the responsibility for the associated event was transferred to an external manager.</p>
<b>U</b>	<p><b>User Action:</b> Indicates if a user action is attached to the event and describes its status using the following icons:</p> <ul style="list-style-type: none"> <li> — User action available for event</li> <li> (spinning) — Automatic action is running</li> </ul>

UI Element (A-Z)	Description
	<p>✓ — User action executed successfully</p> <p>✗ — User action failed to execute successfully</p>
<b>Application</b>	Application that caused the event to occur.
<b>Category</b>	Name of the logical group to which the event belongs (for example, Database, Security, or Network). Event categories help simplify the process of deciding to which user or user group an event type should be assigned for investigation. An event category is similar in concept to a message group in OM.
<b>CI Type</b>	Configuration item type associated with the event.
<b>Company</b>	A default custom attribute that is configured in the <b>Available Custom Attributes</b> infrastructure setting (in <b>Administration &gt; Setup and Maintenance &gt; Infrastructure Settings &gt; Applications &gt; Operations Management &gt; Operations Management - Custom Attribute Settings</b> ).
<b>Core ID</b>	Host system where the event occurred.
<b>Customer</b>	A default custom attribute that is configured in the <b>Available Custom Attributes</b> infrastructure setting (in <b>Administration &gt; Setup and Maintenance &gt; Infrastructure Settings &gt; Applications &gt; Operations Management &gt; Operations Management - Custom Attribute Settings</b> ).
<b>Description</b>	Optional information about the event in addition to the event's original title and the text captured from the event source.
<b>ETI</b>	<p><b>Event Type Indicator:</b> Display name of the event type indicator (ETI) and the current state, (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 state 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>
<b>Event Age</b>	Time elapsed since the event was created. The event age is updated when the data in the Event Browser (HTML) is automatically synchronized with the database every minute or when the Event Browser (HTML) is manually refreshed.
<b>External ID</b>	ID of the event assigned by the external manager.
<b>Group</b>	<b>Assigned Group:</b> Name of the group to which the event is assigned.
<b>ID</b>	ID of the event. Same as the ID of the message in OM if it is forwarded to OMi.


UI Element (A-Z)	Description
<b>Manager</b>	A default custom attribute that is configured in the <b>Available Custom Attributes</b> infrastructure setting (in <b>Administration &gt; Setup and Maintenance &gt; Infrastructure Settings &gt; Applications &gt; Operations Management &gt; Operations Management - Custom Attribute Settings</b> ).
<b>Node</b>	Host system where the event occurred.
<b>Node Hint</b>	Information used to identify node CI. For example, the hostname in OM used to find host in the RTSM: <ul style="list-style-type: none"> <li>• DNS name of the originating server.</li> <li>• Node ID of the originating server.</li> </ul>
<b>Object</b>	Device such as a computer, printer, or modem.
<b>Originating Server</b>	Management server that initially forwarded the original event along the chain of servers configured in a flexible management environment.
<b>Prio</b>	<p><b>Priority:</b> Priority assigned to the event. The following icons indicate the event priority:</p> <p> — Highest</p> <p> — High</p> <p> — Medium</p> <p> — Low</p> <p> — Lowest</p>
<b>Region</b>	A default custom attribute that is configured in the <b>Available Custom Attributes</b> infrastructure setting (in <b>Administration &gt; Setup and Maintenance &gt; Infrastructure Settings &gt; Applications &gt; Operations Management - Custom Attribute Settings</b> ).
<b>Related CI</b>	<p>Name of the impaired configuration item where the event occurred.</p> <p>If the Related CI includes a subcomponent, it is displayed as follows: Related CI: Subcomponent. For example, Server1: CPU1.</p>
<b>Related CI Hint</b>	Event information used to identify the CI related to the event.
<b>Sending Server</b>	Last server in the OM flexible management chain that forwarded the event to OMi.
<b>Sev</b>	<b>Severity:</b> Severity assigned to the event. Usually, this is the same as the severity status of the original event, for example if the event is received from OM. The



UI Element (A-Z)	Description
	<p>following icons indicate the event severity status:</p> <p> — Critical</p> <p> — Major</p> <p> — Minor</p> <p> — Warning</p> <p> — Normal</p> <p> — Unknown</p>
<b>Solution</b>	Text field used to document solutions to help operators solve the problem indicated by the event.
<b>Source CI</b>	Node where the monitoring agent or probe is running that generated the event.
<b>Source CI Hint</b>	Information used to identify the source CI.
<b>State</b>	<p><b>Lifecycle State:</b> Position of the event in a defined lifecycle. A lifecycle is a complete series of predefined states that summarizes the event's life. The following icons indicate the lifecycle state:</p> <p> — Open</p> <p> — In Progress</p> <p> — Resolved</p> <p> — Closed</p> <p>To change an event's lifecycle status, select the event, and select one of the status buttons in the Event Details (HTML) side panel or in the event context panel.</p>
<b>Subcategory</b>	Name of the logical subgroup (category) to which the event belongs (for example, <code>Oracle</code> (database), <code>Accounts</code> (security), or <code>Routers</code> (network)).
<b>Time Created</b>	Date and time when the event was created.
<b>Time First Received</b>	Date and time when OMi first received notification of the event.
<b>Time Received</b>	Date and time when the (last duplicate) event was received.
<b>Time State</b>	<b>Time Lifecycle State Changed:</b> Date and time when the last lifecycle state change







UI Element (A-Z)	Description
<b>Changed</b>	took place.
<b>Title</b>	Brief summary of the event.
<b>Type</b>	Type of message in OM. String used to organize different types of events within an event category or subcategory.
<b>User</b>	<b>Assigned User:</b> 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 OM user, the user name is displayed with the prefix OM:, for example, OM:Database Operator.


## Event context panel

To open the event context panel, either right-click the event, or hover over the event and click the  **Open menu** button that appears on the right.

The event context panel displays information about the selected event and offers a set of actions. Some of these actions require you to be logged in as a user with the authorization to start the selected action.

Event context panel items are disabled or removed completely if the user does not have permission to perform certain operations (for example, Work on or Close) or if the item does not contain useful information (for example, Solution).

UI Element	Description
 <b>Open Details</b>	Opens the Event Details in a pop-up window and displays all available information about the event.
 <b>Open</b>	Sets the lifecycle status to <b>Open</b> . The event can now be assigned to users for investigation and resolution.
 <b>Work on</b>	Sets the lifecycle status to <b>In Progress</b> , indicating that the underlying problems of the event is under investigation.
 <b>Resolve</b>	Sets the lifecycle status to <b>Resolved</b> .
 <b>Close</b>	Sets the lifecycle status to <b>Closed</b> .
 <b>Close and Reset Health Indicator</b>	Sets the lifecycle status to <b>Closed</b> and resets the associated HI value to the default value for the selected event and on all symptom events of the selected event that are not already closed.

UI Element	Description
	<b>Assignment:</b> Opens the Change Assignments dialog box, enabling you to assign the selected event to a specific group or user.
<b>Add Annotation</b>	<p>Opens the Add Annotation dialog box for the selected event. The annotation is associated with the selected event.</p> <p>For more information about annotations, see <a href="#">"Annotations" on page 71</a>.</p>
<b>Add Custom Attribute</b>	<p>Opens the Add Custom Attribute dialog box for the selected event. The custom attribute is associated with the selected event on saving.</p> <p>For more information about custom attributes, see <a href="#">"Custom Attributes" on page 74</a>.</p>
<b>Custom Action</b>	Opens the Custom Actions sub menu from which you can select a custom action from a list of those configured for the CI type associated with the selected event.
<b>Launch Tool</b>	Opens the Run Tool wizard which you use to select a tool from a list of those configured for the CI type associated with the selected event.
<b>Recalculate Priority</b>	<p>Manually recalculates the priority for the selected event.</p> <p>If the Business Criticality was changed for one or more CIs related to events in the Event Browser (HTML), a recalculation assigns new priority values for these events.</p>
<b>Configure &gt; Event Type Indicators</b>	Opens the Indicator Definitions UI in a new window. You need the appropriate authorization to access the Indicator Definitions UI and other Administration features.
<b>Configure &gt; View Mappings</b>	Opens the View Mappings UI in a new window. You need the appropriate authorization to access the View Mappings UI and other Administration features.
<b>Configure &gt; Integration Policies</b>	Opens the Policy Management UI in a new window. You need the appropriate authorization to access the Policy Management UI and other Administration features.
<b>Configure &gt; Policy</b>	<p>Opens the Policy Editor UI in a new window, enabling you to edit policy templates. Only the policies present in the Monitoring Automation policy inventory can be opened for editing.</p> <p><b>Note:</b> You must redeploy the policies modified in the Policy Editor launched from the Event Browser (HTML); automatic redeployment of updated policies is not possible.</p> <p>For information on how to deploy policy templates, see the <i>OMi Administration Guide</i>.</p>
<b>Configure &gt; Tools</b>	Opens the Tools UI in a new window. You need the appropriate authorization to access the Tools UI and other Administration features.






UI Element	Description
<b>Configure &gt; Monitoring</b>	Opens the Assignments and Tuning UI in a new window by using the CI ID of the related CI, which results in a list of all assignments for that particular CI. For more information, see the <i>OMi Administration Guide</i> .
<b>Configure &gt; Performance Dashboards</b>	If available, opens the OMi Performance Dashboard page in a new window. The OMi Performance Dashboard page enables you to create and configure a performance dashboard. For more information, see <a href="#">"Performance Pane" on page 275</a> .
<b>Tools</b>	Shows a list from which you can select a tool of those configured for the CI type associated with the selected event.
<b>Forward to...</b>	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 by creating a Service Manager incident. The external manager can be configured to return an incident ID to OMi as forwarding information.
















## Event Details (HTML)

To open the Event Details (HTML), click  **Show Event Details** in the Event Browser (HTML).

The Event Details (HTML) side panel displays information about the selected event and offers a set of actions. Some of these actions require you to be logged in as a user with the authorization to start the selected action.

Event Details (HTML) items are disabled or removed completely if the user does not have permission to perform certain operations (for example, Work on or Close) or if the item does not contain useful information (for example, Solution).

UI Element	Description
 <b>Reopen</b>	Sets the lifecycle status to <b>Open</b> . The event can now be assigned to users for investigation and resolution.
 <b>Work on</b>	Sets the lifecycle status to <b>In Progress</b> , indicating that the underlying problems of the event is under investigation.
 <b>Resolve</b>	Sets the lifecycle status to <b>Resolved</b> .
 <b>Close</b>	Sets the lifecycle status to <b>Closed</b> .
 <b>Close and Reset Health Indicator</b>	Sets the lifecycle status to <b>Closed</b> and resets the associated HI value to the default value for the selected event and on all symptom events of the selected event that are not already closed.

UI Element	Description
<b>Severity</b>	<p>Opens the Severity sub menu for the selected event, enabling you to change the severity. The following icons indicate event severity status:</p> <ul style="list-style-type: none"> <li> — Critical</li> <li> — Major</li> <li> — Minor</li> <li> — Warning</li> <li> — Normal</li> <li> — Unknown</li> </ul>
<b>Priority</b>	<p>Opens the Priority sub menu for the selected event, enabling you to change the priority. The following icons indicate the event priority:</p> <ul style="list-style-type: none"> <li> — Highest</li> <li> — High</li> <li> — Medium</li> <li> — Low</li> <li> — Lowest</li> </ul>
<b>Assignment</b>	<p>Opens the Change Assignments dialog box, enabling you to assign the selected event to a specific group or user. The following icons indicate the event assignment type:</p> <ul style="list-style-type: none"> <li> — Assigned group</li> <li> — Assigned user</li> </ul>
 <b>Instructions</b>	<p>Opens the Instructions sub menu for the selected event, enabling you to view the details describing automatic and operator-initiated actions, or manual steps to follow for problem resolution.</p>
<b>Solution</b>	<p>Opens the Solution sub menu for the selected event, enabling you to view the full documented solutions to help operators solve the indicated problem.</p>
 <b>Open Details</b>	<p>Opens the Event Details in a pop-up window and displays all available information about the event.</p>

## Keyboard shortcuts

You can use keyboard and/or mouse shortcuts to facilitate working with the Event Browser (HTML)

component. You can use these shortcuts to arrange columns.

With focus on a column header, you can use the following keyboard and/or mouse navigation options to arrange the columns in the Event Browser (HTML):

<b>Keyboard and/or mouse shortcut</b>	<b>Description</b>
Ctrl+Left Arrow or Right Arrow	Change the column order by moving the selected column to the left or right.
Ctrl+Shift+Left Arrow	Pin the selected column.
Ctrl+Shift+Right Arrow	Unpin the selected column.
Shift+Left Arrow or Right Arrow	Increase or decrease the column width.
Spacebar	Sort by one column or toggle the column sorting (ascending or descending).

## Chapter 7: Health

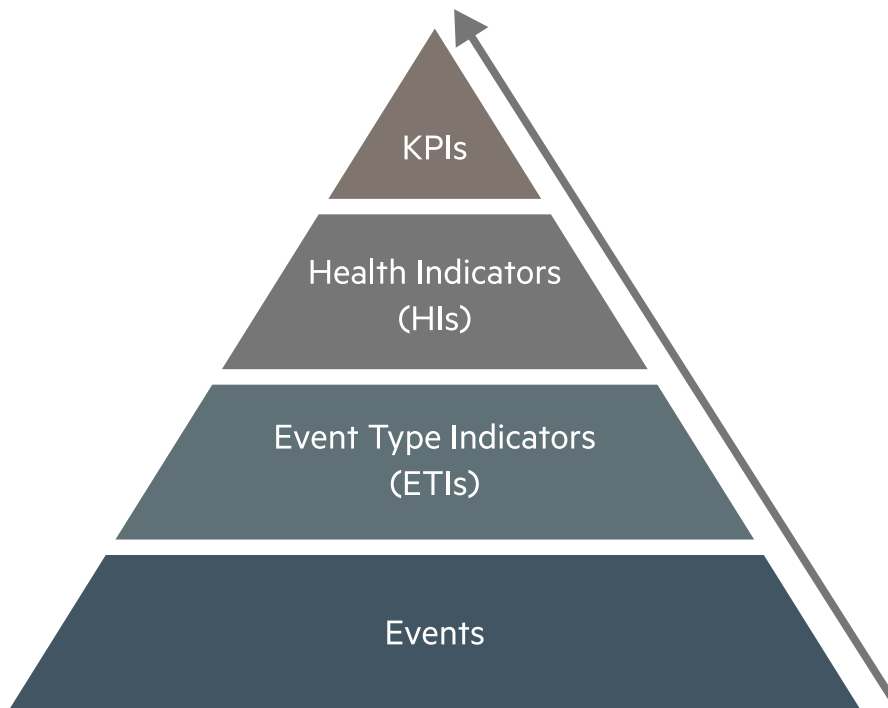
OMi enables you to monitor the availability and performance of the applications and services in your organization. You can keep track of your applications' and services' health, and OMi informs you about problems it detects.

OMi uses data collected by HPE Software applications, such as OM and HPE Operations Agent, as well as data collected from external monitoring tools. Events are displayed based on the collected data received from a range of environments, including Cloud, ERP, Web, and SAP, and 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 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 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.

The following graphic shows how the basic Service Health components impact each other:



**KPIs** (key performance indicators) represent the overall status of CIs. A CI's status is driven by the worst status of all KPIs. They are high-level indicators of CI performance and availability. Based on business rules, the KPI status is calculated by using the statuses of one or more HIs, one or more KPIs, or a combination of both.

#### Example

A software application CI has multiple KPIs assigned, including a `Software Availability` KPI. This KPI can be used to represent the up or down status of all running software CIs.

**HIs** (health indicators) are fine-grained measurements that reflect the state of a CI based on a particular operating characteristic. A change in a health indicator state can affect the KPI status, as well as the ETI status of a CI.

**ETIs** (event type indicators) are categorizations of events. As multiple data collectors may send event samples regarding a single event to OMi, events are generalized into a common type.

Once an event arrives in OMi, it is mapped to a CI, and subsequently to an ETI. If configured, the HI values are attached to the CI and the CI's KPI status is calculated based on those HIs. In the last



step, the event correlation is calculated based on topology-based event correlation (TBEC) rules, and the event is displayed in the OMi Event Browser.

## 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.

To set event type attributes, you can specify the `ETI Hint` value in the OMi Monitoring Automation policies. In OM, you can alternatively configure events to include the custom attribute `ETIHint` to set event type attributes. If the custom attribute is not configured, event type attributes can be set by indicator mapping rules. If adequate information is not available, no ETI is set.

After defining appropriate topology-based event correlation (TBEC) rules, events are correlated based on the ETIs. The correlation rules relate types of events that can occur on the CI, or on a related CI.

## Learn More

### ETI Characteristics

ETIs are characterized by the following:

- Categorize type of event to abstract multiple event sources.
- ETIs consist of at least one value. 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`.
- ETIs are structured according to a `name:state:value` format. For example, an indicator could be: `CPUload:Bottlenecked:100`, with `CPUload` being the name, `Bottlenecked` being the state, and `100` being the value. The state `Bottlenecked` is mapped to a severity, for example `Critical`. Note that, as explained in the example above, some ETIs only consist of the name and state, without a value.
- Events contain an ETI attribute. ETIs do not exist as instances in their own right. An ETI Hint in an event is resolved to an ETI if the ETI has been defined in OMi for a CI type and the event has a related CI of the same CI type (or a child CI type) as defined for the ETI.

- 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 (HIs) determine and display the health of specified aspects of a monitored CI. An HI is an event-driven 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. OMi sets indicators automatically using event attributes or indicator mapping rules.

Although HIs can affect the status of a KPI, this is not always the case. For example, the HI `Number of open sessions:2` contains information about an application, but it does not reflect what the CI's normal state is or if the number of open sessions is good or bad.

## Learn More

This section includes:

- ["Mapping Rules" below](#)
- ["Health Indicators" on the previous page](#)

### 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 display the health of 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.

## Tasks

This section includes:

- ["How to Reset Health Indicators" below](#)

### 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.

Open the Event Browser:

1. (missing or bad snippet)
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

HIs 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 status on the KPI for a specific CI, such as: *Critical*, *Major*, *Minor*, or *Normal*. For example, a Software Performance KPI for a database can include multiple health indicators concerning the cache-hit ratio (0, 50, 00%), the length of query queues (*Empty*, *Full*), and response times (*#ms*) to determine the overall software performance.

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 effects 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 KPI states calculated from HIs directly on the CI.

KPIs related to the CI of a selected event are displayed in the Health Indicators pane of the Health Perspective tab. In the Health Top View, KPIs appear under the monitored object to which they belong. Additionally, you can use the 360° View page to display a hierarchy of CIs in a view, the KPIs assigned to each CI, and their KPI statuses.

For a list of all Service Health components, see ["Service Health Components" on page 129](#).

## Learn More

This section includes:

- ["KPIs for Health-Based Data" on the next page](#)
- ["KPIs for Event-Based Data" on the next page](#)

## KPIs for Health-Based Data

As an example, the following KPIs use health-based data:

- Software 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. Also, the KPI value is displayed as 1 which is, by default, the number of the highest severity events.

**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](#)
- ["HI-Based KPI Calculations" on page 124](#)

## 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 status 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, hover over the CI for which you want to view the KPI business rule, and then click the **Open CI Context** button that appears on the right.

In the CI context menu, click the **KPIs** area and check the value of the entry Business Rule to see which business rule was used to set the severity status (for example, Worst Status 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.

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.

## Drilldown to SiteScope

When SiteScope monitors are used to set the status of a configuration item (CI), you can drill down from the CI (or from a health indicator (HI) on the CI) to a SiteScope monitor that contributes to the HI's status.

### Tasks

1. Access menu commands from a CI or HI in a My Workspace page or component, for example 360° View, Top View, View Explorer, or Health Indicator. Select **Go to > SiteScope**. The SiteScope UI opens directly to the parent group of the relevant monitor.

If monitors from multiple groups contribute to the CI's or HI's status, the **Drilldown to SiteScope** dialog box opens. Select the monitor to which you want to drill down and open it in SiteScope.

The **Drilldown to SiteScope** dialog box displays the following hierarchy:

- The root level shows health indicators.  
  
If you open the dialog box for a CI, one or more HIs that contribute to the CI's status are listed.  
If you open the dialog box for an HI, this HI appears as the root.
- The level below the root shows the SiteScope systems (connected server name) that have monitors contributing to the HI.
- The lowest level shows the SiteScope monitors that contribute to the HI.

**Note:** In the **System Monitors** view, if you select **Go to > SiteScope** from a monitored CI, SiteScope opens to the monitor's parent group. If you select this from a group CI, SiteScope opens directly to the group.

2. Select a SiteScope monitor, and click **Drilldown**. SiteScope opens to the parent group of the selected monitor.

For details on working with SiteScope, see the *Using SiteScope Guide*.

## How to Find Visible and Hidden Child CIs

A CI's child CIs can be specified as included (visible) or excluded (hidden) in a specific view. The status of any child CI, visible or hidden, has an impact on the status of its parent CI in any view where the parent CI appears. For details on including or excluding child CIs, see the *Modeling Guide*.

To access

Within a Service Health component such as the Hierarchy component, right-click a CI and select the **Show > Find Visible and Hidden Child CIs** option, to show the visible and hidden child CIs that appear in the RTSM.

**Note:** Hidden child CIs are only displayed if they have KPIs.

## Learn More

### Example

Use the **Find Visible and Hidden Child CIs** option to list all of the child CIs of the selected CI in the RTSM. After the list of child CIs is displayed, you can search for the views the child CI belongs to and then display the child CIs details in the specific view.

For example, you might have the situation where, in a specific view, the Application Availability KPI's status of the parent CI's is *Critical* while the Application Availability KPI's status of the CI's child CIs are *OK*. When this happens, you would like to know what caused the status of the Application Availability KPI to be *Critical*.

### Find Visible and Hidden Child CIs page

The Find Visible and Hidden Child CIs page displays the following information:

- The name of the selected CI, whose child CIs you want to list, the CI's KPIs, and their status in the current view.
- A list of the child CIs (visible and hidden) that appear in the RTSM, their KPIs and their status. In the **Visible** column, a checkmark indicates that the child CI is visible in the view and an X indicates that the child is hidden in the view.




## Service Health Components

The following section describes available Service Health components.

To access

**Workspaces > My Workspace**

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.
- **Relevant Tasks:** ["How to Set Up My Workspace" on page 229.](#)
- For information on components, see ["Add components to a page" on page 230.](#)
- 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 237.](#)

## Learn More

### Business Impact

Displays business CIs and SLAs that are impacted by the selected CI.

For details, see ["Business Impact Component" on page 131.](#)

### 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 134.](#)

## 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 139](#).

## 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 140](#).

## 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 Indicators Component" on page 148](#).

## Health Top View

Displays the topological view of the CIs affected by the event selected in the Event Browser pane or the topological neighborhood of the CI selected in any of the wired components on the same page.

For details, see ["Health Top View Component" on page 151](#).

## 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 157](#).

## 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 257](#) and ["Working with the KPI Over Time Dashboard as a Component" on page 260](#).

## 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 170](#).

## View Explorer

Displays a list of views and their CI hierarchies. The component enables you to select a view and browse through its CI hierarchy, or to search for a CI in the selected view.

For details, see ["View Explorer Component" on page 179](#).

## Watch List

Displays a high-level health overview of important CIs, from multiple views.

For details, see ["Watch List Component" on page 183](#).

# Business Impact Component

When you select a CI, the Business Impact component shows the KPI Over Time data for the CI and the business CIs that the selected CI impacts. In addition, the business impact of the CIs is indicated, using a rating from zero (no impact) to 5 (high impact).

**Tip:** This rating shows how much of an impact the selected CI has on the business CIs and SLAs in your monitored environment, helping you to prioritize your tasks when problems are detected.

## To access

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

Select a CI, and click the **Business Impact** link.

- 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 229](#).

**Note:** The Business Impact bar is not visible by default in Service Health application components. For details, see the *OMi Administration Guide*.

## Learn More

### The Business Impact Rating

By default, the business impact rating is based on the criticality of impacted business CIs, and the number of impacted business CIs and SLAs. You can assign each of these metrics relative weights and thresholds.

The Business Impact component shows the following CI types (CITs), if they have an **Impact** relationship with the selected CI: BusinessService, BusinessProcess, and BusinessApplication.

For details on modifying how business impact is calculated, see the *OMi Administration Guide*.


## Tasks

This section includes:

- ["How to Select CIs for Display in the Business Impact Component" below](#)
- ["How to Modify Duration Settings" below](#)
- ["How to Modify Refresh Rates" on the next page](#)

### How to Select CIs for Display in the Business Impact Component



If your workspace contains a component where you can select CIs (such as View Explorer, CI Explorer, Top View, or Hierarchy), and also contains the Business Impact component, you can select a CI to display its business impact.

If you are using the Business Impact component independent of other components (on a user-defined page), you can select a CI from within the component itself. Click the  **Configure Component** button in the Business Impact component toolbar, and then click **Configuration Items**. Open a view within the Configuration Items dialog box, and select a CI to display its business impact data.

### How to Modify Duration Settings

By default, the Business Impact 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 Business Impact 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 Business Impact 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

### Business Impact Rating Area

User interface elements are described below:

UI Element (A-Z)	Description
<b>Business Impact (Low to High)</b>	<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 rating is based on the criticality of impacted business CIs. Within RTSM, each CI can have a <b>Criticality</b> attribute defined, with a value of 1-5. If a CI has an impact on one or more CIs which have this attribute defined, the CI's business impact rating is the worst criticality of the CIs that it impacts.</p> <p>You can customize which metrics are used to calculate this rating. For details, see the <i>OMi Administration Guide</i>.</p>

## Impacted Businesses Area

User interface elements are described below:

UI Element (A-Z)	Description
<b>Current Status</b>	The worst status of the KPI assigned to the impacted CI.
<b>Name</b>	The name of the impacted CI.
<b>Past &lt;Hour/Day/Week&gt;</b>	<p>The status of the impacted CI over a predefined time period (default: <b>Past week</b>).</p> <p><b>Tooltip:</b> The tooltip displays a text string containing the name of the status, and the percentage of time that the KPI held this status.</p>
<b>Type</b>	CI type of the impacted CI.

## 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 229](#).

## Learn More

This section includes:

- ["Incidents and Requests for Change" on the next page](#)
- ["Actual Changes" on the next page](#)
- ["Available CI Types" on the next page](#)

## 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 HPE Service Manager).

- For details on developing federation adapters, see the *RTSM Developer Reference Guide*.
- For details on the integration with HPE Service Manager, see the *OMi Integrations Guide*.

## 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.
- Relationship changes are displayed if a relationship has been defined with a **TRACK\_LINK\_CHANGES** qualifier.

## 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

This section includes:

- ["How to Select CIs for Display" below](#)
- ["How to Modify Duration Settings" on the next page](#)
- ["How to Modify Refresh Rates" on the next page](#)

### How to Select CIs for Display



If your workspace contains a component where you can select CIs (such as View Explorer, CI Explorer, Top View, 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** 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
<b>Attribute</b>	The name of the CI attribute that was changed.
<b>Change Type</b>	The type of change that occurred.
<b>Changer</b>	Description of the user or event that modified the CI's property (for example, user name or Discovery).
<b>CI Name</b>	The name of the CI that was changed.
<b>Date</b>	The date and time at which the change occurred.
<b>New Value</b>	The new value of the CI attribute.
<b>Old Value</b>	The previous value of the CI attribute (before the change).
<b>Related CI</b>	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
<b>CI Name</b>	The name of the CI that triggered the incident.
<b>Closing Time</b>	The date and time at which the incident was closed.
<b>Description</b>	Description of the incident.
<b>ID</b>	Incident ID, as it appears in the source application (for example, within HPE Service Manager).

UI Element (A-Z)	Description
<b>Opening Time</b>	The date and time at which the incident was opened.
<b>Origin</b>	The source of the incident.
<b>Severity</b>	The severity of the incident as it appears in the source application (for example, within HPE Service Manager).
<b>Status</b>	The status of the incident as it appears in the source application.
<b>Update Time</b>	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.
<b>CI Name</b>	The name of the CI for which the change is planned.
<b>Contact Person</b>	The name of the contact person regarding the change.
<b>ID</b>	Change request ID, as it appears in the source application.
<b>Impact Severity</b>	The degree of impact of the change, as it appears in the source application.
<b>Opened By</b>	The name of the person who opened the change request.
<b>Planned End Date</b>	The time at which the change is scheduled to end.
<b>Planned Start Date</b>	The time at which the change is scheduled to start.
<b>Risk Assessment</b>	The degree of risk of the change, as it appears in the source application.
<b>Status</b>	The status of the planned change, as it appears in the source application.
<b>Summary</b>	A description of the planned change.

## Custom Image component

Custom Image enables you to associate a view's CIs represented by 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 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 Custom Image (**Administration > Service Health > Custom Image**). 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 229](#).

## Tasks

This section includes:

- ["How to work with Custom Image" below](#)
- ["How to modify the refresh rate" on the next page](#)

### How to work with Custom Image

You work with Custom Image in two stages:

1. Within **Administration > Service Health > Custom Image**, 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 **Workspaces > My Workspace**, 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 and the corresponding status indicators are automatically removed from the relevant custom images.

## How to modify the refresh rate

The default refresh rate for Custom Image is five 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 as follows:

1. From the ▼ **Component Menu** drop-down list, select **Preferences**. The Custom Image Preferences window opens.
2. Modify the refresh rate as needed, and click **OK**.

## 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.

### To access

You can create your own pages and include this component. For details, see ["How to Set Up My Workspace" on page 229](#).

## Learn More

This section includes:

- ["Location Status Information" below](#)
- ["MSN Virtual Earth" below](#)
- ["Offline Map" on the next page](#)
- ["Google Earth" on page 143](#)

## 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 "Working with Relationships" in 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:



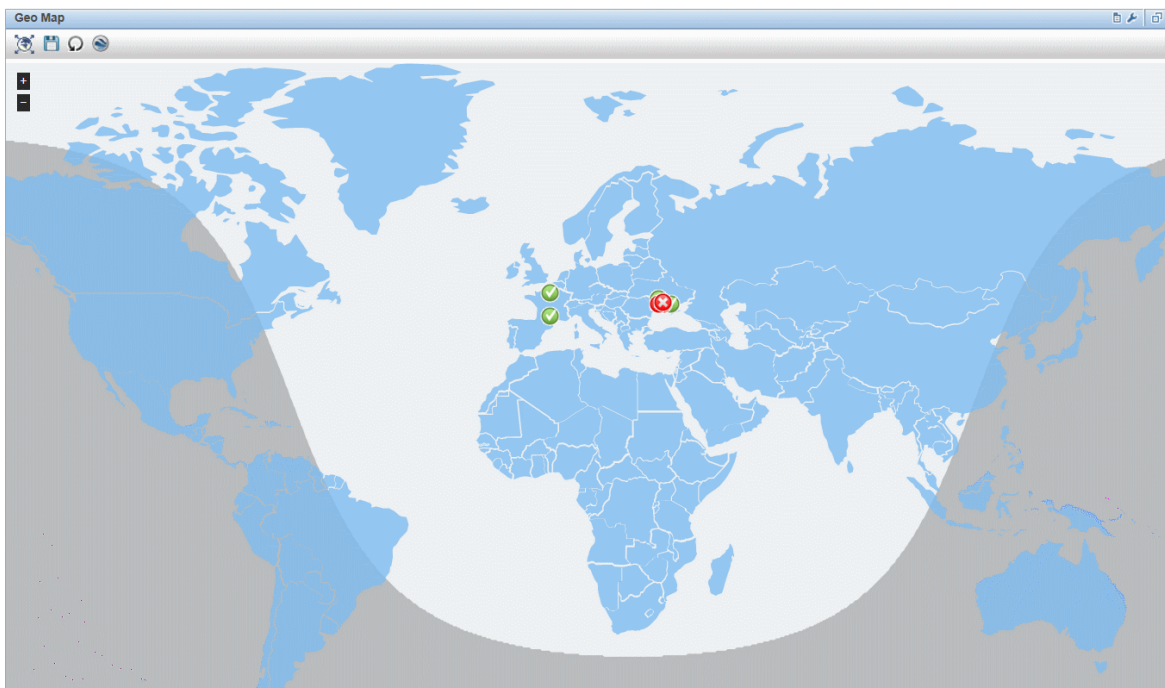
The Virtual Earth Geographical Map presents a flat geopolitical view of the planet where you can display the country borders, the geographic features, or both.

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 "[Geographical Map Component](#)" on page 140). The map displays the worst status at each geographical location and detailed information about the CI's KPIs.

Example of the offline map:



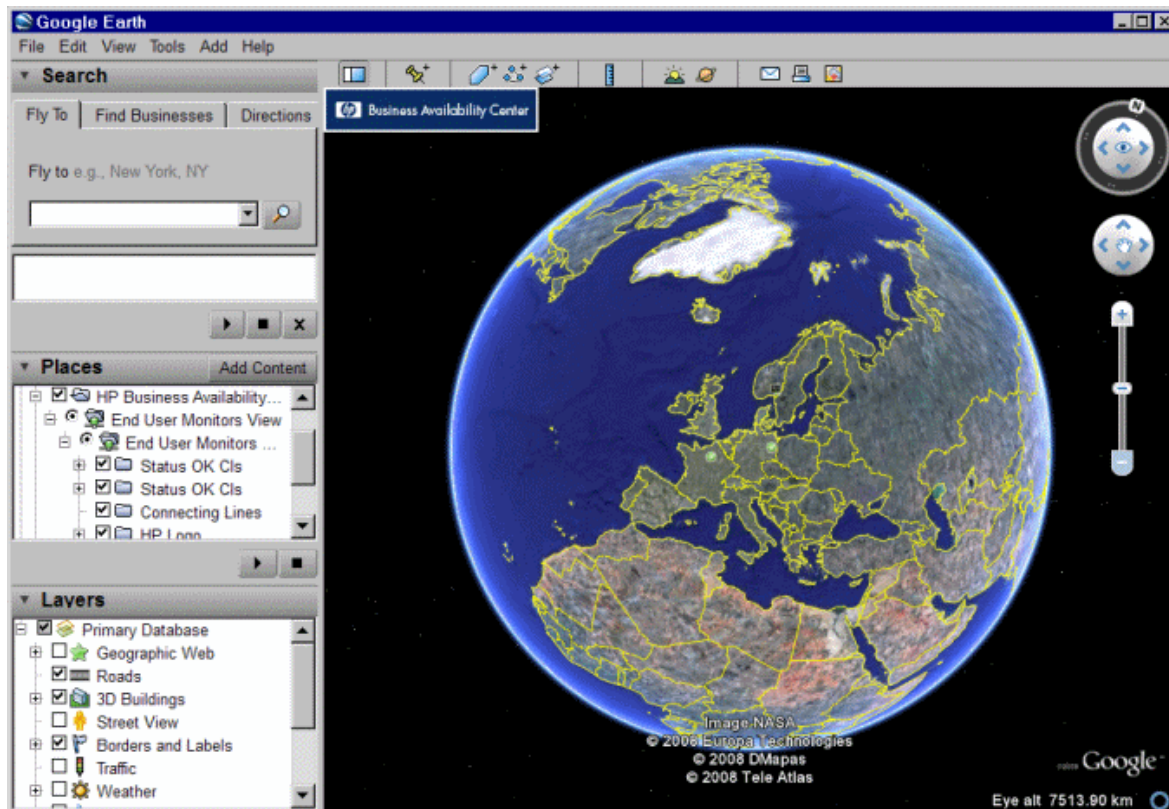
The default color for the offline map is blue. To change this color, see ["Geographical Map Component" on page 140](#).

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 140](#).

## 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 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.

## 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.
<Tooltip>	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.

UI Element (A-Z)	Description
	<p>The tooltip includes the following information:</p> <ul style="list-style-type: none"> <li>• <b>KPI Name.</b> The name of the KPI. The color of the header indicates the worst status of the KPI.</li> <li>• <b>Location.</b> The name of the location (country, city, and state, if applicable).</li> <li>• <b>Status.</b> The status of the KPI.</li> <li>• <b>Held status since.</b> The time and date when the KPI status changed to the current status.</li> <li>• <b>CausedBy.</b> The names of the CIs where the problem occurred.</li> </ul>
<b>Last Update</b>	<p>Displays when the information in the component was last updated.</p> <p>To manually update the information in the component, click the <b>Refresh</b> icon.</p>
<b>Road/Aerial/Bird's Eye/Hybrid/Labels</b>	<p>Click:</p> <ul style="list-style-type: none"> <li>• <b>Road</b> to display the map with the country borders.</li> <li>• <b>Aerial</b> to display the map with the topographical features.</li> <li>• <b>Bird's Eye</b> (inactive)</li> <li>• <b>Labels</b> to remove all labeling on the map other than CI status indicators.</li> </ul>
<b>Search</b>	<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.
	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.

UI Element (A-Z)	Description
<b>&lt;Status of a location&gt;</b> 	<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>
<b>&lt;Tooltip&gt;</b>	<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"> <li>• <b>KPI Name.</b> The name of the KPI. The color of the header indicates the worst status of the KPI.</li> <li>• <b>Location.</b> The name of the location (country, city, and state, if applicable).</li> <li>• <b>Status.</b> The status of the KPI.</li> <li>• <b>Held status since.</b> The time and date when the KPI status changed to the current status.</li> <li>• <b>CausedBy.</b> The names of the CIs where the problem occurred.</li> </ul>
<b>&lt;Country name&gt;</b>	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
<b>&lt;Places area&gt;</b>	Select the view and filter the CIs you want to display.
<b>&lt;Status of a location&gt;</b> 	<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>
<b>&lt;Tooltip&gt;</b>	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.

UI Element (A-Z)	Description
	<p>The tooltip includes the following information:</p> <ul style="list-style-type: none"><li>• <b>KPI Name.</b> The name of the KPI. The color of the header indicates the worst status of the KPI.</li><li>• <b>Location.</b> The name of the location (country, city, and state, if applicable).</li><li>• <b>Status.</b> The status of the KPI.</li><li>• <b>Held status since.</b> The time and date when the KPI status changed to the current status.</li><li>• <b>CausedBy.</b> The names of the CIs where the problem occurred.</li></ul>
<Zoom and direction tools>	Enables you to zoom in or out of the current display.

## Health Indicators Component

The Health Indicators component displays details regarding the health indicators (HIs) that can be 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**. 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 229](#).

## Learn More

This section includes:

- ["HIs and the Event Console" below](#)

## HIs and the Event Console

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.

## Tasks

This section includes:

- ["How to Select CIs for Display" below](#)
- ["How to Reset an HI's State to Default" below](#)
- ["How to Drill Down from the Health Indicator Component" on the next page](#)

### How to Select CIs for Display

If your workspace contains a component where you can select CIs (such as View Explorer, CI Explorer, Top View, 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

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.

Open the Event Browser:

1. (missing or bad snippet)
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**.

## 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.
	<b>Reset columns width.</b> Click to restore the width of the columns in the table to the default widths.
	<b>Select columns.</b> Click to select the columns you want to display in the table.
<b>Health Indicator</b>	HI status icon, and display name of the health indicator.  If the <b>saveLastSample</b> global parameter is set to <b>true</b> , you can click the HI link to see its last sample details. For details, see the <i>OMi Administration Guide</i> .
<b>Health Indicators Contributing to KPIs</b>	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
<b>Health Indicators Not Contributing to KPIs</b>	List of the health indicators that are assigned to the selected CI, but are not used to calculate any KPIs.
<b>KPI</b>	Name of the KPI which uses the health indicator in calculating its status, and current KPI status displayed by a status icon.
<b>Last Status Change</b>	The date and time from when this HI has held its current status.
<b>Trend</b>	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.
<b>Value</b>	Value of the HI.

## Health Top View Component

The Health Top View component displays the availability of your system components. The CI icons in 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 icons 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 CI types. A list of mapped views appears in the View list in the Health Top View toolbar. The contents of the View list are determined by the CI type associated with the event that you select in the Event Browser or by the CI that you select in any of the wired components on the same page. For more information about view mapping, see ["Mapping Views" on page 202](#).

For more information about HIs and KPIs, see ["Health Indicators" on page 122](#) and ["HI-Based KPI Calculations" on page 124](#).

### To access

You can create your own pages and include this component. For details, see ["How to Set Up My Workspace" on page 229](#).

## 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 to 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.

## Tasks

This section includes:

- ["How to View CIs in the Layer Layout" below](#)
- ["How to Modify the Refresh Rate" on the next page](#)
- ["How to Enable the Dark Theme" on the next page](#)

### How to View CIs in the Layer Layout

To view CIs in the layer layout, select  **Layer** from the layout selector. After you select to view a CI topology in the layer layout, you can use most of the options that are available with the other three layouts in Health Top View (hierarchic, circular, or organic). However, because in the layer layout CIs are divided into functional layers (for example, Business Enablement, Infrastructure, or Software), you cannot use the options such as **Show subtree only** and **Expand to problem**.

By using the layer layout, you can see the direction of a CI relationship and the relationship type that links two CIs (visible straightaway if the **Show edge label** option is enabled, or by hovering over a CI relationship if this option is disabled).



For a better overview, each functional layer is color-coded according to the current worst operational status of a CI in that layer.

## How to Modify the Refresh Rate

The default refresh rate for Health Top View is five 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 as follows:

1. From the ▼ **Component Menu** drop-down list, select **Preferences**. The Health Top View Preferences window opens.
2. Modify the refresh rate as needed, and then click **OK**.

## How to Enable the Dark Theme

To change the appearance of the Health Top View component and use the dark theme, follow these steps:









1. From the ▼ **Component Menu** drop-down list, select **Preferences**. The Health Top View Preferences window opens.
2. Select the **Use Dark Theme** check box, and then click **OK**.

## UI Descriptions

### Health Top View Toolbar

The following options are available in the Health Top View toolbar:

UI Element	Description
<View Selector>	Select a view from the drop-down list (on the top left area of the toolbar) to display its CIs.
<Search Bar>	Click to expand, and then type a CI name to focus on that CI.
<Layout Selector>	The hierarchic layout is the default. However, if you choose a different layout for the selected view, the layout preference is saved (every time you select this view, it is





	<p>displayed in the layout that you chose last).</p> <p>Select one of the following layouts for viewing a CI topology:</p> <ul style="list-style-type: none"> <li>•  <b>Hierarchic Layout.</b> This is the default layout.</li> <li>•  <b>Circular Layout.</b></li> <li>•  <b>Organic Layout.</b> The organic layout may require more time to render large topologies compared to the other three layout types.</li> <li>•  <b>Layer Layout.</b> In this layout, CIs with multiple relationships are displayed only once, with no duplicates.</li> </ul> <p><b>Note:</b> If you choose the layer layout, you cannot use all the options that are available with the other three layouts (for example, <b>Show subtree only</b> and <b>Expand to problem</b>).</p>
≡	<p><b>Options.</b> Click to access all commonly performed operations when viewing essential applications and business processes:</p> <ul style="list-style-type: none"> <li>•  <b>RELOAD.</b> Click to restore the view to its original display.</li> <li>•  <b>ZOOM TO FIT.</b> Click to automatically resize the CI topology to fit the screen size.</li> <li>•  <b>EXPORT.</b> Click to export a CI topology as a graph. After you click this button, a new tab opens showing you the image. Right-click the image and save it to the desired location.</li> </ul> <p><b>Note:</b> The export format of the image is SVG for Firefox and Safari, and PNG for Internet Explorer.</p> <ul style="list-style-type: none"> <li>• <b>ZOOM.</b> Use the slider to increase or decrease the CI topology display size.</li> <li>• <b>DISPLAY OPTIONS.</b> <ul style="list-style-type: none"> <li>◦ <b>Show KPIs.</b> Use the switch to show or hide KPI icons on CIs. To view a list of CI's KPIs and their statuses, either click the KPI icon or select <b>Open CI Context &gt; KPIs</b> on a CI. <ul style="list-style-type: none"> <li>• <b>Show KPIs with normal status.</b> Use the switch to show or hide KPIs that have the normal status.</li> </ul> </li> <li>◦ <b>Show Health Indicators.</b> Use the switch to show or hide Health Indicator icons on CIs. To view HI details, either click  or select <b>Open CI Context &gt; Show HIs</b> on a CI.</li> <li>◦ <b>Play sound notification.</b> Use the switch to turn the sound notification option on or off. If this option is turned on, a sound alert is played when a CI in the view changes its status to critical (red).</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>◦ <b>Show edge label.</b> <i>Available only with the layer layout.</i> Use the switch to show or hide the names of the relationships that link CIs in a CI topology.</li> <li>◦ <b>Show multiline labels.</b> Use the switch to enable or disable the display of multiple lines for CIs with long names.</li> </ul>
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## CI Context Menu

To open the CI context menu, either right-click the selected CI, or hover over the selected CI and then click the **Open CI Context** button that appears on the right. In the CI context menu, you can choose among the following sections:

- Button actions:

UI Element	Description
	<b>Show subtree only.</b> Click to focus only on a particular part of a CI topology.
	<b>Show Path to Root.</b> Click to display the path from the selected CI to the view root CI.  <b>Note:</b> To view the path from the selected CI to the view root CI in a separate window, press and hold the <b>Ctrl</b> button and click the <b>Show Path to Root</b> button. Alternatively, you can right-click the selected CI, and then select <b>Show &gt; Path to Root</b> .
	<b>Show Problematic Subtree.</b> Click to display all child CIs of a problematic CI that have the Critical or Major status. This helps you to quickly locate a problematic child CI that caused the selected parent CI to have a status other than OK. If you want to see a problematic path in isolation, you can use the <b>Show subtree only</b> button.  <b>Note:</b> To view all child CIs of a problematic CI that have the Critical or Major status in a separate window, press and hold the <b>Ctrl</b> button and click the <b>Show Problematic Subtree</b> button. Alternatively, you can right-click the problematic CI, and then select <b>Show &gt; Problematic Subtree</b> .
	<b>Expand to problem.</b> Click to expand the CI topology display to show the source of a problematic CI (available only for CIs that have a status other than OK).

**Note:** To leave any of these modes, click the **X** button on the top left of the page.

- **Event Information**

Displays a list of events in the Event Browser.

- **KPIs**

Shows a list of KPIs and their statuses.

- **Show HIs**

Shows HI information such as the state, the value, and the last status change.

- **ACTIONS**

Select the action you want to execute or the tool you want to launch.

**Note:** To list all available actions, you can also right-click the selected CI.

## Troubleshooting

This section includes:

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

### 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.

### 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 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 229](#).

## 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:

- **Business Impact.** Displays the KPI Over Time data for the CI and the business CIs that the selected CI impacts. For details, see ["Business Impact Component" on page 131](#).
- **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 Indicators Component" on page 148](#).
- **Alerts.** Displays the Alerts for the selected CI in the active view, for example CI Status Alerts and Event Based Alerts.
- **Actual Changes, Planned 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 134](#).

## 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 **Log Out** when you are ready to exit the browser. (If you close the browser without logging out, your changes are not saved.)

## Tasks

This section includes:

- ["How to Create a Quick CI Filter" below](#)
- ["How to Create an Advanced Filter" on page 161](#)
- ["How to Set up Sound Notification When KPIs are Critical" on page 162](#)
- ["How to Modify the Refresh Rate" on page 163](#)
- ["How to Modify the Number of CI Levels Displayed in the Hierarchy Component" on page 163](#)
- ["How to Display Child CIs Collapsed Rather than Expanded" on page 164](#)

### 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	-	-
Default Client_Snt_Ap1_1	!	✖
Default Client_Snt_Ap1_1_Sanity_BTW1_1	!	✖
tx_10	!	✓
tx_15	!	✓
tx_1_failed	?	✖
tx_2_failed	?	✖
tx_5	✓	✓

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		
Default Client_Snt_Ap1_1_Sanity_BTW1_1		
 tx_10		
 tx_15		

## 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 and parent CIs (without status) in the view which fulfill 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.

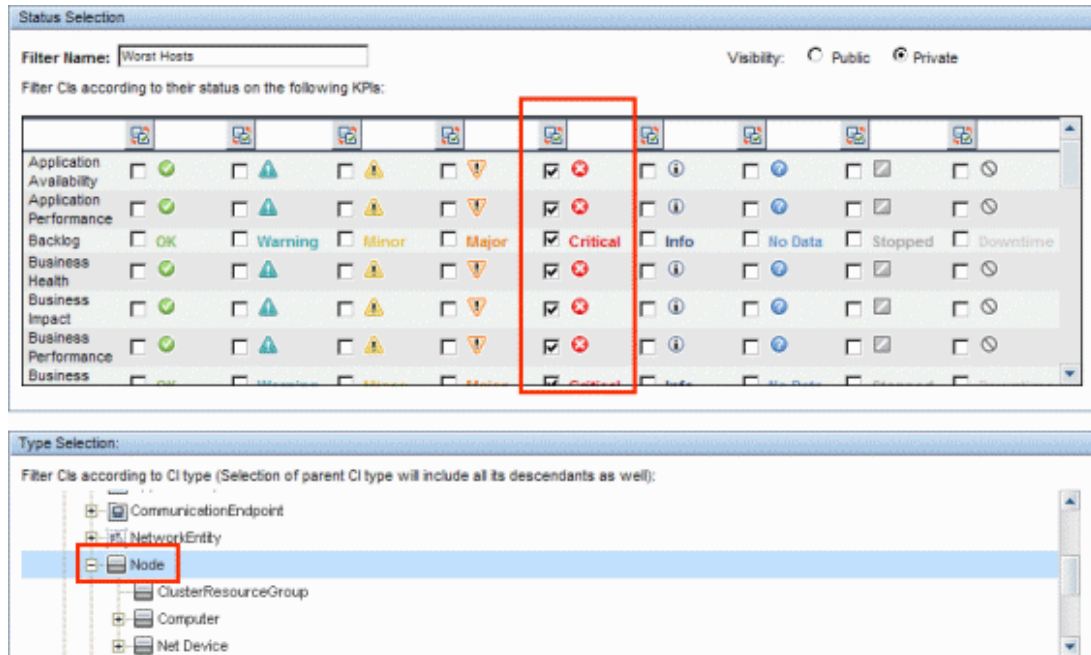
If you select a higher-level CIT, its descendant CITs are included in the filter as well.

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><b>Menu.</b> Select one of the following options:</p> <ul style="list-style-type: none"><li>•  <b>Expand Available Levels/Collapse All.</b> Click to expand or collapse the CIs displayed in the Hierarchy component.  These buttons are enabled when one or more of the currently displayed CIs can be expanded or collapsed.</li><li>•  <b>Drill Down.</b> Select a CI and click to drill down to its child CIs. This button is only enabled when a CI is selected.  If a filter is active, the drill-down opens a new browser window for the selected CI.</li><li>•  <b>Up One Level.</b> Click to display the parent CI of the CI currently displayed in the Hierarchy component.  This button is only enabled when the currently displayed CI has a parent CI.</li><li>•  <b>Select Columns.</b> Click to open the Select Columns dialog box, which enables</li></ul>

UI Element	Description
	<p>you to select which KPIs are displayed.</p> <p>Use the arrows to add or remove KPIs from the display.</p>
	<p><b>Filter.</b> 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><b>Remove Filter.</b> If a filter is active, click to cancel filtering and show all KPI statuses for all CIs.</p>
<Filter Bar>	<p>After you press the <b>Filter</b> 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"> <li>• <b>Filter.</b> After selecting statuses, click to activate filtering.</li> <li>• <b>Clear.</b> Click to clear all of the statuses.</li> <li>• <b>Advanced.</b> Click to create an advanced filter. This enables you to filter specific KPIs or CI types, and to create a permanent filter.</li> </ul> <p><b>Note:</b> 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"> <li>• Select a filter to apply it to the Hierarchy display.</li> <li>• To edit, clone, or delete a filter, select the filter from this list, then click the <b>Favorite Filters Menu</b> button.</li> </ul> <p><b>Predefined filters</b> 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"> <li>• <b>global: Show Errors.</b> Displays the CIs whose KPIs have a <b>Critical</b> status.</li> <li>• <b>global: Show Errors and Warnings.</b> Displays the CIs whose KPIs have a <b>Minor</b>, <b>Major</b>, or <b>Critical</b> status.</li> <li>• <b>global: Show PNR.</b> Displays, for all CI types, only the CIs whose <b>PNR</b> KPI has an <b>OK</b>, <b>Warning</b>, <b>Minor</b>, <b>Major</b>, <b>Critical</b>, or <b>No Data</b> status.</li> </ul>
	<p><b>Favorite Filters Menu.</b> This opens a drop-down menu, which enables you to perform the following actions:</p>

UI Element	Description
	<ul style="list-style-type: none"> <li>To create an advanced filter, click <b>New</b>.</li> <li>To edit or delete a filter, select the filter from the Favorite Filters list, and click <b>Edit</b> or <b>Delete</b>.</li> </ul> <p>Note that predefined filters cannot be modified or deleted.</p> <ul style="list-style-type: none"> <li>To clone a filter, select the filter from the Favorite Filters list, and click <b>Clone</b>.</li> </ul>
	<b>Filter Hierarchical Mode.</b> 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.
	<b>Filter Flat Mode.</b> 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.
	<p><b>Sound On/Off.</b> You can set up Service Health to issue an alert sound when the status of a KPI changes to Critical.</p> <p>Click to toggle the sound on or off.</p>

## 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
<b>Business Impact</b>	<p><b>Note:</b> Business Impact is not visible by default. To modify, see the <i>OMi Administration Guide</i>.</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 <i>OMi Administration Guide</i>.</p>
<b>&lt;KPIs&gt;</b>	Each of the KPI columns displays the status and value of a specific KPI, for each of the CIs displayed in the table.
<b>&lt;KPI Domains&gt;</b>	<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>
<b>Name</b>	This column displays the CIs in the selected view in a hierarchical structure;

UI Element	Description
	you can expand a CI to drill down to its child CIs.
<b>Status</b>	Displays the worst KPI status for the CI.

## Hierarchy Table Rows

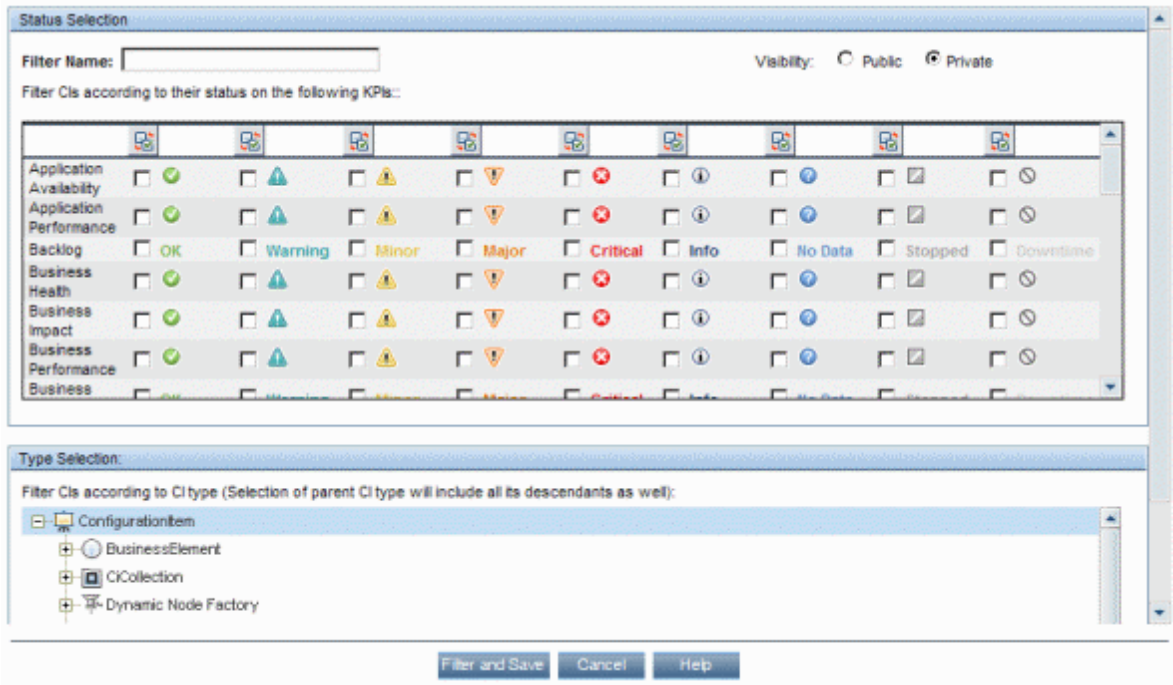
User interface elements are described below (unlabeled elements are shown in angle brackets):

UI Element	Description
<b>&lt;CI name&gt;</b>	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.
<b>&lt;KPI status/value&gt;</b>	Displays text or an icon indicating the current status or value of the KPI. Tooltip: <ul style="list-style-type: none"> <li>• <b>Status.</b> The status of the CI (calculated according to one of the status calculation methods). It may also display: <ul style="list-style-type: none"> <li>◦ <b>Not up to date.</b> For decayed CIs. For a SiteScope CI, this status is displayed after a SiteScope monitor is disabled.</li> <li>◦ <b>Stopped.</b> When a Business Process is stopped.</li> <li>◦ <b>Business Rule.</b> The name of the rule that calculates the KPI status or value.</li> <li>◦ <b>Last Status Change.</b> The date and time since which this CI has held its current operational status.</li> </ul> </li> </ul>
<b>&lt;KPI History&gt;</b> 	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 <i>OMi Administration Guide</i> . Tooltip: <ul style="list-style-type: none"> <li>• <b>History Type.</b> The type of history (worst status or average status) used when calculating history status.</li> <li>• <b>Historical Worst/Average.</b> The worst or average status of the KPI in the selected time period.</li> </ul>
<b>&lt;KPI Trend&gt;</b>	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 <i>OMi Administration Guide</i> .


UI Element	Description
	Tooltip: <ul style="list-style-type: none"><li>• <b>Trend.</b> The trend of the KPI in the selected time period.</li></ul>

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**. In the **Hierarchy** component, click **Filter** and then click **Advanced**, or click the **Favorite Filters Menu** button.



User interface elements are described below:

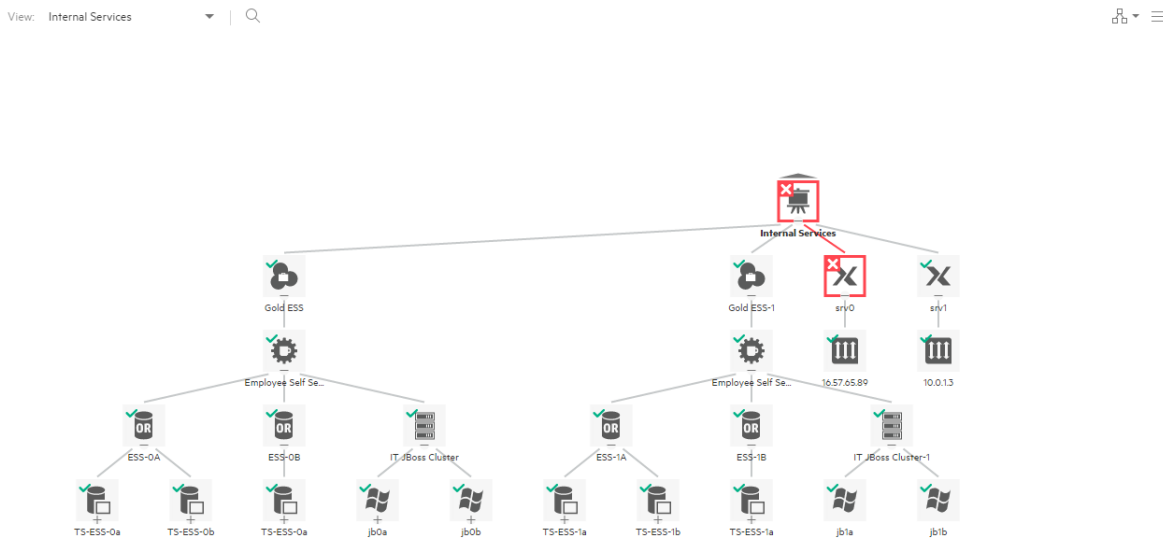
UI Element (A-Z)	Description
	<b>Invert Selection.</b> Click to select or deselect one of the statuses, for all the KPIs.
<b>&lt;Status check boxes&gt;</b>	Select the check box for each KPI status that you want to include in the filter. The Hierarchy display shows all the CIs that have at least one KPI that fills the filter criteria.



UI Element (A-Z)	Description
<b>Cancel</b>	Click to exit the Defining/Editing Filters dialog box without saving changes.
<b>Filter</b>	Click to apply the filter (without saving filter settings).
<b>Filter and Save</b>	Click to apply the filter, and save your changes to the filter.
<b>Filter Name</b>	Type the name of the filter you are creating.
<b>Type Selection</b>	<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><b>Note:</b> If you select a higher-level CIT, all its descendant CITs are included in the filter as well.</p>
<b>Visibility</b>	<p>Select the required visibility option:</p> <ul style="list-style-type: none"> <li>• <b>Private.</b> 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: <b>private:&lt;name&gt;</b>.</li> </ul> <p>For each user name used when logging on to OMi, Service Health creates an associated filters file. When you log on to OMi by 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"> <li>• <b>Public.</b> 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: <b>public:&lt;name&gt;</b>.</li> </ul> <p><b>Note:</b> Visibility is displayed only to the administrator or to a user with the appropriate permissions.</p>

## Top View Component

Top View enables you to see the availability of your system components at a glance. The CIs in the component provide a visual representation of real-time IT performance metrics mapped to business applications, based on the hierarchy structure defined for each view. The connecting lines between the CIs define their relationships.



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 and HI details.

### 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 229](#).

## Learn More

This section includes:

- ["Interactive Map" below](#)
- ["Virtual Folders" below](#)

## Interactive Map

Top View presents an interactive map of the CIs that can be manipulated using the mouse, enabling you to focus on specific branches of the tree that are related to 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 CIs represent the branches of the tree. For detailed information about how to change the number of CI levels displayed in Top View, see the *OMi Administration Guide*.

## Virtual Folders

By default, the maximum number of displayed child CIs of a view root CI is 100. However, in large CI topologies, this number can be easily exceeded. In this case, the child CIs are evenly distributed into virtual folders so that not too many CIs are displayed at once, and therefore, any potential performance issues are avoided. Each virtual folder shows the number of contained CIs. After expanding it, you can view the contained CIs in three different layouts (hierarchical, circular, or organic).

**Note:** The maximum number of displayed child CIs of a view root CI before introducing the virtual folders can be defined in the Infrastructure Settings. For details, see the *OMi Administration Guide*.

## Tasks

This section includes:

- ["How to Customize Top View" on the next page](#)
- ["How to Select a View to Display a CI Topology" on the next page](#)
- ["How to Monitor the Status of CIs in a Topology" on the next page](#)
- ["How to Display CI Details" on the next page](#)
- ["How to Locate a CI" on page 173](#)
- ["How to Focus on a Particular Subtree" on page 173](#)
- ["How to View CIs in the Layer Layout" on page 173](#)

- ["How to Modify the Refresh Rate" on page 174](#)
- ["How to Enable the Dark Theme" on page 174](#)

## How to Customize Top View

You can customize various aspects of Top View such as the Top View layout, CI, KPI, or HI display options, the background image, and so on.

For details on customizing Top View, see the *OMi Administration Guide*.

## How to Select a View to Display a CI Topology

Selecting a view from the drop-down list of the Top View component or any of the wired components on the same page shows CIs in that view. The CI that you select in any of the wired components is automatically selected in other components. For example, if you select a CI in the View Explorer component, this CI is automatically selected and centered in the Top View component, and sub-branches are expanded if necessary.

**Note:** Top View enables you to zoom the displayed CI topology in and out by using the mouse wheel, pressing **Ctrl+Plus Sign** or **Ctrl+Minus Sign**, or by using the slider that you can access through the Options button. You can also move your displayed CI topology around by clicking and holding down the left mouse button. In addition, hovering over the Collapse icon creates a fading effect and helps you to see which elements will be collapsed, if you decide to do so.

## How to Monitor the Status of CIs in a Topology

You can quickly determine the status of CIs in a topology by checking icons and colors that indicate the CI health status. The view is automatically updated when the event status is changed or a new event is received, as well as when there is a change in the CI topology (for example, when a new CI is discovered).



**Note:** If you want a sound alert to be played when a CI in the view changes its status to critical (red), make sure the **Play sound notification** option that you can access through the Options button is switched on. This option is enabled by default, but you can disable it by switching it off.

## How to Display CI Details

By default, CIs are shown without their KPIs. To display KPI icons for CIs, click the **Options** button, and then switch the **Show KPIs** option on. You can also choose to show only the KPIs that have the

normal status. In this case, make sure you switch the **Show KPIs with normal status** option on.

KPIs are displayed with severity icons and colors based on their current statuses. To view a list of a CI's KPIs and their statuses, either click a KPI icon or open the CI context menu by hovering over the selected CI and clicking the **Open CI Context** button that appears on the right. In the latter case, for more details, open the display view by clicking the right arrow button. Go back by clicking the left arrow button or close the display view by clicking the **X** button.

To display HI information, click the **Options** button, and then switch the **Show Health Indicators** option on. Each CI that has HIs assigned has  displayed. To view HI details, click  or open the CI context menu. For more information about the data displayed, see ["Health Indicators Component" on page 148](#).

## How to Locate a CI

To search for a specific CI in Top View, type any part of a CI name in the Search bar. A list of all matching CIs in that view appears. Selecting a CI focuses on that CI and the branches are expanded if necessary.


## How to Focus on a Particular Subtree

If you want to focus only on a particular part of a CI topology, hover over the root of a subtree that you want to view closely, and then click the **Show subtree only** button that appears on the left. The selected subtree is displayed. If necessary, you can repeat this action to focus even further on the subtree.

To go one level up in the subtree, click the up arrow on the top left of the page. To leave the Show subtree only mode completely, click the **X** button on the top left of the page. The focus is kept on the last CI you selected.

You can also use the **Show subtree only** button in the CI context menu. For details, see ["CI Context Menu" on page 176](#).

## How to View CIs in the Layer Layout

To view CIs in the layer layout, select  **Layer** from the layout selector. After you select to view a CI topology in the layer layout, you can use most of the options that are available with the other three layouts in Top View (hierarchic, circular, or organic). However, because in the layer layout CIs are divided into functional layers (for example, Business Enablement, Infrastructure, or Software), you cannot use the options such as **Show subtree only** and **Expand to problem**.

By using the layer layout, you can see the direction of a CI relationship and the relationship type that links two CIs (visible straightaway if the **Show edge label** option is enabled, or by hovering over a CI relationship if this option is disabled).

For a better overview, each functional layer is color-coded according to the current worst operational status of a CI in that layer.

The order of layers and the number of CIs displayed in the layer layout can be customized through the Infrastructure Settings. For details, see the *OMi Administration Guide*.

## How to Modify the Refresh Rate

The default refresh rate for Top View is five 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 as follows:

1. From the ▼ **Component Menu** drop-down list, select **Preferences**. The Top View Preferences window opens.
2. Modify the refresh rate as needed, and then click **OK**.

## How to Enable the Dark Theme

To change the appearance of the Top View component and use the dark theme, follow these steps:

1. From the ▼ **Component Menu** drop-down list, select **Preferences**. The Top View Preferences window opens.
2. Select the **Use Dark Theme** check box, and then click **OK**.









## UI Descriptions


This section includes:

- ["Top View Toolbar" on the next page](#)
- ["CI Context Menu" on page 176](#)
- ["Keyboard shortcuts" on page 178](#)

## Top View Toolbar

The following options are available in the Top View toolbar:

UI Element	Description
<View Selector>	Select a view from the drop-down list (on the top left area of the toolbar) to display its CIs.
<Search Bar>	Click to expand, and then type a CI name to focus on that CI.
<Layout Selector>	<p>The hierarchic layout is the default. However, if you choose a different layout for the selected view, the layout preference is saved (every time you select this view, it is displayed in the layout that you chose last).</p> <p>Select one of the following layouts for viewing a CI topology:</p> <ul style="list-style-type: none"> <li>•  <b>Hierarchic Layout.</b> This is the default layout.</li> <li>•  <b>Circular Layout.</b></li> <li>•  <b>Organic Layout.</b> The organic layout may require more time to render large topologies compared to the other three layout types.</li> <li>•  <b>Layer Layout.</b> In this layout, CIs with multiple relationships are displayed only once, with no duplicates.</li> </ul> <p><b>Note:</b> If you choose the layer layout, you cannot use all the options that are available with the other three layouts (for example, <b>Show subtree only</b> and <b>Expand to problem</b>).</p>
	<p><b>Options.</b> Click to access all commonly performed operations when viewing essential applications and business processes:</p> <ul style="list-style-type: none"> <li>•  <b>RELOAD.</b> Click to restore the view to its original display.</li> <li>•  <b>ZOOM TO FIT.</b> Click to automatically resize the CI topology to fit the screen size.</li> <li>•  <b>EXPORT.</b> Click to export a CI topology as a graph. After you click this button, a new tab opens showing you the image. Right-click the image and save it to the desired location.</li> </ul> <p><b>Note:</b> The export format of the image is SVG for Firefox and Safari, and PNG for Internet Explorer.</p> <ul style="list-style-type: none"> <li>• <b>ZOOM.</b> Use the slider to increase or decrease the CI topology display size.</li> </ul>





	<ul style="list-style-type: none"><li>• <b>DISPLAY OPTIONS.</b><ul style="list-style-type: none"><li>◦ <b>Show KPIs.</b> Use the switch to show or hide KPI icons on CIs. To view a list of CI's KPIs and their statuses, either click the KPI icon or select <b>Open CI Context &gt; KPIs</b> on a CI.<ul style="list-style-type: none"><li>• <b>Show KPIs with normal status.</b> Use the switch to show or hide KPIs that have the normal status.</li></ul></li><li>◦ <b>Show Health Indicators.</b> Use the switch to show or hide Health Indicator icons on CIs. To view HI details, either click  or select <b>Open CI Context &gt; Show HIs</b> on a CI.</li><li>◦ <b>Play sound notification.</b> Use the switch to turn the sound notification option on or off. If this option is turned on, a sound alert is played when a CI in the view changes its status to critical (red).</li><li>◦ <b>Show edge label.</b> <i>Available only with the layer layout.</i> Use the switch to show or hide the names of the relationships that link CIs in a CI topology.</li><li>◦ <b>Show multiline labels.</b> Use the switch to enable or disable the display of multiple lines for CIs with long names.</li></ul></li></ul>
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## CI Context Menu

To open the CI context menu, either right-click the selected CI, or hover over the selected CI and then click the **Open CI Context** button that appears on the right. In the CI context menu, you can choose among the following sections:



- Button actions:

UI Element	Description
	<b>Show subtree only.</b> Click to focus only on a particular part of a CI topology.
	<b>Show Path to Root.</b> Click to display the path from the selected CI to the view root CI.  <b>Note:</b> To view the path from the selected CI to the view root CI in a separate window, press and hold the <b>Ctrl</b> button and click the <b>Show Path to Root</b> button. Alternatively, you can right-click the selected CI, and then select <b>Show &gt; Path to Root</b> .
	<b>Show Problematic Subtree.</b> Click to display all child CIs of a problematic CI that have the Critical or Major status. This helps you to quickly locate a problematic child CI that caused the selected parent CI to have a status other than OK. If you want to see a problematic path in isolation, you can use the <b>Show subtree only</b> button.  <b>Note:</b> To view all child CIs of a problematic CI that have the Critical or Major status in a separate window, press and hold the <b>Ctrl</b> button and click the <b>Show Problematic Subtree</b> button. Alternatively, you can right-click the problematic CI, and then select <b>Show &gt; Problematic Subtree</b> .
	<b>Expand to problem.</b> Click to expand the CI topology display to show the source of a problematic CI (available only for CIs that have a status other than OK).

**Note:** To leave any of these modes, click the **X** button on the top left of the page.

- **Event Information**

Displays a list of events in the Event Browser.

- **KPIs**

Shows a list of KPIs and their statuses.

- **Show HIs**

Shows HI information such as the state, the value, and the last status change.

- **ACTIONS**

Select the action you want to execute or the tool you want to launch.

**Note:** To list all available actions, you can also right-click the selected CI.

## Keyboard shortcuts

You can use the following keyboard shortcuts in Top View:

Keyboard shortcut	Description
Arrow keys (up, down, right, left)	Move from one CI to another.
Enter	Select the CI that is currently focused.
Shift+C	Center the Top View focus on the selected CI.
Plus Sign or Minus Sign (Not available in the layer layout.)	Expand or collapse the selected CI.
Spacebar (Not available in the layer layout.)	Expand or collapse the selected CI.
Ctrl+Plus Sign or Ctrl+Minus Sign	Increase or decrease the CI display size.
Ctrl+0	Zoom to fit (that is, resize the CI topology to fit the screen size).
Ctrl+Shift+Plus Sign or Ctrl+Shift+Minus Sign	Zoom in or out completely.
Esc	Exit a view mode (for example, Problematic Subtree), close the CI context menu, or close the Options menu.
Shift+V	Focus on the view selector and expand the View drop-down list.
Shift+F	Focus on the Search bar.
Shift+L	Change the layout for viewing a CI topology.
Ctrl+Shift+M	Open the Options menu.
Shift+R (Not available in the layer layout.)	Focus on the root CI.
Application key	Open the CI context menu.
F3	Show the next search result.
Shift+F3	Show the previous search result.

**Note:** You can also search for a CI by typing its name anywhere in the Top View page. The Search bar becomes active automatically.

## View Explorer Component

The View Explorer component displays a list of views and CIs that are contained in the selected view.

The interaction between the View Explorer component and the information presented in other components on a page varies according to the context. For example, when you select one or more CIs in the CI tree, a filter is automatically applied to the Event Browser so that only events that are related to the selected CIs are displayed. The selected view also limits the events displayed to those related to the CIs contained in the view.

Some components such as Top View have built-in view selectors, 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 that 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 229](#).

## Learn More

This section includes:

- ["CI Context Menu" below](#)
- ["Unavailable Views and CIs " below](#)

### CI Context Menu

You can perform actions for the CI from the CI context menu. To open the CI context menu, either right-click the CI, or hover over the CI, and then click the  button.

### Unavailable Views and CIs

The view selector in the View Explorer component may not display all views from 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, navigate to:  
**Administration > Users > Users, Groups, and Roles**
- 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 the *Modeling Guide*.

## Tasks


This section includes:

- ["How to Select a View" below](#)
- ["How to Search for CIs in a View" on the next page](#)
- ["How to Display CI Statuses" on the next page](#)
- ["How to Enable the Dark Theme" on the next page](#)
- ["How to Update the View Explorer" on the next page](#)
- ["How to Change the Automatic Refresh Rate" on page 182](#)

### How to Select a View


In the View Explorer pane, select a view from the drop-down list (on the top left area of the toolbar) to display CIs contained in the view. Entering a character in the view selector field highlights the first matching view name.

**Note:** If you enable the option **Display CI statuses instead of icons**, the view is automatically updated when the CI status is changed (for example, when a new event changing the KPI status is received), as well as when there is a change in the CI topology (for example, when a new CI is discovered).

To reload the view list from the cache, click the  button that you can access through the **Options** button on the top right area of the toolbar.

## How to Search for CIs in a View

To search for a specific CI in the CI tree, type any part of the CI name in the Search bar. A list of all matching CIs in that view appears. Selecting the desired CI in the search bar focuses on that CI and the branches are expanded if necessary.

You can collapse all CIs in a view by clicking the  button that you can access either by hovering over the root CI or through the **Options** button on the top right area of the toolbar.

## How to Display CI Statuses


If you want the CI statuses held by KPIs to be displayed instead of the icons, follow these steps:

1. Select  **Options**.
2. Enable **Display CI statuses instead of icons**, and then click  **Close**.

## How to Enable the Dark Theme

You cannot change your preferences of this component in the pages that are delivered out-of-the-box. To edit them, create your own pages and include this component.

To change the appearance of the View Explorer component and use the dark theme, follow these steps:

1. From the  **Component Menu** drop-down list, select **Preferences**. The View Explorer Preferences window opens.
2. Select the **Use Dark Theme** check box, and then click **OK**.

## How to Update 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. If a requested view is not in the cache, the view is loaded from the RTSM.

## How to Change the Automatic Refresh Rate

By default, the View Explorer component is automatically refreshed every 5 seconds. The refresh requests are sent serially – if one refresh request is in progress, another one will not be sent until the former is finished.

You can change the default refresh rate in the Infrastructure Settings:

### Administration > Setup and Maintenance > Infrastructure Settings

Select **Application > Service Health Application**, then scroll down to the Top View Properties. You can change the settings **Top View independent refresh** and **Top View independent refresh rate** to modify the View Explorer component's default behavior. Note that changing these settings will also change the refresh rate of the Top View component.

## UI Reference

### Keyboard shortcuts

You can use the following keyboard shortcuts in View Explorer:

Keyboard shortcut	Description
Up Arrow	Moves the focus to the previous CI that is visible in the CI tree.
Down Arrow	Moves the focus to the next CI that is visible in the CI tree.
Left Arrow	Collapses the focused CI if it is expanded. Otherwise, moves the focus to the parent CI.
Right Arrow	Expands the focused CI if it is collapsed. Otherwise, moves the focus to the first child CI.
Page Up	Moves the focus to the nth previous CI that is visible in the CI tree. In this instance, n is the number of CIs that are visible on the screen.
Page Down	Moves the focus to the nth next CI that is visible in the CI tree. In this instance, n is the number of CIs that are visible on the screen.
Home	Moves the focus to the first CI that is visible in the CI tree.

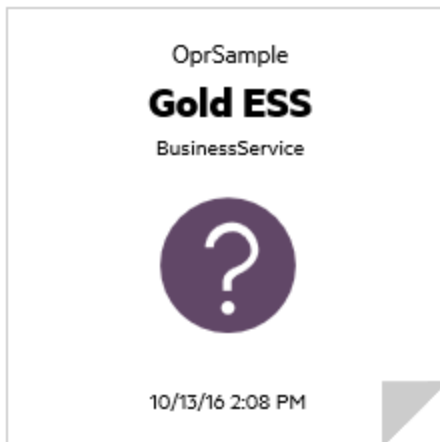
Keyboard shortcut	Description
End	Moves the focus to the last CI that is visible in the CI tree.
* (asterisk)	Expands all CIs that are under the focused CI.
/ (slash mark)	Collapses all CIs that are under the focused CI.
+ (plus sign)	Expands the focused CI.
– (minus sign)	Collapses the focused CI.
Spacebar	Toggles the selection of the focused CI.
Enter	Selects only the focused CI and leaves all other CIs unselected.
Ctrl	Preserves the selection made. This means that by holding down this key and using the arrow keys at the same time, the original selection does not change even though the focused CI changes. To change the selection, Spacebar or Enter must be used.
Shift	Selects a range of CIs. This means that by holding down this key and using the arrow keys at the same time, the range of CIs can be selected from the CI that is selected first.

## 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 229](#).

## 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.

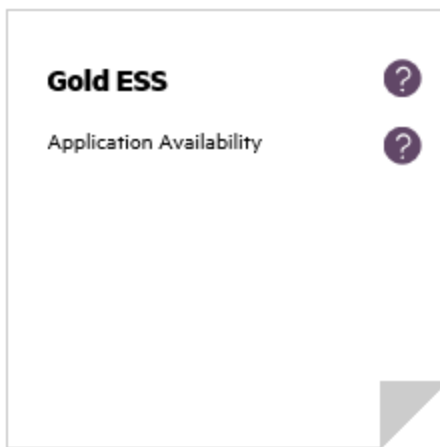


## List of Associated KPIs

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 data for the KPI.

If there are five or more KPIs without a status of OK, there is a **More** link which opens a pop-up 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 Top View in one pane and Watch List in a different pane, you can click on a CI in Top View 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, Top View), 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:**




- 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
	<b>Edit Watch List.</b> Opens Edit mode so that you can add or remove CIs from the Watch List.
	<b>Open in a New Window.</b> 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
	<b>Add CIs to Watch List.</b> Adds the selected CIs to the right pane.
	<b>Cancel all changes since last save.</b> Deletes all changes that you made since you opened Edit mode.
	<b>Save changes and open Watch List in View Mode.</b> 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 Dashboards. 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:

- ["Event-Related Actions" below](#)
- ["Custom Actions" on the next page](#)

### Event-Related Actions

Events 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 \(HTML\)" on page 103](#).

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:**

Selecting multiple events in the Event Browser disables the Actions pane.

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.

**Note:** Only the attributes that can be edited in the Event Browser can be changed by the custom action scripts.

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 Event-Related Action" on the next page](#)
- ["How to Launch a Custom Action" on page 191](#)

### 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 Event-Related Action" below](#))
-  — Custom Actions (see also ["How to Launch a Custom Action" on the next page](#))
-  — Performance Dashboards (see also ["Performance Perspective" on page 273](#))
-  — Run Books (see also [Launching Operations Orchestration Run Books](#))
-  — Tools (see also ["Tools" on page 197](#))
-  — User action (see also ["How to Run an Event-Related Action" below](#))

**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 Event-Related 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
<b>CI</b>	CI related to the selected event.
<b>Clear</b>	Removes the currently applied search string and displays all applicable actions for the selected CI.
<b>Event</b>	Title of the event that provides a brief summary of the event.
<b>Filter</b>	Used to reduce the number of actions displayed in the Actions pane by showing only those applicable to CIs or Nodes.  <b>All</b> — Shows all applicable actions for the selected event.

UI Element (A-Z)	Description
	<b>CI</b> — Shows actions that can be run on the CI related to the selected event. <b>Node</b> — Shows actions that can be run on the Node related to the selected event. <b>Source CI</b> — Shows all actions that can be run on the source CI of the received event.
<b>Node</b>	Host name to which the event is related.
<b>Search</b>	Used to reduce the number of actions displayed in the Actions pane by showing only those that match the entered search string.

## Tips and Troubleshooting

### How to Recover the Confirmation Dialog Box

When you run a custom action or a user action, or when an automatic action starts, a dialog box displays asking you for confirmation. This dialog box can be avoided by selecting the **Don't show this dialog again** check box. To recover the confirmation dialog box, you must clear your browser's local storage.

## Chapter 8: CI Explorer

The Configuration Item (CI) Explorer component displays a list of CIs based on their CI type. This component is used for browsing CIs and is especially useful when browsing through CIs that belong to different views. It enables you to search directly for the CIs without switching between these views. By default, CI Explorer lists all CIs related to the Node CI type, but you can select any other CI type for the search to be performed.

The interaction between the CI Explorer and the information presented in other components on a page varies according to the context. For example, when you select one or more CIs from the list, a filter is automatically applied to other components which display the specific data related only to the selected CIs. You can then use this data to compare multiple CIs.



To access


- **Workspaces > Operations Console > <select a perspective>**
- You can also create your own pages and include this component. For details, see ["How to Set Up My Workspace" on page 229](#).

## Learn More

This section includes:

- ["Multiple selection" below](#)
- ["Permissions" below](#)

### Multiple selection

You can select multiple CIs, which is useful, for example, for comparing CIs. You can do this by clicking  **Multiple selection**, which divides the pane into SELECTED CIS and AVAILABLE CIS parts. When you select a CI from the AVAILABLE CIS list, it is automatically displayed in the SELECTED CIS part. Meanwhile, you can change the CI type in the Options panel and continue with adding new selected CIs from this type to the already existing selected CIs. To deselect a CI, just click on it in any of the lists.

### Permissions

To browse through CIs by using CI Explorer, the user must have the appropriate permissions. To set permissions:

1. Navigate to:  
**Administration > Users > Users, Groups, and Roles**
2. Select **Manage Roles** in the Roles frame.
3. Open the Role Editor for the desired role, and then expand the RTSM>RTSM CIs permissions.
4. Select the **Browse CIs** check box to set the permissions for this role.

## Tasks

This section includes:


- ["How to Search for CIs" below](#)
- ["How to Select a CI Type" below](#)
- ["How to Enable the Dark Theme" below](#)

### How to Search for CIs


You can search for CIs in one of the following ways:

- By listing the CIs of a CI type that is selected in the Options panel (or the Node CI type, by default)  
The displayed list shows 100 CIs, and there is a link to the next 100 CIs that belong to the selected type at the bottom of the page.
- By typing in the Search field a desired CI or any keyword that occurs in the CI name for which you are searching for.  
All of the CIs that match or contain the typed text pattern are displayed.

### How to Select a CI Type

You can search for CIs from any of the CI types in the CI type tree. To select a CI type, click  **Options** to open the Options panel and then perform one of the following:

- Select the desired CI type from the CI type tree in the Options panel.
- In the Search field, type a CI type name. You can type any keyword that occurs in the CI type name and then select the desired CI type from the list of all matching CI types that is displayed. The CIs of the selected type and its descendants are listed in the CI Explorer.

To close the Options panel, click outside it in the CI Explorer area or click  **Close** button.

### How to Enable the Dark Theme

To change the appearance of the CI Explorer component and use the dark theme, follow these steps:

1. From the ▼ **Component Menu** drop-down list, select **Preferences**. The CI Explorer Preferences window opens.
2. Select the **Use Dark Theme** check box, and then click **OK**.

## UI Reference

### Keyboard shortcuts

You can use the following keyboard shortcuts in CI Explorer:

Keyboard shortcut	Description
Up Arrow	Moves the focus to the previous CI that is visible in the list.
Down Arrow	Moves the focus to the next CI that is visible in the list.
Home	Moves the focus to the first CI that is visible in the list.
End	Moves the focus to the last CI that is visible in the list.
Spacebar	Toggles the selection of the focused CI.
Enter	Selects only the focused CI and leaves all other CIs unselected.

You can use the following keyboard shortcuts in the CI type tree that is available in the Options panel :

Keyboard shortcut	Description
Up Arrow	Moves the focus to the previous CI type that is visible in the CI type tree.
Down Arrow	Moves the focus to the next CI type that is visible in the CI type tree.
Left Arrow	Collapses the focused CI type if it is expanded. Otherwise, moves the focus to the parent CI type.
Right Arrow	Expands the focused CI type if it is collapsed. Otherwise, moves the focus to the first child CI type.
Page Up	Moves the focus to the nth previous CI type that is visible in the CI type tree. In this instance, n is the number of CI types that are visible on the screen.

Keyboard shortcut	Description
Page Down	Moves the focus to the nth next CI type that is visible in the CI type tree. In this instance, n is the number of CI types that are visible on the screen.
Home	Moves the focus to the first CI type that is visible in the CI type tree.
End	Moves the focus to the last CI type that is visible in the CI type tree.
* (asterisk)	Expands all CI types that are under the focused CI type.
/ (slash mark)	Collapses all CI types that are under the focused CI type.
+ (plus sign)	Expands the focused CI type.
– (minus sign)	Collapses the focused CI type.
Spacebar	Toggles the selection of the focused CI type.
Enter	Selects only the focused CI type and leaves all other CI types unselected.
Ctrl	Preserves the selection made. This means that by holding down this key and using the arrow keys at the same time, the original selection does not change even though the focused CI type changes. To change the selection, Spacebar or Enter must be used.
Shift	Selects a range of CI types. This means that by holding down this key and using the arrow keys at the same time, the range of CI types can be selected from the CI type that is selected first.

## Chapter 9: Tools

You can specify tools, for example, to ping a system. These tools are launched from events, from configuration items (CIs), or from the Actions pane and run on the associated CI or node. Tools are designed to help users solve common problems quickly and efficiently.

The available tools are displayed in the context menu of events, the Run Tool wizard, or the Actions pane. The selection of tools a particular user sees depends on the tools that are available for the CI affected by a particular event.

For more information about using the Tools manager to configure tools, see the *OMi Administration Guide*.

## Learn More

This section includes:

- ["Tools and CI Types" below](#)
- ["Launching a Tool on Multiple CIs or Nodes" on the next page](#)

### Tools and CI Types

Tools are associated with a particular CI type, for example, Node or Net Device. When you run a tool, you run it from one or more events associated with CIs of the types for which the tool is specified. (You can also run a tool directly on one or more CIs.)

The name of the CI associated with the event is displayed in parentheses alongside the tool in the tools list:

- **(CI)**—impaired CI where the event occurred.
- **(Node)**—host system where the event occurred.
- **(Source CI)**—host system where the monitoring agent or probe is running.

The selected tool runs on the CI of your choice. If required, the tool also retrieves any runtime parameters from the CI. For example, the tool Ping (Node) runs on the node where the event occurred and also retrieves runtime parameters from the node.

## Launching a Tool on Multiple CIs or Nodes

In the context of a single event, available tools are displayed in the **Launch > Tools > <tools>** context menu and the Actions pane. Selecting a tool starts the Run Tool wizard, which you use to launch the tool and to evaluate the tool results. The tool is run on the target defined in the tool, for example the related node CI of the selected event. You can also launch a tool in the context of a single CI by selecting it in the View Explorer and clicking **Launch Tool** in the context menu.

To launch a tool on multiple CIs or nodes in parallel, select the events in the Event Browser or the CIs in the View Explorer. You can select multiple items by holding down the **Ctrl** or **Shift** key while selecting them. Clicking the **Launch > Tool** context menu opens the Run Tool wizard in which you select the tool, launch it, and view its results.

### Note:

When you launch a tool on multiple events or CIs, OMi shows only those tools that are associated with a CI type common to all selected events or CIs.

URL tools can only be launched on a single CI or event. They are excluded from the list of available tools when multiple CIs or events are selected.

## Tasks

### How to Launch a Tool

In this task, you learn how to launch a tool that is configured for a particular CI type. Tools are displayed in the context menus.

**Note:** Tools, custom actions, performance dashboards, 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 CI type with the tool you want to start.
3. To open the Run Tool wizard, make one of the following selections:

- Right-click an event in the Event Browser and select a tool in the Actions pane. For details on the Actions pane, see ["Actions" on page 188](#).

- Right-click an event in the Event Browser and select:

**Launch > Tools > <select a tool>**

- Select and right-click multiple events in the Event Browser and select:

**Launch > Tool**

- Right-click one or more CIs in the View Explorer and select:

**Launch Tool**

The Run Tool wizard opens.

4. If you opened the Run Tool wizard in the context of multiple events or CIs, select the tool you want to launch in the **Select Tool** page.

**Tip:** Enter the tool name or part of the tool name in the **Search** field to reduce the list of displayed tools. Similarly, select **CI**, **Node**, or **Source CI** to limit the list of displayed tools to those that apply to the related CI or the host node.

If the tool does not require additional information, you can launch the tool directly from the **Select Tool** page by clicking the **Run Tool** button.

If the tool requires any additional information, for example to resolve parameters, click **Next** and type the required information in the **Specify Parameters** page.

5. To run the selected tool, click **Run Tool** in the **Preview** page.

For scripts and executable commands, the **Execution Result** page opens and displays the output of the tool execution.

For URL launches, the target is opened in a browser.

Additional options in the **Execution Result** page include:

- Click the **Stop Tool** button to stop the execution of the tool. All processes initiated by the tool are stopped.
- Use the **Rerun Tool** button to run the tool again if the first execution failed, did not yield the desired results, or was stopped.
- Click the **Word Wrap** button to make sure that all output text is displayed within the output pane.
- If the **Execution Result** page contains multiple execution results, you can sort and filter the

results for better handling. To sort the results, click the **Hostname** or **Status** columns. To filter the results by status, click the status link to the right of the status icon.

6. *Optional.* Copy the execution results to the clipboard for further investigation or archiving. The results are deleted once the Run Tool wizard is closed.

For scripts and executable commands, after the tool is run, click **Close**.

## Troubleshooting and Limitations

This section provides help for 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 CI or the CI associated with the selected event.
- The selected event does not contain Related CI, Node, or Source CI information.

### Tool does not run

- The tool depends on external resources such as network or Internet connectivity that are not currently available.

### Tool error: Cannot open file for temporary use

- The following error indicates that two or more tools of the type script are launched in parallel on the same host:

```
Open(2) failed; cannot open file for temporary use
```

**Problem:** When a script tool is launched, it first stores the execution information in a temporary file on the host. When two or more script tools are launched in parallel, they all try to access the same temporary file, which results in the above error for some of the tools.

**Workaround:** Launch script tools sequentially, not in parallel.



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

### 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 151](#).

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 the *Modeling Guide*.

## Part II: 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 229](#). 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 208](#).

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 235](#).

- **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 229](#).

- **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 237](#).

- **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 232](#).


## 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 229](#).

## 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 229](#).

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 208](#).

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 231](#).

Page	Description
<b>Dashboards</b>	
<b>360° View</b>	Displays comprehensive data about a selected CI in one central location. The 360°

Page	Description
	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 <a href="#">"360° View" on page 256</a> .
<b>KPI Over Time</b>	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 <a href="#">"KPI Over Time Dashboard" on page 257</a> .
<b>Monitoring Dashboard</b>	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 <a href="#">"Monitoring Dashboard" on page 244</a> .
<b>ROI Dashboard</b>	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 <a href="#">"Return On Investment Dashboard" on page 263</a> .
<b>Operations Console</b>	
<b>Discover OMi</b>	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.
<b>Event Perspective</b>	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 <a href="#">"Event Perspective" on page 270</a> .
<b>Health Perspective</b>	<p>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.</p> <p>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 <a href="#">"Health Perspective" on page 271</a>.</p>

Page	Description
<b>Performance Perspective</b>	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 <a href="#">"Performance Perspective" on page 273</a> .

## 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 218](#).

**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 211](#)
- ["Service Health" on page 211](#)
- ["SiteScope" on page 212](#)

### Event Management

Component Name	Description
<b>Actions</b>	Displays a list of the Actions (Tools, Run Books, Custom Actions, and Performance Dashboards) applicable to a selected event, its related CI, or the node that hosts the CI. For details, see <a href="#">"Actions" on page 188</a> .
<b>Event Browser</b>	Displays a summary of all the events that have occurred in the operating environment you are monitoring. For details, see <a href="#">"Event Perspective" on page 270</a> .
<b>Event Browser with Details</b>	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 <a href="#">"Event Perspective" on page 270</a> .
<b>Event Details</b>	Displays detailed information about the selected event in a dedicated pane below the Event Browser or as a popup window. For details, see <a href="#">"Event Perspective" on page 270</a> .



Component Name	Description
<b>Event Browser (HTML)</b>	Displays a summary of all active events that have occurred in the operating environment you are monitoring. For details, see <a href="#">"Event Browser (HTML)" on page 103</a> .
<b>Monitoring Dashboard</b>	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 <a href="#">"Monitoring Dashboard" on page 244</a> .
<b>ROI Dashboard</b>	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 <a href="#">"Return On Investment Dashboard" on page 263</a> .

## General

Component Name	Description
<b>Discover OMi</b>	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.
<b>CI Explorer</b>	Enables you to search for CIs based on their CI type. This component is used for browsing CIs and is especially useful when browsing through CIs that belong to different views. It enables you to search directly for the CIs without switching between these views. For more information, see <a href="#">"CI Explorer" on page 192</a> .

## 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) (<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 235](#).

Component Name	Description
<b>Layer 2 Neighbor View</b>	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.
<b>Layer 3 Neighbor View</b>	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.
<b>MPLS VPN Inventory</b>	This is an enterprise customer view of how their sites are connected via service provided MPLS networks.
<b>Open Key Incidents</b>	Shows the incidents that are most important to network operators, and that often require more immediate action.
<b>Overall Network Health (Node Group Overview)</b>	Displays a map containing all (top-level) Node Groups that do not have parent Node Groups.
<b>Overall Network Health - Routers</b>	Displays a Node Group Map of the Router connectivity in your network.
<b>Overall Network Health - Switches</b>	Displays a Node Group map of the Switches connectivity in your network.
<b>Router Redundancy Groups Inventory</b>	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
<b>Performance Dashboards</b>	Displays the Performance pane from which you can create and customize performance dashboards. For details, see <a href="#">"Performance Perspective" on page 273</a> .

## Service Health

Component Name	Description
<b>Business Impact</b>	Displays business CIs and SLAs that are impacted by the selected CI. For details, see <a href="#">Business Impact Component</a> .
<b>Changes and Incidents</b>	Displays the incidents opened for the selected CI, as well as planned changes and actual changes made to the CI. For details, see <a href="#">"Changes and Incidents Component" on page 134</a> .
<b>Custom Image</b>	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 <a href="#">"Custom Image component" on page 139</a> .
<b>Geographical Map</b>	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 <a href="#">"Geographical Map Component" on page 140</a> .
<b>Health Indicators</b>	Displays details regarding the health indicators that are used to calculate and set the current status of a selected CI. For details, see <a href="#">"Health Indicators Component" on page 148</a> .
<b>Health Top View</b>	Displays the topological view of the CIs affected by the event selected in the Event Browser pane or the topological neighborhood of the CI selected in any of the wired components on the same page. For details, see <a href="#">"Health Top View Component" on page 151</a> .
<b>Hierarchy</b>	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 <a href="#">"Hierarchy Component" on page 157</a> .
<b>KPI Over Time</b>	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

Component Name	Description
	monitored environment at a glance. For details, see <a href="#">"KPI Over Time Dashboard" on page 257</a> and <a href="#">"Working with the KPI Over Time Dashboard as a Component" on page 260</a> .
<b>Top View</b>	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 <a href="#">"Top View Component" on page 170</a> .
<b>View Explorer</b>	Displays a list of views and their CI hierarchies. The component enables you to select a view and browse through its CI hierarchy, or to search for a CI in the selected view. For details, see <a href="#">"View Explorer Component" on page 179</a> .
<b>Watch List</b>	Displays a high-level health overview of important CIs, from multiple views. For details, see <a href="#">"Watch List Component" on page 183</a> .

## SiteScope

Component Name	Description
<b>SiteScope Multi-View</b>	Displays availability and status information of SiteScope objects that belong to different hierarchical levels in a single view. For details, see the <i>Using SiteScope Guide</i> .

## My Workspace User Interface

This section includes:

- ["My Workspace" on the next page](#)
- ["Page Gallery Dialog Box" on page 216](#)
- ["Component Gallery Dialog Box" on page 218](#)
- ["New/Edit Component Dialog Box" on page 220](#)
- ["Wiring Dialog Box" on page 227](#)

## 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 208](#).

To access

### Workspaces > My Workspace

**Note:** After logging into OMi, users are automatically redirected to their personal My Workspace page.


- **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 229](#).








## 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>	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.  If you start typing a page name in this box, the list includes only those pages whose name starts with the typed letters.
	<b>Refresh.</b> Refresh the page.

UI Element	Description
	<p><b>Save or Save As.</b> 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><b>Page Gallery.</b> 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 <a href="#">"Page Gallery Dialog Box" on page 216</a>.</p>
	<p><b>New Page.</b> 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 <a href="#">"How to Set Up My Workspace" on page 229</a>.</p>
	<p><b>Edit Page Layout.</b> 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><b>Exit Editing.</b> When you are done, click this button to stop editing.</p>
	<p><b>Components.</b> 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 <a href="#">"Component Gallery Dialog Box" on page 218</a>.</p>
	<p><b>Page Wiring.</b> Define the wiring between components, which determines how components interact with one another. For user interface details, see <a href="#">"Wiring Dialog Box" on page 227</a>.</p>
	<p><b>Start Slideshow/Stop Slideshow.</b> 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 <b>not</b> 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
<b>Layout Tools</b>	
	<b>Remove Layout.</b> Remove a layout from the page.
	<b>Add Component.</b> Open the Component Gallery. You can then double-click a component to place it in the layout area. For user interface details, see " <a href="#">Component Gallery Dialog Box</a> " on page 218.
	<b>Split.</b> Divide a vertical layout into two layouts, one above the other.
	<b>Split.</b> Divide a horizontal layout into two layouts, side by side.
	<b>Switch to Horizontal.</b> Change the layout from vertical or tabbed to horizontal. Components placed in this area will be added side by side.
	<b>Switch to Vertical.</b> Change the layout from horizontal or tabbed to vertical. Components placed in this area will be added one above the other.
	<b>Switch to Tabs.</b> Change the layout from vertical or horizontal, to a tab layout. Components placed in this area will be added as tabs.
<b>Layout Icons</b>	
	<b>&lt;Horizontal layout&gt;.</b> 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.
	<b>&lt;Vertical layout&gt;.</b> 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.
	<b>&lt;Tabbed layout&gt;.</b> 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"> <li>• <b>Preferences.</b> Enables you to rename a component, and customize refresh rates.</li> <li>• <b>Wiring.</b> Enables you to customize how this component interacts with the other components on the page. For details, see <a href="#">"Wiring Dialog Box" on page 227</a>.</li> <li>• <b>Refresh.</b> Manually refresh the component.</li> <li>• <b>Help.</b> Access help on the component.</li> </ul> <p><b>Note:</b></p> <ul style="list-style-type: none"> <li>• Depending on the component, some of these options may not be available.</li> <li>• 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.</li> </ul>
	<p><b>Configure Component.</b> Define filtering for the component, when a component supports internal filtering.</p>
	<p>Display the component in a separate popup window.</p> <p><b>Note:</b> The popup window that opens does not support wiring.</p>
»	Restore a collapsed component.
«	Temporarily collapse a component.
×	<p>In a vertical or horizontal layout, closes a component and removes it from the page.</p> <p>In a tabbed layout each tab has a button which closes the tab; the main close button removes the layout.</p>

## 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

**Workspaces > My Workspace**






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 229.](#)

## Learn More





### Categories (left side)

User interface elements are described below:

UI Element	Description
	<b>New Category.</b> Create a new category. You can then assign pages to this category. For details see <a href="#">"How to Modify Page and Component Categories" on page 239.</a>
	<b>Edit Category Name.</b> Select a user-defined category and click to rename (default categories cannot be renamed).
	<b>Delete Category.</b> Select a user-defined category and click to delete (default categories cannot be deleted).
<b>Categories</b>	<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"><li>• A number following the category name shows how many pages are in the category.</li><li>• A lock icon following the category name shows that the category is a default category, and cannot be renamed or deleted.</li></ul> <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
	<b>Open Page.</b> Select a page and click to open it in My Workspace.
	<b>Categorize Page.</b> Select a page and click to assign it to a category.
	<p><b>Clone Page.</b> 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>
	<b>Delete Page.</b> Select a page and click to delete it from the gallery.
<b>Pages</b>	<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>
<b>Search box</b>	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

### Workspaces > My Workspace




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 208](#).
- **Relevant Tasks:** ["How to Set Up My Workspace" on page 229](#).

## Learn More


### Categories (left side)




User interface elements are described below:

UI Element	Description
	<b>New Category.</b> Create a new category. You can then assign components to this category. For details see <a href="#">"How to Modify Page and Component Categories" on page 239</a> .
	<b>Edit Category Name.</b> Select a user-defined category and click to rename (default categories cannot be renamed).
	<b>Delete Category.</b> Select a user-defined category and click to delete (default categories cannot be deleted).
<b>Categories</b>	<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"><li>• A number following the category name shows how many components are in the category.</li><li>• A lock icon following the category name shows that the category is a default category, and cannot be renamed or deleted.</li></ul> <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
	<b>Add External Component.</b> Add a new component based on a URL.  This opens a dialog box where you define the new component. For details, see <a href="#">"New/Edit Component Dialog Box" on the next page</a> .  You can add any URL as a component.

UI Element	Description
	<b>Edit Component Properties.</b> Select an external component and click this button to edit the component's definitions. For details, see <a href="#">"New/Edit Component Dialog Box" below</a> .
	<b>Categorize Component.</b> Select a component and click this button to assign it to a category.
	<b>Delete Component.</b> Select a component and click this button to delete it from the gallery.
<b>Components</b>	This shows the default components available for display in My Workspace, as well as external components that you have added.  Select a component and use the toolbar to edit component definitions, or drag the component onto the page.
<b>Search box</b>	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

### Workspaces > My Workspace

Access the Component Gallery and click **Add External Component**, or select an external component and click **Edit Component Properties**.

- **Important Information:** URLs for external components must begin with one of the following: `https://`, `http://`, or `ftp://`. If a URL is saved with a different prefix, the OMi session will hang.

- **Relevant Tasks:** ["How to Set Up My Workspace" on page 229](#)

**See Also:** ["How to Create a Component Using a Dynamic URL – Use-Case Scenario" on page 236](#)

## Learn More

### Upper pane

User interface elements are described below:

UI Element	Description
<b>Name</b>	Enter the name you want to assign to the component.
<b>URL</b>	<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 hpe in Google.com uses the following format: <code>http://www.google.com/search?q=hpe</code></p> <p>The static part of this URL is the section before the question mark: <code>http://www.google.com/search</code></p>
<b>Description</b>	Enter a description of the component.
<b>Display last update label</b>	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><b>Add Context.</b> 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><b>Remove.</b> 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><b>New Parameter.</b> 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: https://domain/ &lt;path&gt; ? &lt;query_string&gt; # &lt;fragment&gt;.</p> <p>For example, to create a dynamic URL based on <code>http://www.google.com/search?q=hpe</code> add a URL parameter named <code>q</code>.</p>
	<p><b>Remove.</b> Select a URL parameter and click this button to remove it from the list.</p>
<b>Attributes</b>	<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>&lt;&lt;ciId&gt;&gt;</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 <b>Value</b> area of the parameter.</p>
<b>URL Parameter and Value</b>	<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 <b>Attributes</b> area to the <b>Value</b> area of the parameter.</p> <p>To edit a parameter name or value, click the parameter or value itself and edit its contents.</p>

UI Element	Description
<b>URL Parameters</b>	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.

## Attributes per wiring context

Based on the wiring context, different attributes are available to build the URL pattern.

Wiring Context	Attributes
<b>CIChange</b>	<p>The CIChange attributes are based on the properties of a CI. Not all properties (and not all attributes) are applicable to every CI type. To find out which of your CIs have which properties, open the IT Universe Manager and access the New CI dialog box. Once you select a CI type, the possible (and partly predefined) properties are listed.</p> <p>&lt;&lt;ack_cleared_time&gt;&gt; — The time when the acknowledgment history of a CI is cleared.</p> <p>&lt;&lt;ack_id&gt;&gt; — The location of the acknowledgment ID.</p> <p>&lt;&lt;ack_update_time&gt;&gt; — The time when an acknowledged CI was last updated.</p> <p>&lt;&lt;ciId&gt;&gt; — The ID of an CI.</p> <p>&lt;&lt;city&gt;&gt;</p> <p>&lt;&lt;classification&gt;&gt; — A CI's classification property. For example, a CI of the CI type Computer has the classification infrastructure.</p> <p>&lt;&lt;cmdbId&gt;&gt; — The location of the RTSM object ID.</p> <p>&lt;&lt;contextmenu&gt;&gt; — The context menu(s) of a CI.</p> <p>&lt;&lt;country&gt;&gt;</p> <p>&lt;&lt;description&gt;&gt; — The description of a CI.</p> <p>&lt;&lt;digest&gt;&gt;</p> <p>&lt;&lt;display_label&gt;&gt; — The label that appears for a CI in the topology map.</p> <p>&lt;&lt;document_list&gt;&gt;</p> <p>&lt;&lt;global_id&gt;&gt; — The global ID of a CI.</p> <p>&lt;&lt;is_save_persistency&gt;&gt;</p>

Wiring Context	Attributes
	<p>&lt;&lt;layer&gt;&gt;</p> <p>&lt;&lt;MENU&gt;&gt;</p> <p>&lt;&lt;monitored_by&gt;&gt;</p> <p>&lt;&lt;name&gt;&gt; — The name of a CI.</p> <p>&lt;&lt;state&gt;&gt; — A CI's status (Critical, Major, Minor, Warning, OK, No Data, Downtime, Stop, Info, Uninitialized).</p> <p>&lt;&lt;TenantOwner&gt;&gt; — A tenant owner ID.</p> <p>&lt;&lt;TenantsUses&gt;&gt;</p> <p>&lt;&lt;track_changes&gt;&gt;</p> <p>&lt;&lt;user_label&gt;&gt;— The user label of a CI. If no user label is specified, the CI name appears as the default label.</p> <p>&lt;&lt;viewName&gt;&gt; — The name of the view in which a CI is displayed.</p>
<b>EventChange</b>	<p>The EventChange attributes are based on the properties of an event. To find out more about event properties, see <i>the OMi User Guide</i>.</p> <p>&lt;&lt;category&gt;&gt; — The category of an event, for example DB, Storage, or System.</p> <p>&lt;&lt;ciRef&gt;&gt;</p> <p>&lt;&lt;context&gt;&gt;</p> <p>&lt;&lt;event.annotationCount&gt;&gt; — An event's number of annotations. Annotations are comments or observations relating to the associated (or a similar) event.</p> <p>&lt;&lt;event.application&gt;&gt; — Application that caused the event to occur.</p> <p>&lt;&lt;event.assignedGroup.name&gt;&gt; — The name of a group to which an event is assigned.</p> <p>&lt;&lt;event.assignedUser.loginName&gt;&gt; — The login name of an user to whom an event is assigned.</p> <p>&lt;&lt;event.assignedUser.name&gt;&gt; — The name of an user to whom an event is assigned.</p> <p>&lt;&lt;event.category&gt;&gt; — The category of an event, for example DB, Storage, or System.</p> <p>&lt;&lt;event.closeKeyPattern&gt;&gt; — The close key pattern of an event.</p> <p>&lt;&lt;event.ctrlTransferredTo.externalId&gt;&gt; — The external ID of</p>



Wiring Context	Attributes
	<p>an event.</p> <p><code>&lt;&lt;event.custom.Company&gt;&gt;</code> — An event's default custom attribute "Company".</p> <p><code>&lt;&lt;event.custom.Customer&gt;&gt;</code> — An event's default custom attribute "Customer".</p> <p><code>&lt;&lt;event.custom.Manager&gt;&gt;</code> — An event's default custom attribute "Manager".</p> <p><code>&lt;&lt;event.custom.Region&gt;&gt;</code> — An event's default custom attribute "Region".</p> <p><code>&lt;&lt;event.description&gt;&gt;</code> — The description of an event.</p> <p><code>&lt;&lt;event.duplicateCount&gt;&gt;</code> — The number of an event's duplicates.</p> <p><code>&lt;&lt;event.eti.indicator.name&gt;&gt;</code> — The name of an event's ETI.</p> <p><code>&lt;&lt;event.eti.value.name&gt;&gt;</code> — The value of an event's ETI.</p> <p><code>&lt;&lt;event.etiHint&gt;&gt;</code> — An event's ETI resolution hint.</p> <p><code>&lt;&lt;event.id&gt;&gt;</code> — The ID of an event.</p> <p><code>&lt;&lt;event.key&gt;&gt;</code> — An event's key reference.</p> <p><code>&lt;&lt;event.matchInfo.policyName&gt;&gt;</code> — An event's matched policy name.</p> <p><code>&lt;&lt;event.matchInfo.policyType&gt;&gt;</code> — An event's matched policy type.</p> <p><code>&lt;&lt;event.node.dnsName&gt;&gt;</code> — The DNS name of the originating server, used to identify the node CI.</p> <p><code>&lt;&lt;event.node.id&gt;&gt;</code> — The node ID of the originating server, used to identify the node CI.</p> <p><code>&lt;&lt;event.object&gt;&gt;</code> — An event's relation to a named object, such as a computer, printer, or modem.</p> <p><code>&lt;&lt;event.omServiceId&gt;&gt;</code> — An event's specified Operations Manager Service ID.</p> <p><code>&lt;&lt;event.omUser&gt;&gt;</code> — An event's specified Operations Manager user.</p> <p><code>&lt;&lt;event.originalData&gt;&gt;</code> — The original event text as captured from HPE Operations Agent before being formatted into an OM message.</p>

Wiring Context	Attributes
	<p>&lt;&lt;event.originalId&gt;&gt;</p> <p>&lt;&lt;event.originatingServer&gt;&gt; — The host name of the event's originating server.</p> <p>&lt;&lt;event.priority&gt;&gt; — The event's priority, for example None, Low, or Medium.</p> <p>&lt;&lt;event.relatedCi.id&gt;&gt; — The ID of a CI, used to identify the CI related to the event.</p> <p>&lt;&lt;event.sendingServer&gt;&gt; — The core ID of the sending server.</p> <p>&lt;&lt;event.severity&gt;&gt; — The severity of an event.</p> <p>&lt;&lt;event.solution&gt;&gt; — The solution steps taken to solve the problem identified by the event.</p> <p>&lt;&lt;event.sourceCi.id&gt;&gt; — The ID of the specified source CI.</p> <p>&lt;&lt;event.sourcedFrom.dnsName&gt;&gt; — The DNS name of the connected server from which the event is sourced.</p> <p>&lt;&lt;event.sourcedFrom.externalId&gt;&gt; — The ID of an external source from which the event is sourced.</p> <p>&lt;&lt;event.state&gt;&gt; — The lifecycle state of an event, for example Open, In Progress, Resolved, or Closed.</p> <p>&lt;&lt;event.subCategory&gt;&gt; — Name of the event's subcategory.</p> <p>&lt;&lt;event.timeChanged&gt;&gt; — The point in time relative to the current time when the event was last changed.</p> <p>&lt;&lt;event.timeCreated&gt;&gt; — The point in time when the event occurred.</p> <p>&lt;&lt;event.timeFirstReceived&gt;&gt; — The point in time when OMi received its first notification of an event.</p> <p>&lt;&lt;event.timeReceived&gt;&gt; — The point in time when an event was received.</p> <p>&lt;&lt;event.timeStateChanged&gt;&gt; — The point in time when the last lifecycle state change took place.</p> <p>&lt;&lt;event.title&gt;&gt; — The title of an event.</p> <p>&lt;&lt;event.type&gt;&gt; — The type of an event.</p> <p>&lt;&lt;eventId&gt;&gt; — The ID of an event.</p> <p>&lt;&lt;relatedCi.display_label&gt;&gt; — The display label of a CI, used to identify the CI related to an event.</p>

Wiring Context	Attributes
	<p>&lt;&lt;relatedCi.name&gt;&gt; — The name of a CI, used to identify the CI related to an event.</p> <p>&lt;&lt;sourceCi.name&gt;&gt; — The name of a CI, used to identify the source CI.</p>
<b>EventDashboardClickEvent</b>	<p>&lt;&lt;dashboardId&gt;&gt; — ID of a Monitoring Dashboard.</p> <p>&lt;&lt;drillDownDashboardId&gt;&gt; — ID of a Monitoring Dashboard that you want to drill down to.</p> <p>&lt;&lt;filterId&gt;&gt; — ID of a filter used to limit the results displayed in the Event Browser.</p> <p>&lt;&lt;filterName&gt;&gt; — Name of a filter used to limit the results displayed in the Event Browser.</p> <p>&lt;&lt;viewName&gt;&gt; — Name of a view used to filter the events displayed in the Event Browser.</p> <p>&lt;&lt;widgetId&gt;&gt; — ID of a widget used in a Monitoring Dashboard.</p>
<b>EventPropertyChange</b>	<<eventIds>>
<b>ViewChange</b>	<<viewName>> — The name of a view.


## 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

**Workspaces > My Workspace**

In My Workspace, click the **Wiring**  button.

- **Relevant Tasks:** ["How to Set Up My Workspace" on page 229](#)

## Learn More

User interface elements are described below:

UI Element (A-Z)	Description
<b>Contexts</b>	<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>
<b>Source Components</b>	<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><b>Note:</b> 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>
<b>Summary of Page Wiring</b>	<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>
<b>Target Components</b>	<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" on the next page](#)
- ["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 page 231](#)
- ["Close a page or delete a page" on page 231](#)

### 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 213](#).

For an example of defining layout, see in ["How to Configure Page Layout – Use-Case Scenario" on page 232](#).

## Add components to a page

My Workspace is provided with default components from the OMi applications, as described in ["Available Components" on page 208](#). 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 218](#).

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.
- When using the **Components** button on the Page Management toolbar to add a component, double-clicking is not supported.

## 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 235](#). 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 220](#).

## 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 must 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 237](#).

## 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 239](#).

## 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 selectors 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.

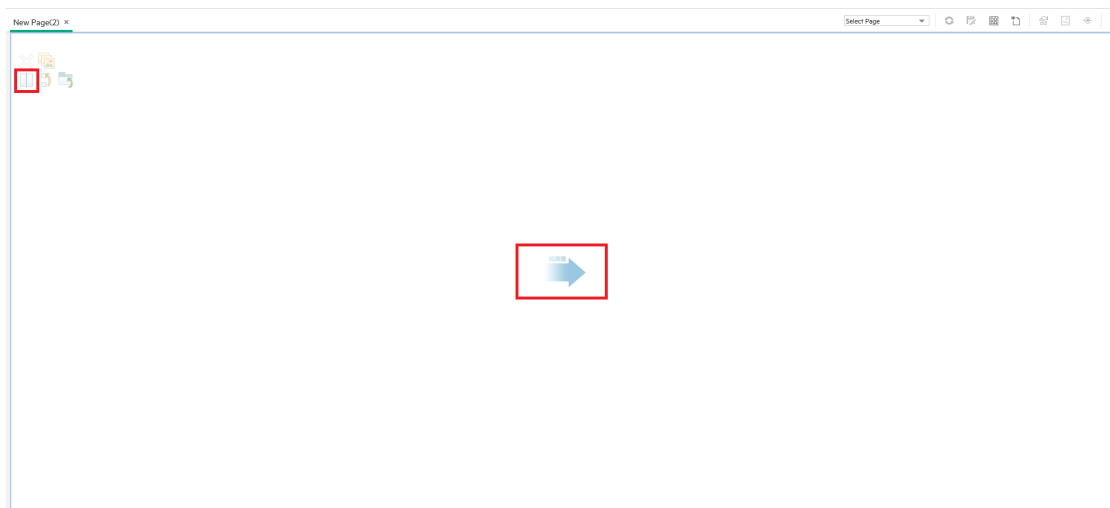
### 1. Background

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

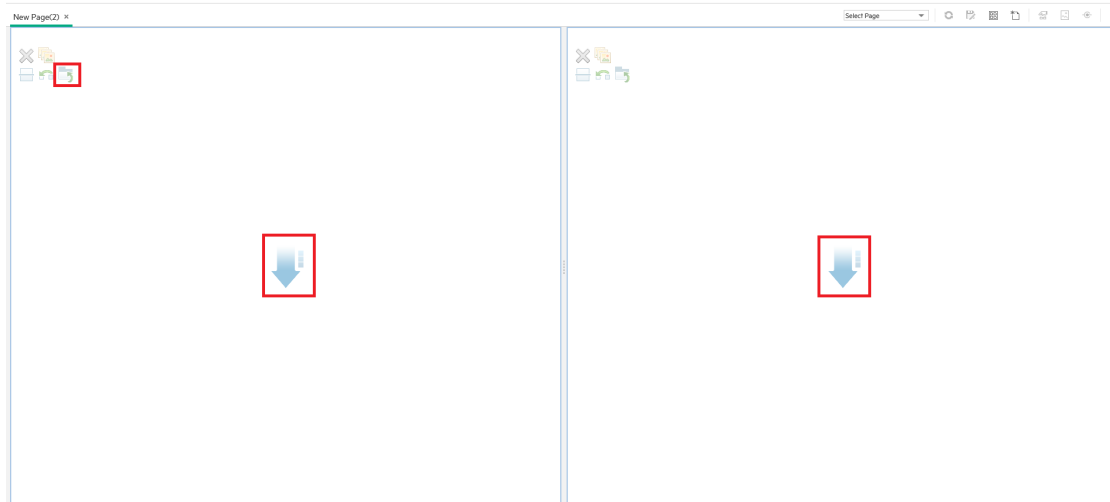
Adam opens a new page, which has a horizontal layout by default:





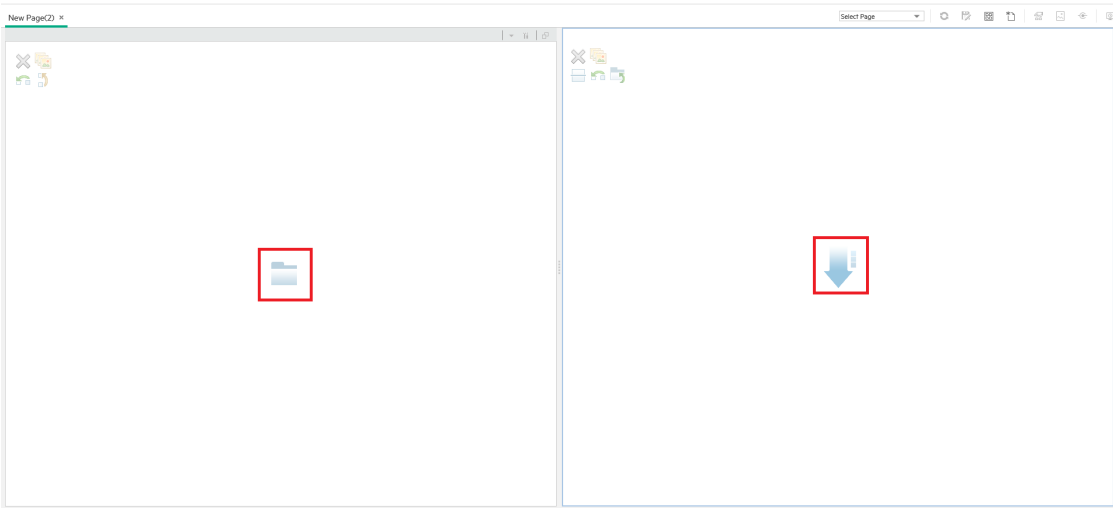
### 3. Split the page

Adam then clicks **Split** to divide the layout into a left and right pane. The layout is now oriented vertically:



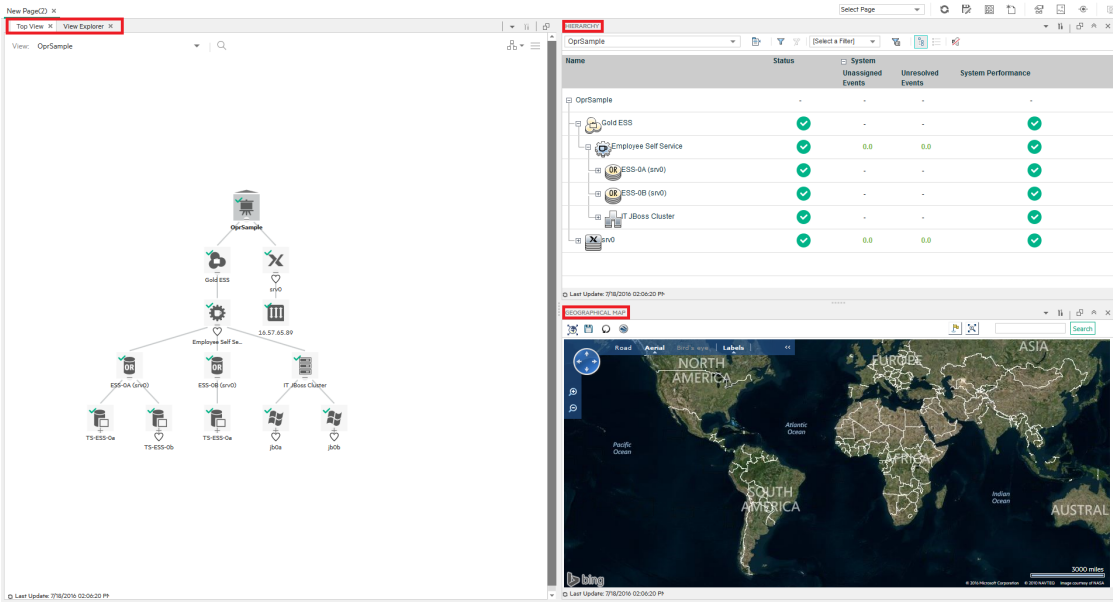
### 4. Create a tab layout in the left pane

Within the layout on the left side, he clicks **Switch to tabs** to create a tabbed area in the left pane:



5. 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 View Explorer) 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 220](#).

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 239](#).

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.
  - 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:

`https://domain/ <path> ? <query_string> # <fragment>`

For example, you could use dynamic URL parameters to create one of the following:

- `www.google.com/search?hl=<<lang>>&q=<<viewID>>`
- `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 Top View, and the right side of the page will display the ACME Support directory.

When a CI is selected in Top View, 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: `https://domain/ <path> ? <query_string> # <fragment>.`

1. Jane opens a new page, and divides it into two panes. She opens the Component Gallery, and drags Top View 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 **CICChange** to the list of contexts, so that the Support directory will respond when a CI is selected in the Top View.
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 Top View source component sends `CICChange` contexts to the ACME Support target component.

When a CI is selected in Top View, 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 227](#).

### 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 218](#).

### 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.

# How to Enable the Screen Capturing Applet

By default, the screen capture applet is disabled. You can enable it so that every time you save a page, a screen shot of it is taken, which is then shown as a thumbnail in your Page Gallery.


To enable the screen capturing applet, follow these steps:



1. Navigate to Infrastructure Settings:

**Administration > Setup and Maintenance > Infrastructure Settings**

2. Select **Applications > My Workspace**.

3. In the My Workspace - General area, click the  **Edit Setting** button for the Enable screen capture applet option.
4. In the Edit Setting dialog box, select **true** from the drop-down list associated with the Value field. By default, the value is false.
5. Click **Save**.

## Troubleshooting My Workspace

For information on exporting My Workspace content to another OMi system, see the *OMi Administration Guide*.

## 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 Dashboard" on page 244](#).
- **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 256](#).
- **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 257](#).
- **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 263](#).



## Chapter 13: 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 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.

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**

**Note:** 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 229](#).

## Learn More

This section contains the following:

- ["Combining Monitoring Dashboards with Other My Workspace Components" on the next page](#)
- ["Monitoring Dashboard" above](#)

- "Dashboard Preferences" on page 249

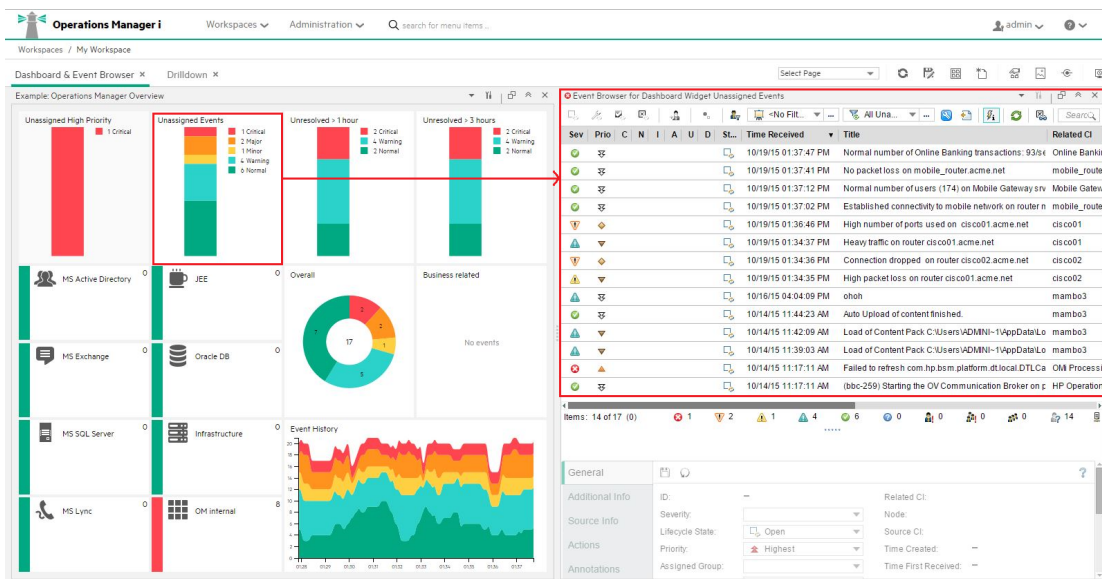
## Combining Monitoring Dashboards with Other My Workspace Components

My Workspace 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.

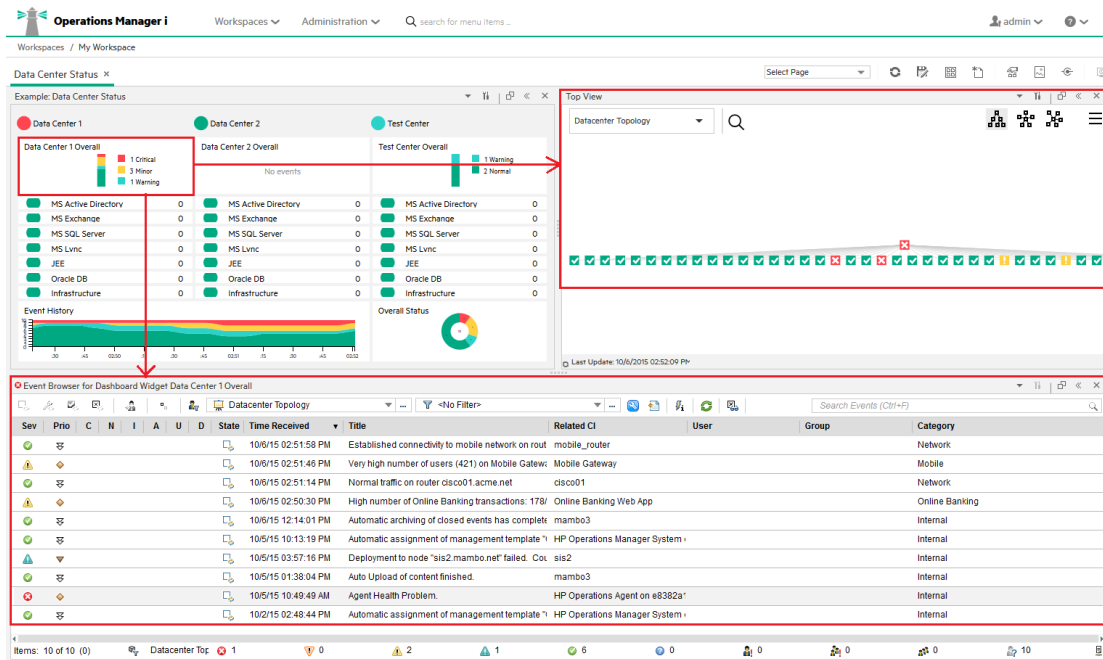
- Example: Monitoring Dashboard and Event Browser

Clicking the Unassigned Events widget causes the Event Browser to display only those events that match the Unassigned Events event filter.



- Example: Monitoring Dashboard and Top View

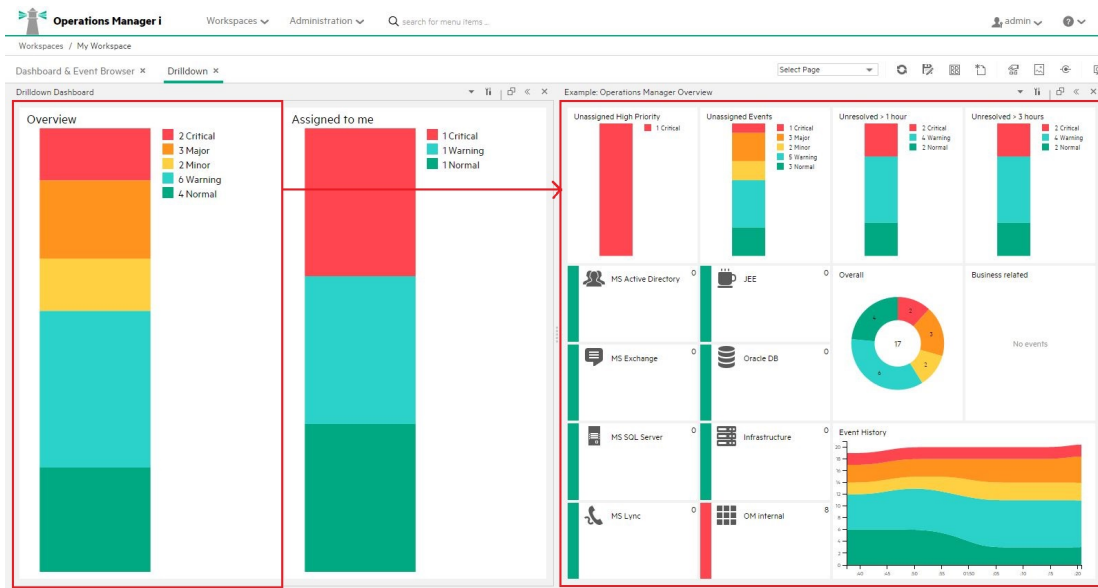
Clicking the Data Center 1 Overall widget causes Top View to display the Datacenter Topology view associated with the widget, and causes the Event Browser to display only those events that match the Data Center 1 Overall event filter.



- Example: Parent and Drill-Down Dashboard on the Same Page

Clicking the Overview widget causes its drill-down dashboard Example:Operations Manager Overview to be displayed within the second dashboard on the same page. For this to happen, the wiring between these two dashboards has to be configured as described in the ["How to Set Up Wiring Between Components" on page 237](#).

**Note:** To display the drill-down dashboard of the first dashboard within component, use the drill-down icon in the lower right corner of the component. To disable this feature, deselect the **Open Drill-Down Dashboards within component** option in the Preferences dialog of the parent component.



## • 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.
- **Note:** In case there are more than one monitoring dashboard open, and one of them has drill-down dashboard configured, the other one reacts to the EventDashboardClickEvent context by displaying the drill-down dashboard of the first dashboard widget.
- **ViewChange.** The ViewChange context can be consumed by many components, for example the Top View.

For more information about wiring, see ["How to Set Up Wiring Between Components" on page 237](#).

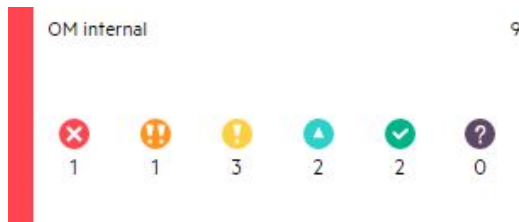
## Types of Widgets

Monitoring Dashboards can include many different widget types. Some types, such as the Overview, the Simple Status and the Group, 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 also shown.

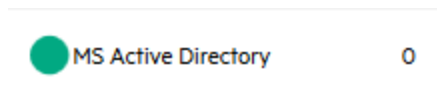
The following types of widgets can be incorporated into a Monitoring Dashboard:

- **Overview Widget** The number in the upper right-hand corner indicates the number of all events that match the filter and view.

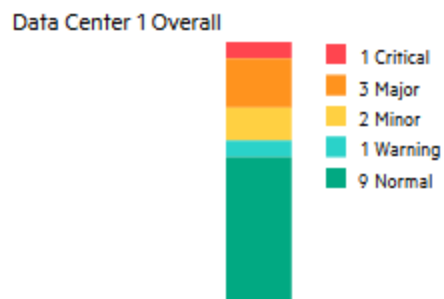
Overview widgets can be displayed in normal and compact mode. In compact mode, the severity icons and the corresponding numbers are hidden.



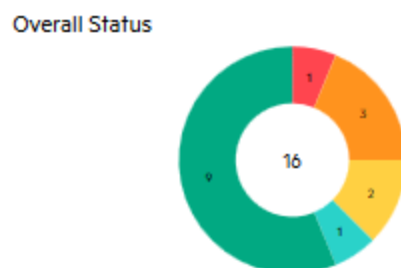
- **Simple Status Widget**



- **Stack Widget**

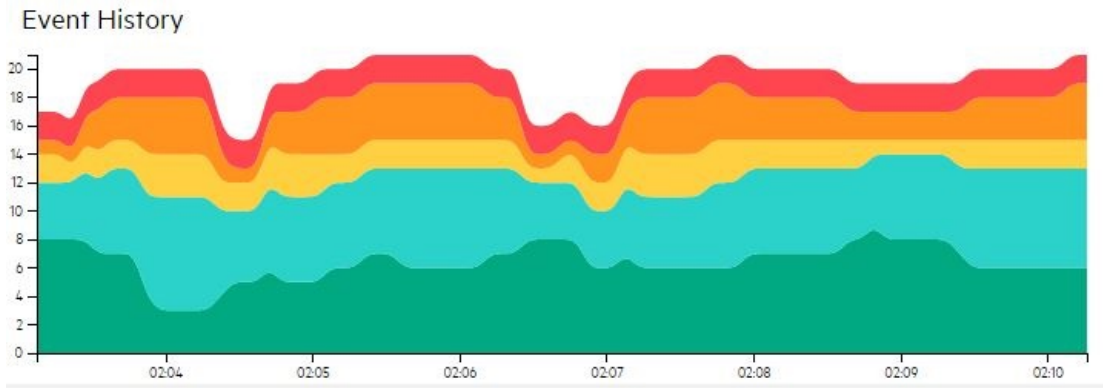


- **Pie Widget**



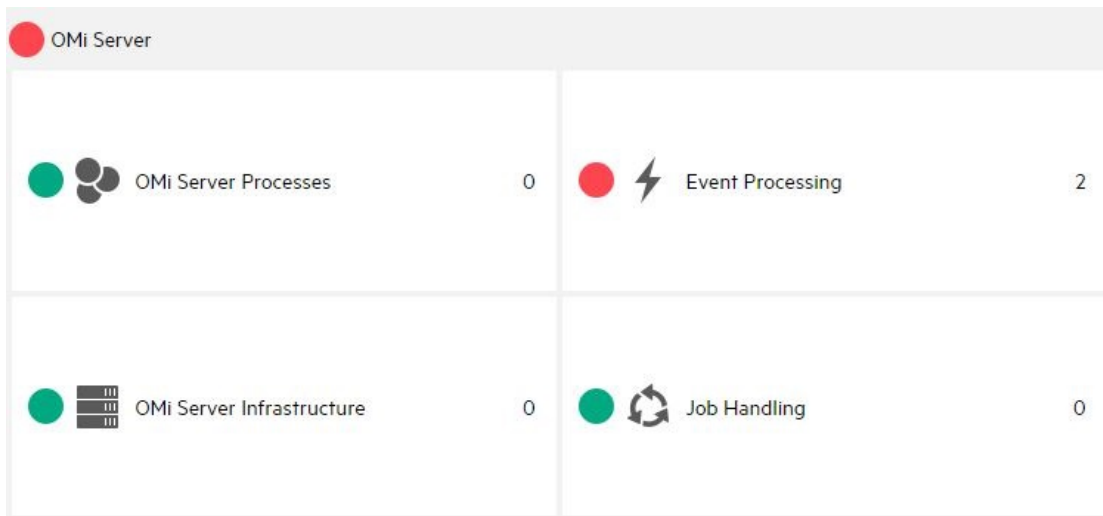


- **History Widget.** History widgets display the number of events per severity (y axis) against time (x axis).



- **Group Widget.** Group widgets group multiple widgets under a common heading (OMi Server, 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.



## Dashboard Preferences

- **Name.** Name of the Monitoring Dashboard. My Workspace users select Monitoring Dashboard configurations by their names.

**Note:** The name of the Monitoring Dashboard can be changed from Administration, where Monitoring Dashboard are configured. For more information, see the *OMi Administration Guide*.

- **View Mode.** Changes the displayed size of the selected Monitoring Dashboard in the Dashboard Details pane. Possible options are Compact, Medium, and Large.
- **Use Dark Theme.** Changes the appearance of the Monitoring Dashboard so that it uses the HPE's dark theme.
- **Open Event Browser on Click.** This option configures the Monitoring Dashboard to open the Event Browser in a pop-up window when you click a widget. With this option selected, you can save space on your My Workspace page by excluding the Event Browser from the page. The Event Browser opens on demand in a new window.
- **Open Drill-Down Dashboards within component.** Opens a drill-down dashboard within the selected component. For more information on this option, see ["How to Display the Monitoring Dashboard" below](#).
- **Hide filter errors.** Hides filter errors. When you do not have permission for some filters, or they do not exist, the exclamation mark icon (⚠) is displayed in the widget, and when you hover on the widget, a tooltip with an error message appears. See ["Troubleshooting " on page 254](#) for the examples of these errors. When this option is enabled, these widgets are shown empty.

## 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 252](#)
- ["How to Drill-Down into Dashboards" on page 253](#)

### How to Display the Monitoring Dashboard

**Note:** To display a user-defined My Workspace page, the administrator must grant users a role with appropriate permissions in **Administration > Users > Users, Groups, and Roles**. For more information, see the *OMi Administration Guide*.

**To display the Monitoring Dashboard:**

1. Go to **Workspaces > My Workspace**.
2. Select the predefined OMi Monitoring Dashboard page or any other user-defined Monitoring Dashboard page for which you have permission.
3. Open the **Configure Component** dialog box, and choose a dashboard configuration from the **Choose a Dashboard configuration** drop-down list.

If the drop-down list does not contain any dashboard configurations, the administrator must first create one as described in the *OMi Administration Guide*.

#### To display the Monitoring Dashboard outside of My Workspace:

1. You can display Monitoring Dashboard pages in a Web browser outside of My Workspace by using the following URL:

```
https://<server_name>.<domain_name>/opr-  
web/dashboard/app?dashboardId=<dashboard_id>
```

**Note:** To enable drill-down dashboards within component, use the following URL instead:

```
https://<server_name>.<domain_name>/opr-  
web/dashboard/app?dashboardId=<dashboard_id>&enableDrillDownWithin=true
```

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 the Medium view. To change the view to Compact or Large, set appropriately the ViewMode 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/dashboard/app?dashboardId=<dashboard_<br>id>
```

**Tip:** The monitoring dashboard ID is displayed in the dashboard's properties in the Dashboard Designer.

- **eventBrowserOnClick.** 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 this behavior by setting the eventBrowserOnClick parameter in the URL to

false:

```
https://<server_name>.<domain_name>/opr-  
web/dashboard/app?eventBrowserOnClick=false&dashboardId=<dashboard_id>
```

To enable this setting again, omit the parameter or set it to `true` (the default value).

- **enableDrillDownWithin.** To display the drill-down dashboard of the dashboard within the same component, use the drill-down icon in the lower right corner of the component. This icon is enabled when the `enableDrillDownWithin` parameter is set to `true`, which is a default value, as follows:

```
https://<server_name>.<domain_name>/opr-  
web/dashboard/app?enableDrillDownWithin=true&dashboardId=<dashboard_id>
```

To immediately open the drill-down dashboard once you click a widget, set the `enableDrillDownWithin` parameter to `onClick`.

To disable this feature, deselect the **Open Drill-Down Dashboards within component** option in the Preferences dialog of the parent dashboard, or set the `enableDrillDownWithin` parameter to `false`.

- **viewMode.** Shows Monitoring Dashboards in a three different view modes, Compact, Medium and Large. If you choose the Compact mode, the result will be decreasing the font size, and also less display space consumed. Likewise, the Large mode is used for displaying the text in larger fonts, which could be useful, for example, for widget headlines. To enable the desired mode, set the `viewMode` parameter in the URL to `compact`, `medium` or `large`.

```
https://<server_name>.<domain_name>/opr-web/dashboard/app?viewMode=<view_  
mode>&dashboardId=<dashboard_id>
```

The default view mode is Compact.

## 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 a role with appropriate permission for Monitoring Dashboards in Users, Groups, and Roles:

**Administration > Users > Users, Groups, and Roles**

For details, see the *OMi Administration Guide*.

- Administrators create Monitoring Dashboards in the Monitoring Dashboards page in Administration. 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*. Click ▼ **Component Menu** to configure preferences and the wiring of the Monitoring Dashboard component:
  - Click **Preferences** to change the name, the view mode (Compact, Medium, or Large), the way the Event Browser opens when you click a widget and so on. For more information, see ["Dashboard Preferences" on page 249](#).
  - Click **Wiring** to open the ["Wiring Dialog Box" on page 227](#). The Monitoring Dashboard component includes default wiring. You can modify this default wiring definition if required.
7. *Optional*. Add other components to your page, for example the Top View or the Event Browser component.
8. Click **OK** and save your page to the Page Gallery.


## How to Drill-Down into Dashboards

1. Select **My Workspace** in the menu bar.
2. Open the dashboard with the configured drill-down dashboard. The widget with the drill-down dashboard has the drill-down icon in the lower right corner.
3. Click the drill-down icon to drill into the dashboard associated with this widget. The drill-down dashboard offers the additional information to the one offered by the parent dashboard widget.

**Note:** To navigate back to the parent dashboard, select its name from the navigation bar in the upper left corner of the widget.

## Troubleshooting


### No matching event filter found for Dashboard Widget

If a widget in a Monitoring Dashboard contains just the exclamation mark icon () and the `No matching event filter found for Dashboard Widget` tooltip is displayed when hovering on the widget, you probably do not have the required permissions for this filter, or the filter is deleted.


### Dashboard Widget is empty

If a widget in a Monitoring Dashboard is empty, you probably do not have the required permissions for this filter, or the filter is deleted. Check with your administrator about your permissions.


### No matching view filter found for Dashboard Widget

If a widget in a Monitoring Dashboard contains just the exclamation mark icon () and the `No matching view filter found for Dashboard Widget` tooltip is displayed when hovering on the 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 contains just the exclamation mark icon () and the `More than one matching event filter found for Dashboard Widget` tooltip is displayed when hovering on the 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 contains just the exclamation mark icon () and the `No permission to clear view filter for Dashboard Widget` tooltip is displayed when hovering on the widget, you probably do 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 contains just the exclamation mark icon (⚠) and the `No permission to set view filter for Dashboard Widget` tooltip is displayed when hovering on the widget, you probably do 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, open the **Configure Component** dialog box from the right corner menu and choose the desired dashboard from 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 230](#).

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 237](#).



## 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 Panel" on page 259](#)
- ["Key Performance Indicators Dialog Box" on page 259](#)
- ["Types of Widgets" on page 259](#)
- ["Working with the KPI Over Time Dashboard as a Component" on page 260](#)

### 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.

### Example of working with the KPI Over Time dashboard

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.

 **Select start time** provides easy access to specific points in time, and  **Go to present time** resets the dashboard to show the current date and time.

You can visually filter data shown in the widgets by clicking on a data point. The widgets recalculate themselves based on the current selection context.

To reset the filter selection, click **Clear filter**. 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 over time data** 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 Panel


This panel enables you to select the CIs to be included in the KPI Over Time dashboard. The dashboard provides information based on the selected CIs.

To display data when you access the KPI Over Time dashboard, click **Select a Configuration Item** or click  **Select Configuration Items** to open the CI panel.

**Note:** Only CIs with attached KPIs can be selected.


## Key Performance Indicators Dialog Box

This dialog box enables you to select the KPIs to be included in the KPI Over Time dashboard. The dashboard provides information based on the selected KPIs.

To display key performance indicators for the CIs, click  **Filter Key Performance Indicators**. 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  **Select KPI Status Widgets**. 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

- For information on components, see ["Add components to a page" on page 230](#).
- 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 237](#).


## Tasks

### How to Display CIs and KPIs in the KPI Over Time Dashboard


1. Click  **Select Configuration Items** to open the CI panel.


Select a view from the drop-down list. The list of the related CIs is displayed for the selected view.


To collapse the list, click  **Collapse all** beside the name of the view.

**Tip:** To search for a CI in a current view, use  **Search** beside the list.



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 Panel" on page 259](#).

A selected CI is automatically selected in all parent CIs where it reside. To clear the selection, click  **Clear all** in the right corner.

Close the CI dialog box by clicking outside it, or by clicking  **Close** in the upper right corner.

2. *Optional.* Click  **Filter Key Performance Indicators** to open the KPI dialog box and select or deselect KPIs to display. For more information, see ["Key Performance Indicators Dialog Box" on page 259](#).

By default, all KPIs for the selected CIs are preselected.

3. *Optional.* Click  **Select KPI Status Widgets** 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 259](#).
4. *Optional.* To change the KPI Over Time component's refresh rate (**none** by default) and display name, click the  **Component Menu** 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 **Clear filter**. 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.
- 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.
- 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.
- 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.

- 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.
- 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 Integrations 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.

## 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" below

"Using the ROI Dashboard" on the next page

"Return On Investment Dashboard" on page 263



"Return On Investment Dashboard" on page 263

"Return On Investment Dashboard" on page 263

"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.


**Note:** For best results, use the following printer settings:

Orientation: Landscape

Page size: A4 (preferred) or Letter

## UI Reference

### Dashboards Pane

UI Element	Description
	<p><b>Event Cost Savings:</b> 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><b>Note:</b> 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>
<b>Statistics for timeframe</b>	Presents a summary of the time period selected over which to display the Return On Investment data.
<b>Total Number of Events</b>	Displays the total number of events received by OMi from the IT environment during the selected time period.
<b>Reduced By OMi</b>	Displays the number of events handled automatically by OMi during the selected time period.
<b>Cost Savings By OMi</b>	<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>

UI Element	Description
<b>Time Frame</b>	<p><b>from:</b> Displays the selected start date for the return on investment calculation.</p> <p><b>to:</b> Displays the selected end date for the return on investment calculation.</p> <p>Dates can be input directly in the <b>to</b> and <b>from</b> 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
<b>Display cost savings through Operations Manager i in the report</b>	<p>Select this check box to enable displaying of the Return On Investment dashboard in the Operations Manager i user interface.</p> <p><b>Note:</b> 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>
<b>Use default value</b>	Select this option to use the value specified in the Cost Per Event setting under the Operations Management - Return On Investment Infrastructure Settings.
<b>Use custom value</b>	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.

## 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.** Enables you to visualize performance metrics in the form of a performance dashboard. By default, OMi Performance Dashboard comprises out-of-the-box dashboards. In addition, you can also create and customize performance dashboards for the Configuration Items (CIs) that you are monitoring.
- **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 a list of views and their CI hierarchies. The component enables you to select a view and browse through its CI hierarchy, or to search for a CI in the selected view. For more information, see ["View Explorer Component" on page 179](#).

- **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 \(HTML\)" on page 103](#).

- **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, OM 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 188](#), and [Launching Operations Orchestration Run Books](#).

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 views and their CI hierarchies. The component enables you to select a view and browse through its CI hierarchy, or to search for a CI in the selected view. For more information, see ["View Explorer Component" on page 179](#).

- **Event Browser**

Displays a list of the active events in your environment. For more information, see ["Event Browser \(HTML\)" on page 103](#).

- **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 151](#).

- **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 122](#).

- **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 188](#), and [Launching Operations Orchestration Run Books](#).

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 122](#) and ["HI-Based KPI Calculations" on page 124](#).



# Chapter 19: Performance Perspective

In the Performance Perspective tab, OMi Performance Dashboard enables you to visualize performance metrics in the form of performance dashboards. By default, OMi Performance Dashboard comprises out-of-the-box dashboards. In addition, you can also create and customize performance dashboards for the Configuration Items (CIs) that you are monitoring.

OMi Performance Dashboard helps you perform the following:

- Explore and visualize performance metrics of a host of components such as applications, system, and network.
- Quickly visualize the performance of important CIs by using personalized favorites.
- Public Favorites - Support for sharing user-defined favorites as public favorites.
- Embed charts such as graphs, table, text, process table, and pie into the performance dashboard or copy the URL of any chart and embed it into your **My Workspace** page.
- Support for URL launch - embed performance dashboards or single charts into any UI mashup page.
- Instance Parameterization for managing different multiple instances across systems.
- Event Overlay for visualizing event information in the performance dashboard.
- Date Range Panel for visualizing time-specific data.
- Dashboard Assignment for assigning performance dashboards to CI Types (CITs).
- Real-time visualization of performance metrics.
- Simultaneous display of real-time and historical data.
- Forward critical performance metrics to Business Value Dashboard (BVD).
- CI Comparison dashboard for comparing CIs that belong to similar CITs.
- Support for OpsBridge store, new data store provided by OMi Performance Engine.

OMi Performance Dashboard can be used by Performance Experts - System and Application Administrators - to diagnose specific problems and to troubleshoot server performance.

In the Performance Perspective tab, the following panes help you visualize performance metrics:

- **View Explorer**

Displays a list of views and their CI hierarchies. The component enables you to select a view and browse through its CI hierarchy, or to search for a CI in the selected view. For more information, see ["View Explorer Component" on page 179](#).

- **Performance Pane**

Enables you to create, customize, and visualize performance dashboards.

## Date Formats

The date formats displayed in the Performance Perspective 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-DE - German

en-AU - English Australia

en-GB - English United Kingdom

en-IN - English India

en-US - English United States

en-CA - English Canada

es-ES - Spanish

fr-FR - French

ja-JP - Japanese

ko-KR - Korean

ru-RU - Russian

zh-CN - Chinese China

zh-HK - Traditional Chinese Hong Kong

zh-SG - Simplified Chinese Singapore

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

**Note:** For German or French languages, 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-FR setting.

## Understanding OMi Performance Dashboard

OMi Performance Dashboard includes the following components:

- View Explorer (part of OMi)
- Performance Pane

### View Explorer

The View Explorer pane displays a list of views and the associated CIs in a tree view. The CI tree displays the list of available CIs. You can select the required CI for which you want to view an existing performance dashboard or create a new performance dashboard. You can also create your own views. You can select only one CI from the tree view to create dashboards. If you select more than one CI, the system displays an error message stating that it could not load the performance dashboard. For more information, see ["View Explorer Component" on page 179](#).


### Performance Pane











Performance Pane enables you to create and visualize performance dashboards. In addition, you can also customize and visualize content in the performance dashboard.

To access

**Workspaces > Operations Console > Performance Perspective**

The following table explains the options available in the Performance Pane.

UI Elements	Description
	Click to view the available performance dashboards, default performance dashboard, and favorites.

UI Elements	Description
	<p><b>Note:</b>  indicates the default dashboard.</p>
	<p>Click to view the following options:</p> <p><b>Save as</b> - Save a copy of the performance dashboard.</p> <p><b>Clear Cache</b> - Clear cache and reload meta data.</p> <p><b>Mark as Default</b> - Mark the performance dashboard as default.</p> <p><b>Dashboard JSON</b> - View the JSON file for the performance dashboard.</p> <p><b>Export Dashboard</b> - Export the dashboard in CSV format.</p> <p><b>Print To PDF</b> - Save the dashboard in PDF format.</p>
	Click to create a new performance dashboard.
	Click to save the performance dashboard.
	Click to refresh the data when connection is lost and retrieved.
Last Updated	Shows the last updated time for the performance dashboard. The last updated time appears in the format hh:mm:ss.
	Click to view the date range panel.
	Click to configure performance dashboard settings.
	Click to view real-time data in the performance dashboard.
	Click to add rows to the performance dashboard.
	Click to add charts, rows, or change other settings.

## Configuring Performance Dashboard

This option enables you to configure and define the settings for a performance dashboard. These settings can be used to create a new performance dashboard or to edit and customize an existing performance dashboard.

To access

1. **Workspaces > Operations Console > Performance Perspective.**
2. In the Performance Pane, click .

The performance dashboard settings include the tabs General, Features, Parameterization, and Event Overlay. See the following tables for explanations about the tabs' UI elements.

## General

You can use this tab to edit the properties of the performance dashboard.

UI Element	Description
Title	Specify the title of the performance dashboard.
Time Correction	You can select Coordinated Universal Time (UTC) or Browser time.
Auto-Refresh	You can select the timeline for auto-refresh by choosing 5 minutes, 15 minutes, 30 minutes, 1 hour, 2 hour, or 1 day.
Points Every	<p>Determines the granularity (number of data points) on the performance dashboard. This value is used in conjunction with the <b>Maximum Points</b> value to determine the level of summarization to use. The following values are supported:</p> <ul style="list-style-type: none"><li>• <b>auto</b> - Selects the value to display data points within the configured limit. 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.</li><li>• <b>raw</b> - Displays all the data collected by the datasource for the specified duration.</li><li>• <b>5 min</b> - Displays one data point for every five minutes of the specified duration.</li><li>• <b>15 min</b> - Displays one data point for every fifteen minutes of the specified duration.</li><li>• <b>30 min</b> - Displays one data point for every thirty minutes of the specified duration.</li><li>• <b>hour</b> - Displays one data point for every one hour of the specified duration.</li><li>• <b>3 hours</b> - Displays one data point for every three hours of the specified duration.</li><li>• <b>6 hours</b> - Displays one data point for every six hours of the specified duration.</li><li>• <b>12 hours</b> - Displays one data point for every twelve hours of the specified duration.</li><li>• <b>day</b> - Displays one data point for every day of the specified duration.</li></ul>
Maximum	Determines the number of data points to be displayed on the performance dashboard

UI Element	Description
Points	(default is 100 points – for auto option). This value is used to summarize the data for each data point and to fit the chart in a single window, when Points Every value is set to <b>auto</b> . For other Points Every values, Performance Dashboard determines the number of (data points or time intervals) for each chart and provides options to view the next or previous set of data points or intervals.
Hide Controls	Check this option to hide controls when viewing the performance dashboard.

## Features




UI Element	Description
Shared Crosshair	Check this option to compare the data within a performance dashboard.

## Parameterization

This option enables you to manage multiple instances running on different systems by defining instance parameters in the performance dashboard.

### Parameters


You can use this tab to view the parameters that are defined. You can also edit or delete the instance parameters that are not required.

UI Element	Description
 <b>Edit</b>	Click to edit the parameter.
	Click to delete the parameter.
 <b>Close</b>	Click to close.

### Add



You can use this tab to add parameters.

UI Element	Description
Parameter Name	Specify the parameter name.

UI Element	Description
Data Source	Specify the data source.
Class Name	Specify the class name.
Regex	Specify the regular expression to filter the instance names.
	Click to run the regex query.
Add	Select to add the parameter.

### Edit

You can use this tab to select and edit a parameter.

UI Element	Description
Parameter Name	Specify the parameter name.
Data Source	Specify the data source.
regex	Specify the regex.
Class Name	Specify the class name.
	Specify the regular expression to filter the instance names.
	Click to update the parameter.

### Event Overlay

This option enables you to manage visualizing event information in the performance dashboard. By specifying the events, you can visualize the occurrence of events in the performance dashboard.





Options	Description
Critical	Select Critical to visualize critical events in the performance dashboard. The critical events are specific to CI and the time range.
Major	Select Major to visualize major events in the performance dashboard. The major events are specific to CI and the time range.
Minor	Select Minor to visualize minor events in the performance dashboard. The minor events are specific to CI and the time range.
Warning	Select Warning to visualize warning events in the performance dashboard. The warning events are specific to CI and the time range.

## Configuring Rows and Charts

This section provides information about configuring rows and adding charts to the dashboard.

### Configure Rows

To access

1. **Workspaces > Operations Console > Performance Perspective**
2. In the Performance pane, click  and then click  to create a new performance dashboard.
3. In the Performance pane, a row is added by default. To add another row, click .
4. In the Performance pane, click  and select the required component.

The following components are included: Add Chart, Set Height, Move, and Row Editor. See the following tables for explanations about the tabs' UI elements.

### Add Chart

You can use Add Chart to include the following charts into the performance dashboard:

Component	Description
Graph	Creates a graph chart.
single value	Creates a single value chart. By default, the average metric value appears in the single value chart.
Text	Creates a text chart.
Pie	Creates a pie chart.
Table	Creates a table chart.

### Set Height

You can use Set Height to define the height of the chart. Depending on your requirement, you can choose the height. For example, you can choose 150 pixels or 200 pixels and so on.



## Move

You can use this option to move the charts up or down.

## Row Editor

You can use this option to edit the properties of the rows.

### General

This tab provides the following options:

UI Element	Description
Title	Specify the title of the row.
Height	Specify the height of the row.
Show Title	Specify if you want to show the title of the row

### Charts

This tab provides information about the performance dashboard components that are included into a row. In addition, you can also move or delete the charts.

UI Element	Description
Title	Displays the title of the row.
Type	Displays the type of chart. For example, graph, single value, text, pie chart, or table.
Span	Specifies the span of the chart.
Move Up or Down	Move the rows up or down.
Delete	Delete the chart.

## Delete Row

You can use this option to delete a row in the performance dashboard.

## Collapse Row

You can use this option to collapse a row in the performance dashboard.


## Configure Charts

You can use this option to configure charts.

**Note:** The UI elements and options that are described in the table below are not available in real-time and historical combined view. For more information about real-time and historical combined view, see ["Using Real-time and Historical Data Combined View" on page 325](#).

To access

Click the title of the chart to edit.


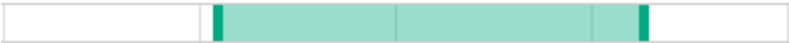

UI Element and Options	Description
-	Click to decrease the width of the chart.
+	Click to increase the width of the chart.  <b>Tip:</b> If a metric value in a single value chart gets truncated, use the + icon to view the complete number.
	Chart JSON - You can view the JSON file for the chart. Export CSV - You can export the chart in CSV format. Toggle Legend - Select to view the legend for the chart.
Maximize	Click to maximize and display only the chart.
Edit	Click to edit the charts. Using the edit option, you can define the metrics, axis, grid, and display styles.
Duplicate	Click to duplicate the chart.
Share	Click to share the chart. After clicking <b>Share</b> , you get the following options: <ul style="list-style-type: none"><li>• Current Time Range - Uses the current time range when the performance dashboard is shared using the URL. If this option is not selected, you can share the performance dashboard with the time-range that was already saved.</li><li>• Current Panel Only - Displays only the current chart when the performance dashboard is shared using the URL. If you do not select this option, then the performance dashboard contains all charts.</li></ul>

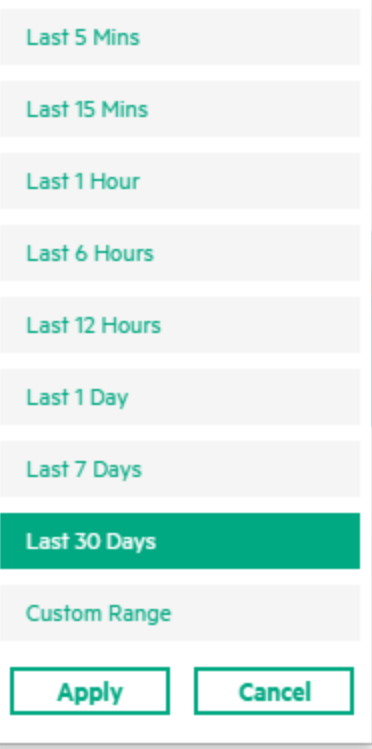
UI Element and Options	Description
	<ul style="list-style-type: none"> <li>• Include Parameters - Displays the existing parameters when the performance dashboard is shared using the URL. If you do not select this option, the parameters are not included. If the chart does not contain any parameters, then this setting is not applicable.</li> </ul>
Add to Favorite	Click to add the chart as a favorite.
x	Click to delete the chart.

## Date Range Panel Option

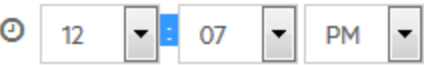
The Date Range Panel option enables you to visualize the performance data for a specific date and time range.

The following table lists all the options that are available to use the date range panel.

UI Element and Options	Description
	Click to show or hide the date range panel.
<p>9/25/2015, 12:07:57 PM to 9/25/2015, 4:35:07 PM</p> 	You can use the slider to choose the date range and time range within the specified start date and end date. The specified start date and end date is defined inside the drop-down custom range option.
 Nov 25, 2015 - Nov 27, 2015 ▼	<p>You can choose the drop-down to select the following:</p> <ul style="list-style-type: none"> <li>• Custom Range (start date, end date, and specific time range)</li> <li>• Relative Time Options (Last 5 minutes, Last 1 hour, and so on)</li> </ul> <p>By default, the drop-down displays the predefined date range.</p>

UI Element and Options	Description
	

Custom Range Options

UI Element and Options	Description
Start Date	You can use the calendar to choose the start date or you can type the start date.
End Date	You can use the calendar to choose the end date or you can type the end date.
>	Click to view the next month in the calendar.
<	Click to view the previous month in the calendar.
	You can specify the time range.
Apply	You can click <b>Apply</b> to make the changes.
Cancel	You can click <b>Cancel</b> to not make the changes.

## Editing Charts

You can use this option to edit charts. The settings for each chart is described in detail. The common and specific settings for each chart are described in this section.

To access

Click the title of the chart and click **Edit**.




The following settings are available for each chart:

Settings	Graph	Single Value	Text	Pie	Table	Process Table
Metrics	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Axis and Grid	<input checked="" type="checkbox"/>					
Display Styles	<input checked="" type="checkbox"/>					
Options		<input checked="" type="checkbox"/>				
Styles					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Link	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### Metrics

You can use this tab to specify the metric attributes for the charts.

UI Element and Options	Description
Title	Specify the title of the chart.
Data Source	Choose the data source. The following data sources are supported: <ul style="list-style-type: none"><li>• Operations Agent</li><li>• SiteScope</li></ul>
Class Name	Depending on the data source selected, the class names are displayed. You can choose the class name

UI Element and Options	Description
	from the list.
Metric Name	Depending on the class name selected, the metric names are displayed. You can choose the metric name from the list.
Instance Name	Depending on the metric name selected, the available instance names are displayed. You can choose the instance name from the list.
Label	<p>Specifies the label which will be displayed in the chart for the corresponding query. The label identifies this metric in the chart. 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> <p>@@[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.</p> <p>@@INSTANCENAME - The instance name that is defined.</p> <p>@@[METRIC] - The metric name. For example, (GBL_CPU_TOTAL_UTIL)</p> <p>@@[CLASS] - The metric class. For example: (GLOBAL)</p> <p>@@[SYSTEM] - The node name supplying the metric. For example: (mysys.net.com)</p> <p>@@[DATASOURCE] - The data source for this metric. For example: (PA, EPC)</p> <p>@@metric - The value of the metric from the same data source and class. For example: @@BYDSK_DEVNAME labels 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. Example: @@[SYSTEM]:@@[CLASS]:@@[METRIC] may produce a label as "mysys.net.com:GLOBAL:GBL_CPU_TOTAL_UTIL"</p>
<p>Actions</p>   	<p>Select one of the options to perform the following actions:</p> <p>Hide metric - This option helps you to hide the metric in the chart. If you enable this option, the metric is not</p>

UI Element and Options	Description
	<p>displayed in the chart. If you disable this option, the metric displayed in the chart.</p> <p>Duplicate metric - This option helps you to duplicate the metric name and its attributes. This is useful while defining multiple instances for the same metric. To duplicate the metric, click the Duplicate metric option.</p> <p>Remove metric - This option removes the metric.</p>
<b>Import Graph Template</b>	Select this option to import graph templates from OMi Management Packs. For more information, see <a href="#">"Importing Graph Templates" on page 314</a> .
<b>Add Metric</b>	Select this option to add the metrics query.


**Note:** If you are importing graph templates, do not specify the system name in the title of the chart.

By default, the label of the chart is defined as @@[METRIC]. If you are defining a chart with a metric for different instances of a class, then the chart legend is duplicated with the same metric name and the chart data is not updated correctly. If you are creating a chart for different instances of a class, it is recommended to differentiate the chart legend by specifying an instance name in the label of the chart. You can update the label of the chart as @@[METRIC] - @@INSTANCENAME

## Axis and Grid

You can use this tab to specify the axis and grid attributes for the charts.

UI Element and Options	Description
Left Y and Right Y	<p>Depending on your requirements, the charts can be customized using these attributes. Based on the selections for Left Y and Right Y, the chart is appended with the units, grid attributes, and labels.</p> <p><b>Unit</b> - You can use this option to specify the following:</p> <ul style="list-style-type: none"> <li>Unit - You can choose short, percent, or none</li> </ul>

UI Element and Options	Description
	<ul style="list-style-type: none"> <li>• <b>Duration</b> - You can choose the duration by specifying nanoseconds, milliseconds, microseconds, or seconds.</li> <li>• <b>Data</b> - You can choose the data size format by specifying bits, bytes, or kilobytes.</li> <li>• <b>Data Rate</b> - You can choose the data rate by specifying bits/second or bytes/second.</li> </ul> <p><b>Grid Max</b> - You can use this option to specify the grid values.</p> <p><b>Label</b> - You can specify the label for Left Y and Right Y axis. The labels appear in the chart.</p>
Show Axis	Select to display x-axis and y-axis.
Range	<p>You can specify the range values (Level 1 and Level 2 ) and the color options. The chart is updated when the metric values exceed Level 1, Level 2 or both the values.</p> <p><b>Level 1</b> - Click to choose Level 1 value. If the metric value exceeds the specified Level 1 value, the chart is appended using the defined color options.</p> <p><b>Level 2</b> - Click to choose the Level 2 value. If the metric value exceeds the specified Level 2 value, the chart is appended using the defined color options.</p> <p>You can select the Level 1, Level 2, or both the values.</p> <p> - Click to choose the Level 1 and Level 2 color options. The chosen color options is appended to the chart if the metric values exceed Level 1 or Level 2.</p>



UI Element and Options	Description
	<b>Line Mode</b> - Click to select line mode. If the metric values exceed the Level 1 or Level 2 values, the chart is appended with a line.
Legend	<p>You can use this option to specify the legend settings.</p> <p><b>Show</b> - Select to show the legend in the performance dashboard.</p> <p><b>Table</b> - Select to show the legend as a table in the performance dashboard.</p> <p><b>Right Side</b> - Select to show the legend in the right side in the performance dashboard.</p> <p><b>Hide Empty</b> - Select to hide empty legend.</p>
Legend Values	You can choose the legend values that need to appear in the chart. You can select Min, Max, Avg, Current, and Total. For each of these legend values, the corresponding metric values are appended in the chart.

## Display Styles

You can use this tab to specify the display styles for the charts.

UI Element and Options	Description
Chart Options	You can select the chart options - Lines, Bars, or Points. Depending on the selection, the metric values are visualized as Lines, Bars or Points.
Line Options	<p>You can specify the line options in the performance dashboard by choosing the Line Fill and Line Width.</p> <p>You can also specify how</p>

UI Element and Options	Description
	<p>the null values should be depicted in the performance dashboard by defining the Null Point Mode.</p> <p>You can select staircase line to visualize the charts as a staircase.</p>
Multiple Metrics	<p>You can choose how multiple metrics can be visualized in the chart. You can choose Stack or Percent. If you choose Stack, the metric values are stacked in the chart. If you choose Percent, the metric values are displayed as percentage.</p>
Tooltip	<p>You can choose how tool tips can be depicted in the performance dashboard.</p> <p><b>All Metrics</b> - Shows all metrics on same tooltip with a shared crosshair to help follow all metrics.</p> <p><b>Stacked Values</b> - Shows metrics as stacked values. You can choose cumulative or individual for specifying how the values in stacked charts must be calculated.</p>
Metric Specific Overrides	<p>You can add custom display styles for each metric using metric override rule. This overrides the generic display styles.</p>
<div data-bbox="243 1644 560 1686" data-label="Text"> <p>Add Metric Override Rule</p> </div> <div data-bbox="243 1749 276 1780" data-label="Image"> </div> <div data-bbox="243 1816 276 1848" data-label="Image"> </div>	<p>You can click add metric override rule and select specific styles for a metric by specifying the label for the metric.</p> <p>Click to delete the metric</p>

UI Element and Options	Description
	<p>override rule.</p> <p>Click to add the display styles for a metric.</p> <p>Click to choose the label from the list of available labels.</p>

## Options

You can use this tab to specify the font and coloring options for the charts.


UI Element and Options	Description
Big Value	<p>The Big Value comprises the following options:</p> <p>Prefix - The value is prefixed with the specified prefix name. For example, if you specify Sample as the Prefix. The chart is displayed as Sample &lt;Value&gt;.</p> <p>Value - You can choose which values need to appear in the chart. You can choose Min, Max, Avg, Current, or Total.</p> <p>Postfix - The value is postfixed with the specified postfix name. For example, if you specify MB as the Postfix. The chart is displayed as &lt;Value&gt;MB.</p>
Font Size	You can choose the font size for the Prefix, Value, and Postfix data.
Unit	<p>Depending on your requirements, the charts can be customized using these attributes. Based on the selections, the chart is appended with the units.</p> <p><b>Unit</b> - You can use this option to specify the following:</p>

UI Element and Options	Description
	<ul style="list-style-type: none"> <li>• <b>Unit</b> - You can choose short, percent, or none.</li> <li>• <b>Duration</b> - You can choose the duration by specifying nanoseconds, milliseconds, microseconds, or seconds.</li> <li>• <b>Data</b> - You can choose the data size format by specifying bits, bytes, or kilobytes.</li> <li>• <b>Data Rate</b> - You can choose the data rate by specifying bits/second or bytes/second.</li> </ul>
Coloring	<p>You can select the range options and the coloring options.</p> <p><b>Background</b> - Select if you want a background color to be displayed.</p> <p><b>Value</b> - Select if you want coloring for the values.</p> <p><b>Range</b> - Specify the range values (Level 1, Level 2, Level 3). If the metric values exceed these levels, then the chart is appended with the defined color options.</p> <p><b>Colors</b> - Click to select and choose colors for Level 1, Level 2, and Level 3 range values.</p> <p><b>Invert Order</b> - Click to invert the order of the range values (Level 1, Level 2, and Level 3).</p>
Spark Lines	<p>You can view the historical data that provides valuable context at a glance. It does not include x or y axis.</p> <p>You can specify the following options for spark lines:</p> <p><b>Show</b> - Click to show the spark lines.</p> <p><b>Background Mode</b> - Click to show</p>

UI Element and Options	Description
	<p>the background.</p> <p><b>Line Color</b> - Click to specify the line color for spark lines.</p> <p><b>Fill Color</b> - Click to specify the fill color for spark lines.</p>
Value to Text Mapping	<p>This option enables you to map values to text. For example, you can map value 12 to appear as N/A. You can do this by using the following options:</p> <p><b>x</b> - Click to delete the value to text mapping</p> <p><b>Value</b> - Specify the value that needs to be mapped to text.</p> <p><b>Text</b> - Specify the text</p> <p><b>+</b> - Click to add the value to text mapping</p>

## Link

You can use this option to link the chart to a performance dashboard. This option appears for graph, pie, table, and process tables.

UI Element and Options	Description
Link Label	Specify the name for the link label.
Dashboard	Specify the performance dashboard to which the chart must be linked.
URL	Specify the URL of the performance dashboard to which the chart must be linked.
	Click to delete the link.
Add Link	Click to add a link to a performance dashboard.

## Styles

You can use this tab to specify the table attributes. This option appears only for tables and process

tables.

UI Element and Options	Description
Table Type	You can choose the table type as TimeSeries or Structured. If you choose TimeSeries, the metric values are for a specific duration are displayed. If you choose Structured, the latest metric values are displayed.
Styling Options	You can define the column width.
Sorting	You can enable this option to choose table sorting. By enabling sorting, you can sort the column headers in ascending or descending order. It allows multi-level sorting. You can sort the data of one column and then followed by another column.
Formatting	You can define the formatting by choosing the decimal places. The values are updated accordingly.
Time as Date	You can select this option if you want to display the time as date. If selected, the UNIX timestamp is displayed in a regular date format.
Column Coloring	<p>You can select the column coloring options.</p> <p><b>Background</b> - Select if you want a background color to be displayed.</p> <p><b>Value</b> - Select if you want values to be displayed.</p> <p><b>Range</b> - Specify the range values (Level 1, Level 2, Level 3). If the metric values exceed these levels then the chart is appended with the defined color options.</p> <p><b>Colors</b> - Click to select and choose colors for Level 1, Level 2, and Level 3.</p> <p><b>Invert Order</b> - Click to invert the order of the range values (Level 1, Level 2, and Level 3).</p>

## Getting Started

The following section provides information about the tasks that you need to perform to start using OMi Performance Dashboard.

## Task 1: Creating Performance Dashboard

You can create the performance dashboard. For more information, see ["Creating a Performance Dashboard"](#)

## Task 2: Configuring Performance Dashboard

After creating the performance dashboard, you need to add content and configure the performance dashboard. For more information, see ["Configuring Performance Dashboard"](#).

## Task 3: Launching Performance Dashboard

After configuring the performance dashboard, you can launch the performance dashboard to visualize the performance metrics. For details, see ["Launching a Performance Dashboard" on page 310](#).

For more information about designing and managing performance dashboard, see ["Designing Performance Dashboard"](#) and ["Managing Performance Dashboards"](#).

## Designing Performance Dashboard

OMi Performance Dashboard comprises out-of-the-box dashboards for exploring and visualizing the performance metrics. In addition, you can also create customized performance dashboards to visualize the performance metrics of CIs.

Using OMi Performance Dashboard, you can perform the following tasks to design the performance dashboard:

["Creating a Performance Dashboard"](#)

["Configuring Performance Dashboard"](#)


["Visualizing Events in the Performance Dashboard"](#)

["Managing Multiple Instances across Systems using Instance Parameterization"](#)

## Creating a Performance Dashboard

You can create and customize dashboards. Using the Performance Pane, you can create the performance dashboard for visualizing the performance metrics.

To create the performance dashboard in OMi, follow these steps:

1. Click **Workspaces > Performance Perspective**.
2. In the View Explorer pane, select the **View** from the drop-down list. For example, you can select **System\_Infrastructure** to view the CIs associated with this view.
3. In the View Explorer pane, click the CI for which you want to create a performance dashboard.
4. In the Performance pane, click  to create a new performance dashboard.
5. You can create rows and add the charts such as graph, single value, text, pie, table, and process table into the performance dashboard. For more information, see ["Configuring Performance Dashboard" on page 305](#).

## Editing Charts

You can edit and customize the charts - graph, single value, text, pie, table, and process table. Before editing charts, you must create or launch an existing performance dashboard. For information about creating a Performance Dashboard, see ["Creating a Performance Dashboard" above](#). For information about launching an existing Performance Dashboard, see ["Launching a Performance Dashboard" on page 310](#). After you create or launch a Performance Dashboard, you must configure the Performance Dashboard. For more information, see ["Configuring Performance Dashboard" on page 305](#).

### How to edit charts (graph, single value, pie, and table)

To edit the charts, click the title of the chart and click **Edit**. Depending on the chart type, the different options appear. To specify the attributes for the charts, follow these tasks:

#### Task 1: Specifying the metrics

You can specify the metrics and other attributes using the **Metrics** tab. This tab is available for Graph, Single Value, Pie, and Table. It is recommended to specify maximum eight metrics.



To define these attributes, follow these steps:


1. **Title** - Specify the title of the chart. This title appears at the top of the chart.
2. **Data Source** - Choose the data source. The data sources - Operations Agent and Site Scope are supported. You can choose one of the data sources.
3. **Class Name** - Depending on the data source selected, the class names are displayed. You can choose the class name from the list.
4. **Metric Name** - Depending on the class name selected, the metric names are displayed. You can choose a metric name from the list.

For detailed description of the metric, select open the metric help. The detailed description of the selected metric appears as a popup. For example, if you select, Operations Agent as the DataSource, Global as the Class Name, and GBL\_ALIVE\_PROC as the metric, you can view the detailed description of this metric. The metric help appears as a popup.

If the metric description character length is more than 500, the popup contains a **more** option. A new window appears selected metrics and their metric descriptions. The selected metrics are highlighted. It also contains the metric name listing of the selected class name. You can also search for a specific metric name using the search box. For example, the window shows the metrics and their descriptions for the class name - Global.

**Note:** The metric help is available only for HPE Operations Agent CIs.

5. **Instance Name** - Depending on the metric name selected, the available instance names are displayed. You can choose the instance name from the list.
6. **Label** - Specify the label which is displayed in the chart for the corresponding query. The label identifies this metric in the chart.
7. **Stat Function** - You can use this to aggregate the data points over a specific period of time and visualize data. You can choose none, min, max, avg to aggregate data points. For example, if you choose average (avg), the average data points are aggregated and displayed in the chart. This feature is available only for OpsBridge Store data source. To use this feature, you must choose **Dashboard Settings > Points Every** and choose the Points Every value. Do not choose Raw as the Points Every value.
8. **Optional. Actions** - Select one of the options to perform the following actions:
  - a. **Hide metric** - This option helps you to hide the metric in the chart. If you enable this option, the metric is not displayed in the chart. If you disable this option, the metric displayed in the chart.
  - b. **Duplicate metric** - This option helps you to duplicate the metric name and its attributes. This is useful while defining multiple instances for the same metric. To duplicate the metric, click the

- Duplicate metric option.
- c. Remove metric - This option removes the metric.
9. *Optional.* To add more metrics, click **Add Metric**
  10. *Optional.* If you are using OMi Management Packs and need to import graph templates, you can click . For more information about importing graph templates, see ["Importing Graph Templates" on page 314.](#)

## Task 2: Specifying the axis and grid

Depending on your requirements, the charts can be customized using the following attributes. This tab is available only for Graph charts. You can define a host of attributes such as axis, grid, range, legend, and so on using the **Axis and Grid** tab. To define these attributes, follow these steps:


1. Based on the selections for Left Y and Right Y, the chart is appended with the units, grid attributes, and labels.

**Units:** You can choose any of the following units:

- Unit - You can choose short, percent, or none
- Duration - You can choose the duration by specifying nanoseconds, milliseconds, microseconds, or seconds.
- Data - You can choose the data size format by specifying bits, bytes, or kilobytes.
- Data Rate - You can choose the data rate by specifying bits/second or bytes/second.

**Grid Max** - You can use this option to specify the grid values.

**Label** - You can specify the label for Left Y and Right Y axis. The labels appear in the chart.



2. Show Axis - Select X-Axis and Y- Axis if you want to view it in the performance dashboard.
3. Range - Specify the range values (Level 1 and Level 2 ) and the color options. The chart is updated when the metric values exceed Level 1, Level 2 or both the values.
  - a. **Level 1** - Click to choose Level 1 value. If the metric value exceeds the specified Level 1 value, the chart is appended using the defined color options.
  - b. **Level 2** - Click to choose the Level 2 value. If the metric value exceeds the specified Level 2 value, the chart is appended using the defined color options.
  - c. Click  to choose the Level 1 and Level 2 color options. The chosen color options is appended to the chart if the metric values exceed Level 1 or Level 2.

- d. **Line Mode** - Click to select line mode. If the metric values exceed the Level 1 or Level 2 values, the chart is appended with a line.
4. Legend, - Specify the legend settings.
  - Show** - Select to show the legend in the performance dashboard.
  - Table** - Select to show the legend as a table in the performance dashboard.
  - Right Side** - Select to show the legend in the right side in the performance dashboard.
  - Hide Empty** - Select to hide empty legend.
5. Legend Values - Choose the legend values that need to appear in the chart. You can select **Min**, **Max**, **Avg**, **Current**, and **Total**. For each of these legend values, the corresponding metric values are appended in the chart.

### Task 3: Display styles

You can customize the display styles for the charts using the **Display Styles** tab. This tab is available only for Graph charts.

1. Chart Options - Select the chart options - Lines, Bars, or Points. Depending on the selection, the metric values are visualized as Lines, Bars or Points.
2. Line Options - Specify the line options in the performance dashboard by choosing the Line Fill and Line Width. For example, you can specify Line Fill as 6 and Line Width as 4. The chart is updated accordingly.
3. Line Options - Specify how the null values must be depicted in the chart by defining the Null Point Mode as Connected, Null, or Null as Zero.
4. Line Options - Select staircase line to visualize the charts as a staircase.
5. Multiple Metrics - Choose how multiple metrics can be visualized in the chart. You can choose Stack or Percent. If you choose Stack, the metric values are stacked in the chart. If you choose Percent, the metric values are displayed as percentage.
6. Tooltip - Choose how tool tips can be depicted in the performance dashboard. You can choose the following option:
  - All Metrics** - Shows all metrics on same tooltip with a shared crosshair to help follow all metrics.
7. Metric Specific Overrides - Add custom display styles for each metric using metric override.
  - a. Click **Add Metric Override Rule**. The metric override rule appears.
  - b. In the label field, click to choose a metric label from the list of available labels.

- c. Click  to choose the display style. You can use this option and also choose more display styles for a specific metric label. For example, you can choose Bars as true and Line Fill as 4 for a specific metric label.
- d. The chart is updated with the bars and line fill as 4 for the chosen metric label.
- e. *Optional.* To delete a metric override rule, choose  .

## Task 4: Specifying the options

You can use the **Options** tab to specify the Prefix or Postfix data, coloring options, value to text mapping and so on. This tab is available only for Single Value and Pie charts. To define these attributes, follow these steps:

1. Big Value - You can specify the following options:
  - a. Prefix - The value is prefixed with the specified prefix name. For example, if you specify Sample as the Prefix. The chart is displayed as Sample <Value>.
  - b. Value - You can choose which values need to appear in the chart. You can choose Min, Max, Avg, Current, or Total.
  - c. Postfix - The value is postfixed with the specified postfix name. For example, if you specify MB as the Postfix. The chart is displayed as <Value>MB
2. Font Size - Choose the font size for the Prefix, Value, and Postfix data.
3. Unit - Choose any of following options that is displayed in the chart.
  - Unit - You can choose short, percent, or none
  - Duration - You can choose the duration by specifying nanoseconds, milliseconds, microseconds, or seconds.
  - Data - You can choose the data size format by specifying bits, bytes, or kilobytes.
  - Data Rate - You can choose the data rate by specifying bits/second or bytes/second.
4. Coloring - Select the following range options and the coloring options.
  - a. **Background** - Select if you want a background color to be displayed.
  - b. **Value** - Select if you want coloring for the values.
  - c. **Range** - Specify the range values (Level 1, Level 2, and Level 3). If the metric values exceed these levels then the chart is appended with the defined color options.
  - d. **Colors** - Click to select and choose colors for Level 1, Level 2, and Level 3 range values.
  - e. **Invert Order** - Click to invert the order of the range values (Level 1, Level 2, and Level 3).

5. Spark Lines - View the historical data that provides valuable context at a glance. It does not include x or y axis. You can specify the following options:
  - a. **Show** - Click to show the spark lines.
  - b. **Background Mode** - Click to show the background.
  - c. **Line Color** - Click to specify the line color for spark lines.
  - d. **Fill Color** - Click to specify the fill color for spark lines.
6. Value to Text Mapping - You can map values to text. For example, you can map value 12 to appear as N/A. You can do this by using the following options:
  - a. **x** - Click to delete the value to text mapping
  - b. **Value** - Specify the value that needs to be mapped to text.
  - c. **Text** - Specify the text
  - d. **+** - Click to add the value to text mapping

## Task 5: Specifying the styles

You can use the Styles tab to specify the table attributes. This tab is available only for Table charts. To define these attributes, follow these steps:

1. Table Type - Choose the table type as TimeSeries or Structured. If you choose TimeSeries, the metric values for a specific duration are displayed. If you choose Structured, the latest metric values are displayed. This is not applicable for process tables.
2. Styling options - Choose the width of the columns.
3. Sorting - Select if you want table sorting. By enabling sorting, you can sort the column headers in ascending or descending order. It allows multi-level sorting. You can sort the data of one column and then followed by another column.
4. Formatting - Define the formatting by choosing the decimal places. The values are updated accordingly.
5. Time as Date - Select if you want to display the time as date. If selected the UNIX timestamp is displayed in a regular date format.
6. Column Coloring - Select the range, coloring options and so on. You can do the following:
  - a. **Background** - Select if you want a background color to be displayed.
  - b. **Value** - Select if you want values to be displayed.
  - c. **Range** - Specify the range values (Level 1, Level 2, and Level 3). If the metric values exceed these levels then the chart is appended with the defined color options.

- d. **Colors** - Click to select and choose colors for Level 1, Level 2, and Level 3.
- e. **Invert Order** - Click to invert the order of the range values (Level 1, Level 2, and Level 3).

## Task 6: Specifying the link

You can use this option to link the chart to a performance dashboard. This tab is available only for Graph, Pie, Table, and Process Table charts.


1. Link Label - Specify the name for the link label. The chart is linked to the performance dashboard using this link.
2. You can choose one of the following options to link the chart to the performance dashboard:

**Dashboard** - Click **Dashboard** and select a performance dashboard from the drop-down list.

**URL** - Click URL and specify the URL. The URL must be absolute. It must start with `https` or `http`. You can link the performance dashboard to any given URL.

3. To add more links, click **Add Link**. To delete the newly added links, click 

**Note:** Before adding more links, you must fill the mandatory link.

4. Click **Back to Dashboard** and click . In the Performance Pane, the link appears at the bottom of the charts - graph, pie, table, or process table. You can click the label to open the performance dashboard.

## How to edit text charts

You can use text charts to add information that helps you understand the chart data. To specify information for the text charts, follow these steps:

1. To edit the text charts, click the title of the chart and click **Edit**.
2. Title - Specify the title of the text chart. This information appears at top of the text chart.
3. Mode - Choose Markdown, Text, or HTML. Based on the selection, you can write the text accordingly.
4. Content - Write the content in the specified format. This content appears on the text chart.
5. Click **Close** to exit and return to the performance dashboard.

## How to edit process tables

Process Table charts enable users to drill down to process data for diagnosing the performance issues. To edit the process table, click the title of the chart and click **Edit**. To specify the attributes, follow these tasks:

### Task 1: Specifying the Metrics

You can specify the metrics and other attributes using the **Metrics** tab. The Process Table is available for Operations Agent Data Sources only. To define these attributes, follow these steps:

1. Specify the title of the chart. This title appears at the top of the chart.
2. By default, the process table chart is available for process class. The corresponding metric names are displayed for the process class. You can choose the metric name from the list.
3. Specify the label that you want to display on the chart for the corresponding query. The label identifies this metric in the chart.
4. *Optional*. Remove metric - Select this option to remove the metric.
5. *Optional*. To add more metrics, click **Add Metric**

### Task 2: Specifying the styles

You can use the Styles tab to specify the table attributes. To define these attributes, follow these steps:

1. Table Type - Choose the table type as TimeSeries or Structured. If you choose TimeSeries, the metric values for a specific duration are displayed. If you choose Structured, the latest metric values are displayed.
2. Styling options - Choose the width of the columns.
3. Sorting - Select if you want table sorting. You can enable this option and sort the column headers in ascending or descending order. It allows multi-level sorting. You can sort the data of one column and then followed by another column.
4. Formatting - Define the formatting by choosing the decimal places. The values are updated accordingly.
5. Time as Date - Select if you want to display the time as date. If selected the UNIX timestamp is displayed in a regular date format.

6. Column Coloring - Select the range, coloring options and so on. You can do the following:
  - a. **Background** - Select and choose the background color to be displayed.
  - b. **Value** - Select and choose the values to be displayed.
  - c. **Range** - Specify the range values (Level 1, Level 2, and Level 3). If the metric values exceed these levels then the chart is appended with the defined color options.
  - d. **Colors** - Click to select and choose colors for Level 1, Level 2, and Level 3.
  - e. **Invert Order** - Click to invert the order of the range values (Level 1, Level 2, and Level 3).


### Task 3: Specifying the link

You can use this option to link the chart to a performance dashboard.


**Note:** This tab is available only for Graph, Pie, Table, and Process Table charts.

1. Link Label - Specify the name for the link label. The chart is linked to the performance dashboard using this link.
2. You can choose one of the following options to link the chart to the performance dashboard:
 

**Dashboard** - Click **Dashboard** and select a performance dashboard from the drop-down list.

**URL** - Click URL and specify the URL. The URL must be absolute. It should start with `https` or `http`. You can link the performance dashboard to any given URL.
3. To add more links, click **Add Link**. To delete the newly added links, click .

**Note:** Before adding more links, you must fill the mandatory link.

4. Click **Back to Dashboard** and click . In the Performance Pane, the link appears in the bottom of the charts - graph, pie, table, or process table. You can click the label to open the performance dashboard.

## Viewing Charts

After editing the charts and defining the attributes, you can view the charts in the Performance Perspective page.

### Viewing graphs

You can view the graphical representation of selected metrics using the graph charts. For example, you



can edit the graph chart and select the metrics - BYCPU\_CPU\_TOTAL\_UTIL and BYCPU\_CPU\_TOTAL\_TIME to visualize the metric details as a graphical representation. The graph charts also contains legends with the selected metrics. You can toggle the legends to view only the specific metric or all metrics in the chart.

## Viewing process tables

You can view the detailed process information by using the Process Table charts. In addition, you can view specific process information by filtering the data.

For numeric data, the filter operators >, <, >=, <=, =, and != are supported. If you specify a numerical value such as 4 as filter, then by default the data is filtered for operator '=' to 4.

For non-numeric data, the filter string **contains is** supported. For example, if you search for string **Agent** for Process Name column, only the Process Name which contains Agent is filtered.


# Configuring Performance Dashboard

This section provides step-by- step information about creating and configuring a performance dashboard. Before configuring the performance dashboard, you must create a new performance dashboard. For more information, see ["Creating a Performance Dashboard" on page 296](#).

## Add rows and charts

You must add new rows and then you can add a graph, single value, text, pie, table, and process table to the performance dashboard.

1. **Workspaces > Operations Console > Performance Perspective**

2. In the Performance pane, click .

3. In the Performance pane, click  > **Add Charts**.

**Note:** You can also drag and drop charts to another row.


4. Click the required chart. For example, you can select Graph.
5. The chart is added to the performance dashboard. Similarly, you can add the required charts to the performance dashboard.

## Edit charts

You can click the title to edit and configure the charts. You can modify the attributes of the charts.

1. In the Performance pane, click the title of the chart to edit. For example, you can click the title of the graph to edit.
2. Click **Edit**. You can now add or modify the Metrics, Axis & Grid, and Display Styles.
3. After specifying the attributes, you can click **Back to Dashboard**. For more information about editing charts, see ["Editing Charts" on page 296](#).

Save the performance dashboard

1. In the Performance pane, click  to save the performance dashboard.
2. Specify a name and click **Save**.


## Visualizing Events in the Performance Dashboard

Using the event overlay feature, you can visualize when the events of a specific severity occur in the time frame shown in the performance dashboard. By visualizing such events, you can diagnose specific issues.

**Use Case:** If there is a spike in the metric, and if the spike can be overlaid on the performance dashboard along with the event being generated, this helps the performance expert to co-relate information about the spike and the event generated. The performance expert can diagnose and take action.

### How to visualize events in the Performance Dashboard

You can visualize the events into a new performance dashboard or to an existing performance dashboard. For information about creating a performance dashboard, see ["Creating a Performance Dashboard" on page 296](#). For information about launching an existing performance dashboard, see ["Launching a Performance Dashboard" on page 310](#).

1. In the Performance Pane, click . The Dashboard Settings appear.
2. In the Dashboard Settings, click **Event Overlay**.
3. You can view the open and closed events in the dashboard. Select the event severity that you want to visualize in the performance dashboard:

Major - Displays Major events within the chosen time range in the performance dashboard. The major events are highlighted in orange.

Critical - Displays Critical events within the chosen time range in the performance dashboard. The critical events are highlighted in red.

Minor - Displays Minor events within the chosen time range in the performance dashboard. The critical events are highlighted in yellow.

Warning - Displays Warning Events within the chosen time range in the performance dashboard. The critical events are highlighted in blue.

4. Click **Close**.

In the Performance Pane, you can visualize the events in the performance dashboard based on your selections.


## Managing Multiple Instances across Systems using Instance Parameterization

You can manage multiple instances running on different systems by defining instance parameters in the performance dashboard. For example, if System A has three instances of metric class X and System B has four instances of metric class X, you can create a performance dashboard with an instance parameter for metric class X and reuse the performance dashboard on both systems. The instance parameter is updated with the instances of metric class X dynamically based on the system.

**Use Case:** Use Instance Parameterization, for example, if you have many disks or application instances and you want to visualize the performance metrics for only some of those instances.

### How to define instance parameters

You can define instance parameters in a new performance dashboard or to an existing performance dashboard. For information about creating a performance dashboard, see ["Creating a Performance Dashboard" on page 296](#). For information about launching an existing performance dashboard, see ["Launching a Performance Dashboard" on page 310](#).

1. In the Performance pane, click .
2. In the Dashboard Settings page, click the Parameterization tab.
3. Click the Add tab to define instance parameters.
4. In the Add tab, specify the **Parameter Name**.

5. Select the **Data Source**. The available data sources are listed based on the CI that is selected in the View Explorer.
6. Select the **Class Name**. The available class names are listed based on the CI that is selected in the View Explorer.
7. *Optional*. Specify a regular expression in the regex field to filter the instance names.

#### Examples

If the defined instance parameters are (1-10) and you want to retrieve the first three parameters, specify the following expression in the Regex field:

```
/^[1-3]/
```

If the defined instance parameters are `OperationsAgent`, `memory_management`, `test`, and `test_cpu`, and you want to retrieve parameter names starting with "m", specify the following expression:

```
/^[m]/
```


Specify `test*` to retrieve all the parameter names starting with the keyword `test`.

**Note:** After you save the dashboard, the regular expression that you specify is automatically executed when the dashboard is relaunched.

8. Click **Add** to add the parameter.

The parameter name appears in the parameters tab.

## How to view instance parameters in the Performance Dashboard

1. In the Performance pane, click  and choose the performance dashboard to view. You can view the parameter and the instances in a drop-down list in the Performance pane.
2. Select the instances for which you want to visualize the performance metrics. In addition, the drop-down list contains the following options:
  - a. Select All - Click to select all instances.
  - b. Select None - Click to show no instances.



**Note:** After you save the dashboard, the instance selection is also saved. The drop-down list displays the previously selected instances when the dashboard is relaunched.

### Default instance parameter selection

The following table describes the instance parameters that are selected by default when a performance dashboard is launched. You can select or deselect the instance parameters based on your requirement.

Scenario	Instance Parameter(s) Selected by Default
A new instance parameter is added.	First
An existing instance parameter is updated.	First
A parametrized dashboard is launched from a different CI and all the previously selected instances are available on the new CI.	All the previously selected instances
A parametrized dashboard is launched from a different CI and one or more previously selected instances are available on the new CI.	One or more previously selected instances that are available on the new CI
A parametrized dashboard is launched from a different CI and none of the previously selected instances are available on the new CI.	First

### How to edit defined instance parameters

1. In the Performance pane, click  and choose the performance dashboard. The dashboard is displayed with the drop-down list containing the defined instance parameters.
2. Click .
3. In the Dashboard Settings page, click the Parameterization tab.
4. Click **Edit** and update the fields as required.
5. Click **Update**.

The chart is updated with the edited instance parameters.

## Managing Performance Dashboards

This section provides information about the tasks related to managing performance dashboards.

"Launching a Performance Dashboard"

"Saving a Performance Dashboard"

"Exporting a Performance Dashboard"

"Importing a Performance Dashboard"

"Adding and Using Favorites"

"Data Forwarding to Business Value Dashboard (BVD)"

"Using the Date Range Panel to Visualize Time-Specific Data "

"Using the Dashboard JSON"


"Deleting a Performance Dashboard"

## Launching a Performance Dashboard

You can launch out-of-the box performance dashboards and the manually created dashboards. You can launch performance dashboards by using one of the following methods:

### Using the Performance Perspective

To list the dashboards for a specific CI, follow these steps:

1. In the View Explorer pane, select **View**. For example, you can select System\_Infrastructure and view the CIs related to System\_Infrastructure.
2. In the View Explorer pane, you can choose a specific CI for which you want to view the performance dashboards.
3. In the Performance pane, click  to view the available dashboards for the selected CI.
4. Click the required performance dashboard. For example, you can click any out-of-the-box performance dashboard. In addition, you can search for a performance dashboard by specifying the title in the search option.

The performance dashboard appears in the Performance pane.

**Note:** You cannot delete the out-of-the-box performance dashboards. Hence, they do not have a delete option.

### Using the Event Perspective tab

1. Click **Workspaces > Operations Console > Event Perspective**.
2. Click the event for which you want to view a performance dashboard in the **Event Browser** pane.
3. In the Actions pane, click **Show Performance Dashboard** to view the performance dashboard.

### Using My Workspace

You can add OMi Performance Dashboard as a component to a My Workspace page by following these steps:


1. Click **New Page** button in the Page Management tool bar. You can add the OMi Performance Dashboard component to an existing page.
2. *Optional.* 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 Dashboard** or drag it 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 Management > Performance Dashboard** from the component gallery and drag it to any area on the page.


4. *Optional.* Select **View Explorer** from the component gallery and drag it to any area on the page. You can get the CI information from other UI mashup components.

## Saving a Performance Dashboard

To save a performance dashboard, follow these steps:

1. Click **Workspaces > Operations Console > Performance Perspective**.
2. In the View Explorer pane, select the **View** and then select the CI. For example, you can select **System\_Infrastructure** and view the CIs related to **System\_Infrastructure**.
3. In the Performance pane, click  to create a new performance dashboard.

For information about creating a performance dashboard, see "[Creating a Performance Dashboard](#)".



4. Click  to save the performance dashboard. The Save page appears with the following options:
  - a. **Save** - Click to save the performance dashboard.
  - b. **Cancel** - Click to cancel.
5. Specify the name of the performance dashboard and click **Save**.

A message appears stating that the performance dashboard is saved.


## Saving a Copy of a Performance Dashboard

You can launch a performance dashboard and create a copy of the performance dashboard.

To save a copy of the performance dashboard, follow these steps:

1. Click **Workspaces > Operations Console > Performance Perspective**.
2. In the View Explorer pane, select the **View** and then select the CI. For example, you can select System\_Infrastructure and view the CIs related to System\_Infrastructure.
3. In the Performance pane, click  to view the available dashboards for the selected CI.
4. Click the required dashboard.
5. Click  and then click **Save As** to create a copy of the performance dashboard. The Save page appears with the following options:
  - a. **Save** - Click to save the performance dashboard.
  - b. **Cancel** - Click to cancel.
6. Specify the name of the performance dashboard and click **Save**.

A message appears stating that the performance dashboard is saved.

**Note:** To mark the performance dashboard as default, click  > **Mark as Default**.



## Saving a Performance Dashboard as PDF

You can save a performance dashboard in PDF format to review the dashboard content. The size of the generated PDF is 20" X 60". The PDF can include maximum 15 charts, with a height of 250 pixels each. The PDF includes details such as the name of the dashboard, the name of the CI from which it is launched, creation date and time, and the date range. The PDF does not include the following:

- Real-time and historical data icons in combined charts.
- Event overlay bubbles above the event lines.
- Blue background for dashboards with real-time charts.

Follow these steps to save a dashboard as PDF:

1. Launch a performance dashboard:

**Workspaces > Operations Console > Performance Perspective.**

2. Click  and then click **Print To PDF**.

If you are using Mozilla Firefox, clicking **Print To PDF** automatically saves the PDF to the Downloads folder of the browser.

If you are using Apple Safari, the PDF opens in the Performance Pane. Click the **Save** icon to save the PDF. Press cmd + [ to go back to the dashboard view.

**Note:** To view the PDF in Apple Safari, ensure that Adobe PDF Viewer is integrated with the browser.

If you are using Internet Explorer, you get an option to either open or save the PDF. You can click **Save** to save the PDF.

## Exporting a Performance Dashboard

You can export the performance dashboard to edit or review the performance dashboard content.


To export the performance dashboards, follow these steps:

1. In the View Explorer pane, select **View** and then select the CI. For example, you can select System\_Infrastructure and view the CIs related to System\_Infrastructure.

2. In the Performance pane, click  to create a performance dashboard.

For information about creating a performance dashboard, see ["Creating a Performance Dashboard"](#)

To add content to the performance dashboard, see ["Editing Charts" on page 296](#)

3. In the Performance pane, click  and then click **Export Dashboard**. If you want to include the instances already existing in the performance dashboard, select **Include Instances**.

The performance dashboard is saved locally.

**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.


## Importing Graph Templates

You can import graph templates from OMi Management Packs into OMi Performance Dashboard. This helps you visualize the performance metrics for a host of applications by using the OMi Performance Dashboard.

### How to import graph templates

You can import graph templates to a new performance dashboard or to an existing performance dashboard. For information about creating a new performance dashboard, see ["Creating a Performance Dashboard" on page 296](#).

To import graph templates to an existing performance dashboard, follow these steps:

1. In the View Explorer pane, select the **View** and then select the CI. For example, you can select System\_Infrastructure and view the CIs related to System\_Infrastructure.
2. In the View Explorer pane, you can choose a specific CI for which you want to view the performance dashboards.
3. Click  to view the available performance dashboards for a specific CI.
4. Click an item to view the performance dashboard. For example, you can click any out-of-the-box performance dashboards. In addition, you can search for a performance dashboard by specifying the title in the search option.

The performance dashboard appears in the Performance pane.


5. If you already have a graph chart in the performance dashboard, you can click the title of the graph chart and then click **Edit**. The graph options appear.

If you do not have a graph chart, you need to configure the performance dashboard and add a graph chart. For more information, see ["Configuring Performance Dashboard" on page 305](#).

6. Click **Import Graph Template**. Navigate to the specific Management Pack and select the appropriate graph templates.
7. Click **Import**. The graph templates are imported to the performance dashboard.

## Duplicating Charts

You can duplicate the charts within the performance dashboard. This feature enables you to create a copy of the chart which can be edited and customized easily.

1. In the View Explorer pane, select the **View** and then select the CI. For example, you can select System\_Infrastructure and view the CIs related to System\_Infrastructure.
2. In the View Explorer pane, you can choose a specific CI for which you want to view the dashboards.
3. Click  to view the available performance dashboards for a specific CI.
4. Click an item to view the performance dashboard. For example, you can click any out-of-the-box performance dashboard. In addition, you can search for a performance dashboard by specifying the title in the search option.

The performance dashboard appears in the Performance pane.


5. If you already have a chart in the performance dashboard, you can click the title of the chart and then click **Duplicate**. A copy of the chart is created and added to the consequent row in the performance dashboard.

## Importing a Performance Dashboard

You can import the performance dashboard by using the **Import** feature.

To import the performance dashboards, follow these steps:

1. In the View Explorer pane, select the **View** and then select the CI. For example, you can select System\_Infrastructure and view the CIs related to System\_Infrastructure.

2. In the Performance pane, click  and then click **Import**
3. Click **Browse** and select the performance dashboard that you want to import.
4. Click **Open**.

The performance dashboard is imported successfully.


5. Click **Save** to save the imported dashboard.

## Sharing a Performance Dashboard

You can share the URL of dashboard or charts (graph, single value, text, pie, table, and process table) and embed in My Workspace page or any UI mashup page. This feature helps you to quickly and easily share performance dashboards or charts.

### How to Share a Performance Dashboard

1. In the View Explorer pane, select the **View** and then select the CI. For example, you can select System\_Infrastructure and view the CIs related to System\_Infrastructure.
2. In the View Explorer pane, you can choose a specific CI for which you want to view the dashboards.

3. Click  to view the available dashboards for a specific CI.
4. Click an item to view the performance dashboard. For example, you can click any out-of-the-box performance dashboards. In addition, you can search for a performance dashboard by specifying the title in the search option.

The performance dashboard appears in the Performance pane.

5. If you already have a graph chart in the performance dashboard, you can click the **title of the chart** and then click **Share**. The following options appear:
  - Current Time Range - Uses the current time range when the performance dashboard is shared using the URL. If this option is not selected, you can share the performance dashboard with the time-range that was already saved.

- **Current Chart Only** - Displays only the current chart when the performance dashboard is shared using the URL. If you do not select this option, then the performance dashboard will contain all charts.
- **Include Parameters** - Displays the existing parameters when the performance dashboard is shared using the URL. If you do not select this option, the parameters are not included. If the chart does not contain any parameters, then this setting is not applicable.

You can choose the required options and copy and share the performance dashboard URL.

If you have created a performance dashboard and do not have a chart, you need to configure the performance dashboard and add a chart. For more information, see ["Configuring Performance Dashboard" on page 305](#).

## Adding and Using Favorites

The Favorites feature helps you to quickly visualize the performance metrics of frequently monitored CIs. The Favorites comprises group of charts from different CIs. For example, if you are monitoring CIs - A and B, and you want to visualize the CPU utilization in the form of a graph for the first CI and the CPU Percentage breakdown in the form of a table for the other CI. You can add the charts - graphs and table from specific CIs to the Favorites for faster visualization of performance data.



By default, there is a **My Favorite** that is available. You can add any number of user-defined Favorites for quick visualization of performance metrics from different CIs. The default My Favorite is available for all the users and is user-specific. Each user can see the charts that they have added.

In addition, as a user, you can share user-defined favorites as public favorites with other users by using the **Share as Public** option. Using the Share as Public option, the Favorites created by one user can be made available to other users as read only. The other users can only view the public favorites but cannot modify the public favorites created by the owners.

**Use Case:** Consider a scenario where as an Administrator you want to see the performance of all business critical servers and applications from a single performance dashboard. You do not want to view different performance dashboards to visualize this information. You can view the performance metrics for business critical servers in a single performance dashboard using the Favorites feature.


### How to add Favorites and create user-defined Favorites

1. In the View Explorer pane, select the View from the drop-down list. For example, you can select System\_Infrastructure to view the CIs associated with this view.


2. In the View Explorer pane, click the CI for which you want to create a performance dashboard.
3. In the Performance pane, click  and click the performance dashboard to view the performance dashboard. For example, you can click any out-of-the-box performance dashboard to view the content.
4. In the Performance pane, click the title of the chart and then click **Add to Favorite**. The Favorite appears with the selection options. You can add the Favorite to the default performance dashboard, user-defined Favorite or create new user-defined Favorite. To create a new user-defined Favorite, follow these steps:
  - a. Click  to create a user defined Favorite
  - b. Specify the name for the user-defined Favorite
5. Click **Save**.



**Note:** You can perform the same steps for adding other Favorite charts. You cannot add favorites that are marked as public and read only.

## How to view Favorites

In the Performance pane, click  and then click **My Sample Favorite** or user-defined Favorites to view the Favorite charts. For example, you can click **My Favorite** to view the Favorite charts. The **My Sample Favorite** appears with the frequently used CIs.

## How to delete Favorites


In the Performance pane, click . The list of performance dashboards and favorites appear.

1. You can hover over the Favorite you want to delete and click . For example, you can hover over **My Sample Favorite** and click .
2. Click **Yes**. A message appears stating that the Favorite is deleted.

**Note:** You cannot delete the out-of-the box default Favorite - **My Favorite**. You can delete the public favorites created by you. You cannot delete **public favorites** created by the owners.

## How to create Public Favorites


As a user, you can view the public favorites but cannot modify the public favorites created by the owners.

1. In the View Explorer pane, select the View from the drop-down list. For example, you can select `System_Infrastructure` to view the CIs associated with this view.
2. In the View Explorer pane, click the CI for which you want to create a performance dashboard.
3. In the Performance pane, click  and click any of the favorite to view.
4. In the Performance pane, click **Save**. The Save page appears and select the option **Share as Public**. This option enables all users to view the favorites created by you. If you do not select this option, the favorites will not be available for all users. The other users cannot modify or save public favorites created by you.

**Note:** The Share as Public option does not appear for the default My Favorite.

## How to view Public Favorites

As a user, you can view the favorites created by other users that are marked as **public**. The public favorites are read only.



In the Performance pane, click  and click the Favorites that are marked as public. For example, you can click **Sample (public)**. The public favorite appears and is read only. You can modify the public favorites but cannot save the public favorites created by the owners.

## Data Forwarding to Business Value Dashboard (BVD)

OMi Performance Dashboard supports integration with Business Value Dashboard (BVD). The critical performance metrics from different data sources is forwarded from OMi Performance Dashboard to BVD. The performance metrics can be visualized in BVD. This option is available only with the Favorite feature.

Before enabling data forwarding to BVD, you must add your BVD connection as Connected Server. For more information, see "Connected Servers" in the *OMi Administration Guide*.

## How to forward data to BVD

1. In the View Explorer, select a view and then the CI for which you want to enable data forwarding.
2. In the Performance pane, click  and open a favorite. Click  and select **Share as Public** and click **Save**.

To forward data from OMi Performance Dashboard to BVD you must perform specific steps in the BVD UI. For more information, see the *BVD documentation*.

## Using the Date Range Panel to Visualize Time-Specific Data

You can use the date range panel to visualize performance data for specific date and time range. You can use the date range panel to perform the following operations:



- Use the slider and choose the specific date range and time range within the specified start date and end date.
- Use the custom range option to choose the start date and end date from calendar for visualizing custom time-specific data.
- Select relative time options for visualizing data. You can choose relative time options such as last 5 minutes, last 1 hour, and so on.

**Note:** To visualize time-specific data, you can use either date range panel or real-time. If you are using date range panel to visualize data, the real-time option is disabled.

To perform these operations using the date range panel, follow these steps:

1. In the View Explorer pane, select the View from the drop-down list. For example, you can select System\_Infrastructure to view the CIs associated with this view.
2. In the View Explorer pane, click the CI for which you want to open a performance dashboard and use the date range panel.



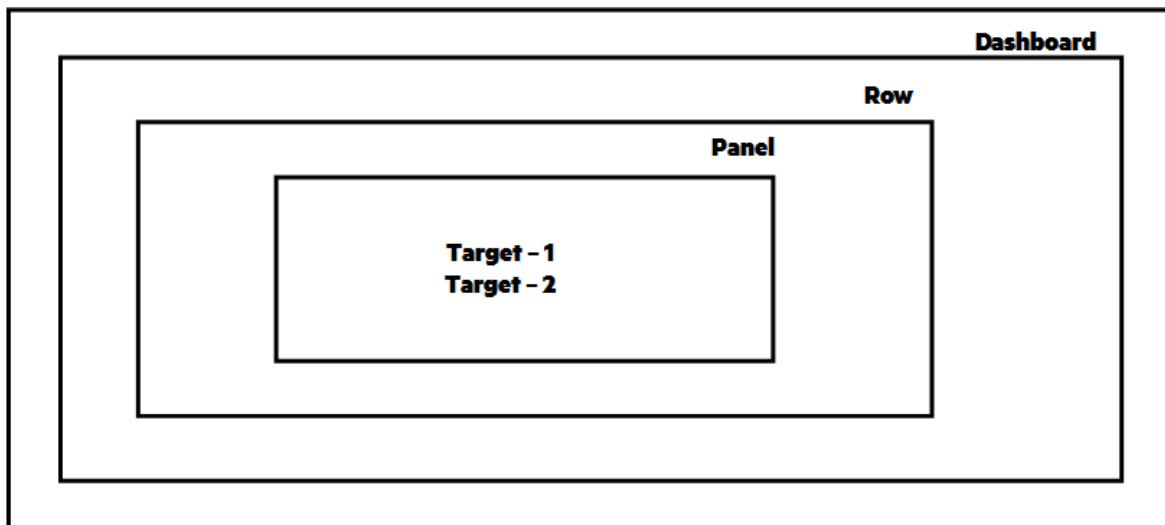
3. In the Performance Pane, click  and click any of the performance dashboard to view the performance dashboard. For example, you can click any out-of-the-box performance dashboard to view the content.
4. Click  to view the date range panel.
5. You can use the slider to view the performance data for a specific date range and time range within the specified Start Date and End Date. You can drag the slider and choose the specific date range and time range.
6. You can select the drop down to view the different options that are available. To choose the custom options (start date, end date, and specific time periods) follow these steps:
  - a. You can choose the date period by specifying the **Start Date** and **End Date**. For example, you can choose October 2nd, 2015 as the Start Date and October 3rd, 2015 as the End Date for visualizing time-specific data.
  - b. You can also choose the time line for the already specified dates.
  - c. Click **Apply** to make the changes. The date range and time range changes then appears in the slider.
  - d. You can now use the slider and choose the date range and time range within the specified start date and end date. The performance dashboard is visualized according to the selection.
7. You can also use the drop down to choose the relative time for data visualization. For example, you can click last 5 minutes or last 1 hour and so on. The performance dashboard is visualized according to the relative time selection.

## Using the Dashboard JSON

You can use the Dashboard JSON to view the metadata or attributes of the performance dashboard. For example, you can use the Dashboard JSON to review the metric names.

### Sample Dashboard JSON

The following image provides information about the structure of performance dashboard JSON.



## Dashboard JSON

The performance dashboard JSON contains the following attributes:

Element	Attribute	Description
Row	Title	You can specify the title of the row.
	Height	You can specify the height of the row.
Charts	Title	You can specify the title of the chart.
	Span	You can specify the width of the chart ranging from 1-12.
Targets	Data Source	You can specify the data source.
	Class Name	You can specify the class name.
	Metric	You can specify the metric name.
	Instance	You can specify the instance name.


## Deleting a Performance Dashboard

You can delete the manually created performance dashboards. However, you cannot delete the out-of-the-box performance dashboards.

To delete performance dashboards, follow these steps:

1. In the View Explorer pane, select the **View** and then select the CI.

For example, you can select System\_Infrastructure and view the CIs related to System\_Infrastructure.

2. In the Performance pane, click  to view the existing performance dashboards.
3. Navigate to the performance dashboard and select **Delete**.
4. Click **Yes** to confirm the deletion.

A message appears stating the performance dashboard is deleted.

## Visualizing Real-time Data

Real-time feature helps you to visualize real-time data in the performance dashboard. You can switch from historical data to real-time data quickly. By default, the real-time data is available for 30 minutes time range. In addition, you can define the time range for visualizing the real-time data. The real-time data is auto refreshed every 5 seconds. If you enable real-time, then the time-specific data chosen using Date Range Panel is overwritten with the real-time data in the performance dashboard. If you disable real-time, then the time-specific data chosen using the Date Range Panel is available in the performance dashboard. By default, when you select real-time the real-time data appears in the performance dashboard with a blue background. The real-time feature is available only for the following data sources:


- HPE Operations Agent
- SiteScope

**Note:** As soon as you enable real-time, you can view the historical data for last 15 minutes in the real-time graph. Currently this is supported for OpsBridge data store only. For HPE Operations Agent and Sitescope, the graphing starts only after you enable real-time.


### How to enable or disable Real-time view

You must create or open an existing performance dashboard and then you can enable or disable real-time data visualization. To enable or disable real-time data visualization, follow these steps:

1. In the View Explorer pane, select the **View** and then select the CI. For example, you can select System\_Infrastructure and view the CIs related to System\_Infrastructure.

2. In the View Explorer pane, you can choose a specific CI for which you want to view the dashboards.
3. Click  to view the available performance dashboards for the selected CI.
4. Click a performance dashboard. For example, you can click any out-of-the-box performance dashboard.

The performance dashboard appears in the Performance pane.

5. In the Performance pane, click . By selecting real-time, you are enabling real-time data visualization in the performance dashboard. If you cancel the selection, the real-time data is no longer displayed and it rolls back to the previous settings that were chosen using the date range panel.

The real-time data is now visualized in the performance dashboard.

## Configuring SiteScope for Real-time

SiteScope version 11.22 and above is supported for real-time.

To get the real-time data from SiteScope, follow these steps:

1. Go to SiteScope Server UI
2. Click **Preferences Option > Search Filter/Tag**.
3. Click **New Tag**. Specify the Tag Name. For example, you can specify PMiDefault.
4. Click **New for Values**. Type the value name and value description. For example, you can specify PMiDefault as the value name and value description.
5. Click **OK** and then click **Monitors**. Select a group or specific monitor for which you want real-time data and click **Properties** and then click **Search/Filter tag**.
6. Select the tag that was created and click **Save**.
7. Go to **Preferences > Integration Preferences**.
8. Click **New** and select **Data Integration** and specify the following details:
  - a. Type the name. For example, you can specify name as PMiDefault.
  - b. Type the Receiver URL as **http://<OMi\_GateWay\_Server\_host\_name>/OVPM/SiteScopeDataReceiver**.
  - c. Type the Encoding as UTF-8.

- d. Type the Reporting Interval as 15 seconds.
- e. Type the Time Synchronization Interval as 10 minutes.
- f. Select GZIP compression only.
- g. Web Server Security Settings - Type the username and password of the OMi server UI if the server is configured to use basic authentication. Otherwise, leave it blank.
- h. Reporting Tags - Select the tag that was newly created and click **OK**.

For more information about configuring SiteScope for real-time, see SiteScope Help.

## Configuring HPE Operations Agent for RTM


If you are using Operations Agent version 11.x, then RTMD services should be running in the Operations Agent. If you are using Operations Agent version 12.00, HPCS should be running in the Operations Agent. For more information, see the *HPE Operations Agent* documentation.

## Using Real-time and Historical Data Combined View


OMi Performance Dashboard provides you an option to view the real time and historical data simultaneously. You can view the combined data for one or more graphs on the dashboard. The options such as **Maximize**, **Edit**, and **Share** are not available in real-time and historical combined view.

**Note:** The real-time and historical data combined view is supported only for graphs. It is not supported for other types of charts such as single value charts, pie charts, and table charts.

How to view real-time and historical combined data





1. Click **Workspaces > Operations Console > Performance Perspective**.
2. In the **View Explorer** pane, select the **View** and then select the CI. For example, you can select System\_Infrastructure and view the CIs related to System\_Infrastructure.
3. In the **View Explorer** pane, choose a specific CI for which you want to view the dashboards.
4. In the Performance pane, click  to view the available performance dashboards for the selected CI and select a dashboard.

The performance dashboard appears in the Performance pane.

5. Click  on the top right of a graph to view the real-time data.

The real-time graph is displayed alongside the historical graph. The real-time chart shows the data for last 15 minutes and is refreshed after every 5 seconds.

Repeat this step on all the graphs for which you want to view the combined data.

6. *Optional.* Click  or  on the top right of a graph to view only the historical graph.
7. *Optional.* Click  to specify date and time range for a historic graph. The date and time range has no impact on the real-time graphs.
8. *Optional.* Click  to save the dashboard.

## CI Comparison

The CI Comparison feature enables users to compare metrics of different CIs that belong to similar CITs and evaluate the comparative performance of these CIs. You can draw graph charts for visualizing the CI Comparison dashboards. The CI Comparison dashboards are mapped to the first parent CIT of the selected CIs. If you select two or more CIs, then you can switch to CI Comparison mode. In the CI Comparison mode, you can view the CI Comparison dashboards. If you select 1 CI, you are automatically switched to the normal mode. In the normal mode, you can view the performance dashboard that are created for the CI.

Consider an environment which contains several CIs that belong to similar CITs and you want to compare some CIs that have performance issues. You want to compare the metrics using one or more metrics such as CPU, Memory, Disk, Network and so on. The CI Comparison by metric enables you to drill down, investigate, and take actions. You can also view the real-time and historical data for a CI comparison dashboard simultaneously. For more information, see ["Using Real-time and Historical Data Combined View" on the previous page](#).

**Note:** Instance Parameterization is supported for CI Comparison. Event overlay and Favorites are not supported for CI Comparison.

How to create a CI Comparison dashboard

1. Click **Workspaces > Performance Perspective**.
2. In the View Explorer pane, select the **View** from the drop-down list. For example, you can select System\_Infrastructure to view the CIs associated with this view.

3. In the View Explorer pane, use **Ctrl** key and select at least two CIs for which you want to create CI Comparison dashboard. Depending on your requirement, you can select two or more CIs. To create a CI Comparison dashboard, you must select at least two CIs.
4. In the Performance pane, click **Create New**. The CI Comparison dashboard page appears.
5. In the Performance pane, click the title of the graph to edit. Click **Edit**.


**Note:** You can draw only one graph for each chart.

6. In the Metric tab, specify the DataSource, Class Name, Metric Name, and Instance Name from the drop-down list.
7. In the Axis & Grid tab, you can define a host of attributes such as axis, grid, range, legend and customize the CI Comparison dashboard.

The preview of CI Comparison dashboard appears on top of the page.

8. Click **Back to Dashboard**.

The CI Comparison dashboard shows the comparative metric visualization as a CI Comparison dashboard. You can view the CI Comparison for the selected CIs.

9. In the Selected CIs pane, you can view the label color for the chosen CIs. You can select or deselect the CIs and visualize the dashboard for specific CI.
10. To save the CI Comparison dashboard, click  and then click **Save**. Specify a name for the CI comparison dashboard and click **Save**.


**Note:** The query editor does not contain options to add metric, hide metric and so on.

**Note:** The instances that are listed are union of instances from all the selected CIs instead of first selected CI.

#### How to view CI Comparison dashboards

In the home page of CI Comparison, you can view the CI comparison dashboards. If the user created dashboards are more than five then the dashboards are shown as drop-down list or a dashboard list is displayed in the home page.

1. Click **Workspaces > Performance Perspective**.
2. In the View Explorer pane, select the **View** from the drop-down list. For example, you can select System\_Infrastructure to view the CIs associated with this view.

3. In the View Explorer pane, use **Ctrl** key and select at least two CIs for which you want to view an existing CI Comparison dashboard. Depending on the CI selected, the CI Comparison dashboards are loaded.
4. Choose the CI comparison dashboards from the drop-down list. In CI Comparison mode, you can also view the existing CI Comparison dashboards by selecting .

#### How to edit CI Comparison dashboards

You can edit an existing CI Comparison dashboard and add a new CI to this CI Comparison dashboard.

1. Click **Workspaces > Performance Perspective**.
2. In the View Explorer pane, select the **View** from the drop-down list. For example, you can select `System_Infrastructure` to view the CIs associated with this view.
3. In the View Explorer pane, use **Ctrl** key and select at least two CIs for which you want to view an existing CI Comparison dashboard.
4. Choose the CI comparison dashboard from the drop-down list.
5. In the View Explorer pane, use **Ctrl** key and select the new CI that you plan to add to the existing CI Comparison dashboard.

In the Selected CIs pane, the CI names of the selected CIs from View Explorer are displayed.

In the Selected CIs pane, the new CI is added to the existing list of CIs. The new CI is appended with a label color.

6. In the Selected CIs pane, you can enable or disable by selecting or deselecting the CI. The CI comparison dashboard is updated accordingly. You can drill down to a specific CI by choosing the CI from the Selected CIs.

## Work Flow - Metric Streaming and Visualization of System and Custom Application Metrics

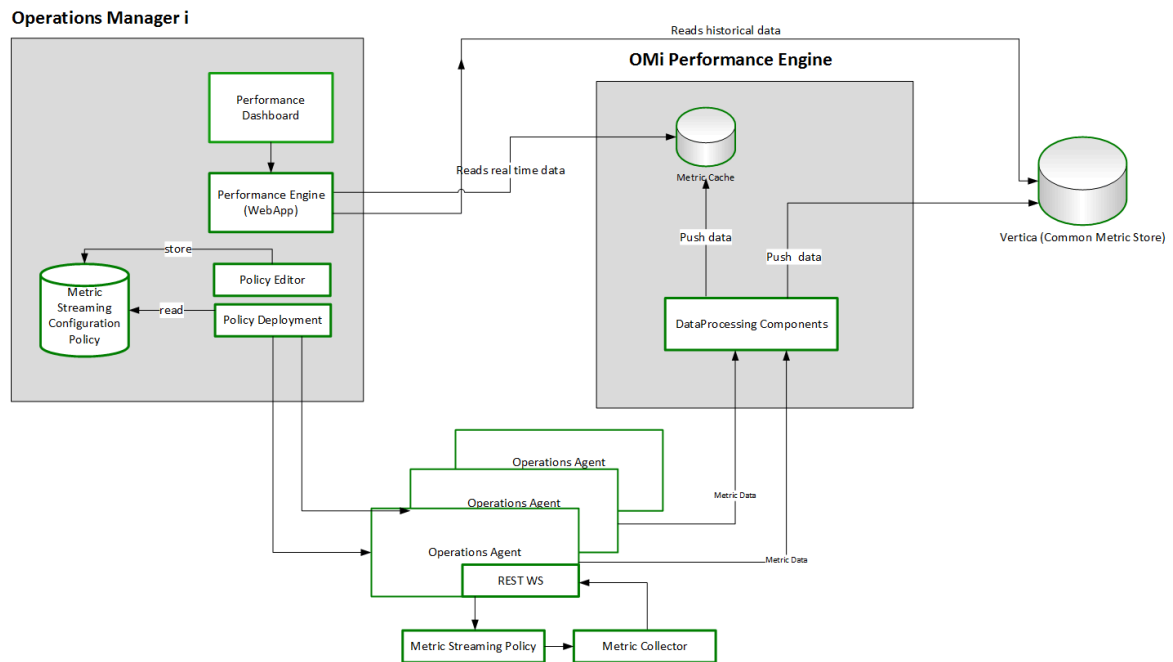
This section provides step-by-step information about metric streaming and visualization for system and custom application metrics in a large scale environment. The end to end work flow comprises several components that work together to provide metric streaming and visualization of system as well as custom application metrics.



The metric streaming configuration policy is defined in Operations Manager i and deployed to the managed node. Operations Agent streams the metric data to OMi Performance Engine which acts as the central store for storing and analyzing metrics in a large scale environment. The custom application metrics are streamed at short collection intervals from the node. OMi Performance Dashboard reads the metric data from OMi Performance Engine and visualizes the custom application metrics in the performance dashboard.

The work flow provides the following functionalities:

- UI based configuration of custom metrics data collection.
- Out-of-the-box content for real-time data streaming
- Real-time graphing of custom metrics in large scale environment
- Optional configuration of new or existing Vertica database for storing and retrieving historical data



## Prerequisites

To visualize custom metrics in a large scale environment, you need to install and configure the following components:

Component	Version
Operations Manager i (includes OMi Performance Dashboard)	10.11

Component	Version
Operations Agent	12.01
or	
Operations Connector	10.11
OMi Performance Engine	10.11
Depending on your requirement, you can install any of the following OMi Management Packs:	
• OMi Management Pack for Docker	2.00
• OMi Management Pack for Amazon Web Services	1.20
• OMi Management Pack for Microsoft Azure	1.10
• OMi Management Pack for Microsoft Exchange	1.01

**Note:** Real-time Custom Metrics and limited System Performance metrics are available without the RT license. The System Performance metrics are available for the classes – **GLOBAL**, **APPLICATION**, **PROCESS**, **CPU**, **NETIF** (\*\_HIGH, \*\_CUM metrics will not be available).


## Visualizing Custom Application Metrics for Docker Application

**Use Case:** Consider an environment in which you want to visualize the streaming of custom application metrics for Docker applications in the OMi Performance Dashboard. To visualize custom application metrics, follow these tasks:

### Task 1: Adding nodes to OMi console

**Note:** If the node already exists in RTSM, you can skip this step and proceed to Task 2.

Before you begin monitoring, you need to add the nodes to the OMi console.

1. Open the Monitored Nodes pane from the Operations Console screen:  
**Administration > Setup and Maintenance > Monitored Nodes**
2. In the Node Views pane, select **Predefined Node Filters > Monitored Nodes**, click  and then select **Computer > <Select the relevant OS type>**. The Create New Monitored Nodes dialog

box appears.




3. Specify the Primary DNS Name, IP Address, Operating System, and Processor Architecture of the node, and then click **OK**.

The newly created node is saved as a Configuration Item (CI) instance in RTSM.

**Note:** The node with Operations Agent needs to be activated on the OMi Server and certificate must be granted. For more information, see Operations Agent documentation.

## Task 2: Deploying discovery aspect

To discover the Docker CIs, deploy the Docker Discovery Aspect by following these steps:

1. Open Management Templates & Aspects pane:  
Click **Administration > Monitoring > Management Templates & Aspects**
  2. In the Configuration Folders pane:  
Click **Configuration Folders > Infrastructure Management > Docker > Docker Discovery Aspect**
  3. Click  **Assign and Deploy Item**.
  4. In the **Configuration Item** tab, select the Computer CI where the application is installed and click **Next** to go to **Required Parameters**. You can select multiple items by holding down the **CTRL** or **SHIFT** key while selecting the parameters.
  5. In the **Required Parameters** tab, click **Next**.
  6. *Optional.* In the **Parameter Summary** tab, you can edit the default value of any parameter. To change the default values of the parameters, you can select the parameter and then click . The Edit Parameter window opens. Click **Value**, specify the value, and then click **OK**.
- Note:** In the **Parameter Summary** tab, you can override the default values of any parameter. You can specify a value for each parameter at the Aspect level. By default, parameters defined as expert parameters are not displayed. To display expert parameters, click  **Show Expert Parameters**.
7. *Optional.* In the **Configure Options** tab, if you do not want to enable the assignment immediately, clear the **Enable Assignment(s)** check box.
  8. Click **Finish**.

**Note:** If Docker Discovery Aspect is deleted from the managed node, as a result CIs for this node are also deleted from the RTSM. Other Aspects assignments are also deleted. To restore the node CIs, you must restart opcmgsa service on the managed node by using the following command:

```
ovc -restart opcmgsa
```

## Task 3: Deploy the Docker Monitoring Aspects

You can follow steps similar to Task 3 to deploy the following Aspects in the same order:

1. Docker Collector Aspect
2. Docker Availability Aspect
3. Docker Performance Aspect


**Note:** If you are using any other OMi Management Pack, ensure that you deploy all the Aspects.

**Note:** You can modify the parameter value of any Aspect for tuning the monitoring after the deployment using the **Assignments & Tuning** pane (**Administration > Monitoring > Assignments & Tuning**).

## Task 4: Specify the Infrastructure Settings

You need to check if the Infrastructure Settings are defined for OMi Performance Engine. If the Infrastructure Settings are not defined, you can define these settings.







**Note:** You need to specify the infrastructure settings only once.

1. In the OMi console, click **Administration > Setup and Maintenance > Infrastructure Settings**.
2. In the Infrastructure Settings page, select the **Applications** context.
3. Select the **Performance Engine** as the specific context from the drop-down list.
4. The Performance Engine Node Infrastructure Setting is displayed. Click .
5. You can use this parameter to configure the Performance Engine Node details from which OMi Performance Dashboard must request real time data. In case of the Cluster mode of Performance Engine Deployment, specify the Load balancer host information. By default, the port number is 7387. For example, you can specify `http://<PE HostName>:7387`

6. You can specify the value as `http://<PE HostName>:<Port Number>` and click **Save**.  
Alternatively, select **Restore Default** and **Save**, to reset the defaults values.

## Task 5: Define the metric streaming configuration policy

1. In the OMi console, click **Administration > Monitoring > Policy Templates**.
2. In the Policy Template Groups pane, select **Policy Management > Templates grouped by type > Configuration**.
3. Click the **Metric Streaming Configuration** folder, and then do one of the following:

- Add a new policy template: in the Policy Templates pane, click the  **New Item** button, and then click the  **Add New Policy Template...** or  **Add New Policy Template (Raw Mode)** button.
- Edit an existing policy template: in the Policy Templates pane, click the  **Edit Item** button, and then click the  **Edit Policy Template** or  **Edit Policy Template (Raw Mode)** button. The Metric Streaming Configuration Policy Editor opens.
- Open the Metric Streaming Configuration Policy Editor. In the Properties section, enter a **Display Name** for the policy.

*Optional.* Change the policy version (**Version**), provide a description of the policy (**Description**), enter information about the policy changes (**Change Log**), and select the operating systems with which the policy is compatible (**OS Types**).


- In the Metrics section, choose the host name of the Operations Agent or Operations Connector from which you want to collect metrics data. Click **Load Metric Definitions** to get a list of all available metrics associated with that Operations Agent or Operations Connector. From the displayed list, select the metrics you want to include in the policy and stream to OMi Performance Engine and OMi Performance Dashboard. If you want to remove all unselected metrics from the list, click **Remove Unselected**. Unselected metrics and instances are excluded from the policy.

You can repeat this step to include metrics from different agents.

*Optional.* Click **+Add Child** next to Metrics to add another data source. Specify the following information:

<b>Data Source</b>	Name of the data source from which the metrics data is collected.
--------------------	---

<b>Collector</b>	<i>Optional.</i> Name of the Operations Agent or Operations Connector that collects the metrics data.
<b>Collector Executable</b>	<i>Optional.</i> Specifies how the metric collection is done by the collector (for example which file is used by Operations Agent or Operations Connector).
<b>Collection Interval</b>	Interval (in minutes or seconds) at which metrics are collected and streamed to the endpoint.
<b>Metric Class</b>	Name of the class to which the metric belongs.
<b>Original Metric Name</b>	<i>Optional.</i> Original name of the metric when retrieved by a third party domain manager.
<b>Instances</b>	Include either all instances or specific instances.
<b>Metric Name</b>	Name of the metric.


*Optional.* Click  on the metric class level to add an instance of the metric.

- In the Target Endpoint section, if you have correctly set up the OMi Performance Engine, the URL is automatically retrieved from the Performance Engine server. You must ensure the URL appears in the Target Endpoint.
- Click **Save and Close** to save the policy template and exit the editor.

## Task 6: Deploy the metric streaming configuration policy

1. In the OMi console, open the Policy Templates manager:


**Administration > Monitoring > Policy Templates**

2. In the Policy Template Groups pane, expand the tree and navigate to the policy template that you want to deploy.
3. In the Policy Templates pane, select the policy template that you want to deploy and click the  button. The *Assign and Deploy* wizard opens.

**Note:** The Assign and Deploy button is grayed out if the policy template contains a stub instrumentation. Upload the instrumentation by using the Content Manager.

4. In the Configuration Item page, click the configuration item to which you want to assign the policy template, and then click **Next**.

5. Specify a value for each parameter:

To change a parameter, double-click it, or select it in the list and click  **Edit**.

- For standard parameters, the Edit Parameter dialog opens.

To set a specific default parameter value, specify **Value** in the range that is valid for this parameter. This value overrides any default values defined in the configuration object.

To use the default value from the configuration object, select **Use Default Value**.

- For instance parameters, the Edit Instance Parameter dialog opens.

Add instance values and specify dependent parameter values for each instance value.

Click **OK**. Click **Next**.

6. *Optional*. In the step Configure Options, clear the **Enable Assignment(s)** check box if you do not want to enable the assignment immediately. You can enable the assignment later using the Assignments & Tuning manager.

7. Click **Finish**. OMi creates deployment jobs, which deploy the policy template to the nodes.

After a policy template has been deployed, the OMi server specified in the **Default Virtual Gateway Server for Data Collectors URL** infrastructure setting becomes the owner of the policy on the node.

## Task 7: Launching and viewing real-time metrics in the OMi Performance Dashboard

By default, out of the box performance dashboards are available for OMi MP for Docker. To launch the performance dashboard for Docker CI, follow these steps:

1. In OMi console, click **Workspaces > Operations Console > Performance Perspective**
2. In the View Explorer pane, select **View**. For example, you can select Docker\_Topology for Docker Applications.
3. In the View Explorer pane, you can choose a Docker Container CI for which you want to view the performance dashboard.

4. In the Performance pane, click  to view the performance dashboard for Docker CI

5. Click an item to view the performance dashboard. In addition, you can search for a performance

dashboard by specifying the title in the search option.

The performance dashboard appears in the Performance pane. You can now visualize the Docker custom application metrics in the performance dashboard.

## Data Sources

A data source can be an agent, agent component, or agentless collector that monitors an entity or an element on which it is deployed.

OMi Performance Dashboard supports the following data sources:

- Operations Agent
- SiteScope
- Operations Connector
- OpsBridge Store
- Application Performance Management (APM)
- Cloud Optimizer

OMi Performance Dashboard 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 OMi Performance Dashboard collects data only from SiteScope data sources. If no value is set for the **Monitored\_by** attribute, OMi Performance Dashboard tries to connect to the HPE Operations agent data source.

The data sources continuously collect data about the monitored elements and store it in the data store for future use. The Performance Dashboard enables you to visualize this historical data stored in the persistent data stores.

**Note:** The Real-Time Metric Access component of the HPE Operations Agent (11.00) provides you with real-time access to performance data for a monitored element. For more information, see the *HPE Operations Agent documentation*.



## 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.

OMi Performance Dashboard enables you to visualize this data in several formats such as graphs, tables, and so on. A performance dashboard 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 HPE Operations Agent and HPE 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 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.

Operations Connector integrates data collected by third-party systems (typically, enterprise management systems) in OMi. The metrics collected by Operations Connector provide information about the systems and applications monitored by the third-party software.

For details, see the *OMi Integrations Guide*.

## Troubleshooting OMi Performance Dashboard

This section provides information about tracing, log files, and troubleshooting scenarios for OMi Performance Dashboard.

### Tracing

You can enable tracing to troubleshoot OMi Performance Dashboard. To enable OMi Performance Dashboard log level to Debug or Trace in `log4j.properties`, go to the following locations:

**Windows:** %TOPAZ\_HOME%\conf\core\Tools\log4j\pmi\log4j.properties

**Linux:** \$TOPAZ\_HOME/conf/core/Tools/log4j/pmi/log4j.properties

You must set all log4j.category to DEBUG or TRACE

## Log Files

The OMi Performance Dashboard and BVD log files are available at the following locations:

### OMi Performance Dashboard

**Windows:** %TOPAZ\_HOME%\log\pmi\pmi.log

**Linux:** \$TOPAZ\_HOME/log/pmi/pmi.log

### BVD

To check the logfiles related to integration of OMi Performance Dashboard with BVD, check the following locations:

**Windows:** %TOPAZ\_HOME%\log\pmi\bvd.log

**Linux:** \$TOPAZ\_HOME/log/pmi/bvd.log

## Troubleshooting Scenarios

### Event Overlay does not work correctly

**Problem:** Events do not appear in the graph charts.

**Solution:** To resolve this problem, you need to zoom in and check the events. It could be possible that the events are overlapping.

### Real Time Graphing displays error message

**Problem:** Real Time graphing displays error message stating No data found error.... in OMi Performance Dashboard.

**Solution:** To resolve this problem, follow these steps:

**For Operations Agent version 12 CIs:**

1. Check if HPCS is running by using the URL: `http://<systemname:portno>/hpcs/lwistatus`  
For example, `http://hostname1:383/hpcs/lwistatus`
2. Check if data is loaded from the system by running the URL:  
`http://<systemname:portnumber>/hpcs/v2/Metrics/all` For example,  
`http://hostname1:383/hpcs/v2/Metrics/all`
3. If HPCS is not running, start the HPCS service using the following command:  
  
`# ovc -restart hpsensor`
4. Check if the **HP Ops OS Inst to Realtime Inst LTU** license is enabled  
  
`oalicense -get -all`
5. If the **HP Ops OS Inst to Realtime Inst LTU** license is not enabled, you can enable HP Compute sensor license on the CI using the following command:  
  
`# oalicense -set -type PERMANENT "HP Ops OS Inst to Realtime Inst LTU`
6. Restart HPCS service using the following command:  
  
`# ovc -restart hpsensor`

#### For Operations Agent version 11 CIs:

1. Check if the **HP Ops OS Inst to Realtime Inst LTU** license is enabled by running the following command:  
  
`oalicense -get -all`
2. If **HP Ops OS Inst to Realtime Inst LTU** license is not enabled, enable RTM license on the CI using the following command.  
  
`# oalicense -set -type PERMANENT "HP Ops OS Inst to Realtime Inst LTU`  
  
The LTU is set successfully
3. Restart `perfd` component and `rtmd` component.
4. Check if the RTM component of Operations Agent is running on the node.
5. Check `perfd` and `rtmd` are running on the node.
6. If the components are not running, start the `perfd` component and `rtmd` component on the node.

Real Time graphing is not updated every 5 seconds

**Problem:** Real Time graphing is not updated for every 5 seconds in OMi Performance Dashboard for

Operations Agent version 12 CIs.


**Solution:** To resolve this problem, follow these steps:

1. Change the HPCS data collection interval by editing the HPCS configuration file.

```
#vi /var/opt/perf/hpcs.conf
```

2. Change `collection_interval` value which is in seconds and save the file.
3. Restart HPCS service using the following command:

```
# ovc -restart
```

4. Restart OMi Performance Dashboard from Operations Agent
5. Go to OMi Performance Dashboard and in the Performance pane, click .
6. Choose the option Clear Cache to reload the OMi Performance Dashboard data collection from HPCS.

## Performance Dashboard is not loading

**Problem:** Performance Dashboard is not loading and not working as expected.

**Solution:** Check the network log, for any failures in URL calls.


To check the network log, follow these steps:

1. Press F12 in the browser, the debug panel appears.
2. Select Network tab in the debug panel.

## Inconsistency in the data shown in the performance dashboard

**Problem:** Inconsistency in the data shown in the performance dashboard.


**Solution:** To resolve this problem, follow these steps:

1. In the Performance pane, click . The performance dashboard is updated with latest data.
2. You can use the following URL to make sure that data is coming for the required time interval.

```
http://<HOST_NAME>/OVPM/rest/1.0/data/graphdata?ciid=<CI_ID>&class=<CLASS>&ds=<DATASOURCE>&endtime=<END_TIME>&instances=<INSTANCE_NAME>&interval=<INTERVAL>&metrics=<METRIC_NAME>&starttime=<START_TIME>
```

## Metrics, Instances or Classes are added in a CI but not available in OMi Performance Dashboard

**Problem:** Metrics, instances, or classes are available in a CI but are not available in OMi Performance Dashboard.

**Solution:** To resolve this problem, Click  > **Clear Cache**.

## CI Type tree does not appear

**Problem:** In Performance Dashboard Mappings, CI Type tree does not appear in the left pane.

**Solution:** To resolve this problem, follow these steps:

1. Check if Adobe flash player is installed in the browser.
2. If Adobe Flash Player is installed, check if it is enabled. If it is disabled, enable it.

## CI Type tree loads with error message

**Problem:** CI Type tree loads with error message

**Solution:** To resolve this problem, you must log out from OMi and log in to OMi.

## Save icon is not enabled

**Problem:** In the Performance Dashboard Mappings, the Save icon is not enabled.

**Solution:** To resolve this problem, follow these steps:

1. If you make any changes, the **Save** option is enabled.
2. To enable **Save** option, you can edit the CI Attribute or Assigned Dashboards.

## Performance Dashboard Mappings does not change locale in Internet Explorer

**Problem:** Performance Dashboard Mappings does not change locale on Internet Explorer.

**Solution:** To resolve this problem, follow these steps:

1. Close all the tabs of the browser.
2. Open the browser again.

3. Open the OMi console.
4. Log on with the credentials.
5. Click **Administration > Operations Console > Performance Dashboard Mappings**

## Real-Time Graph Window Stops Receiving Updates

**Problem:** A performance dashboard drawn with metrics obtained from the RTM data source stops receiving updates if the HPE Operations agent (or the RTM component of the agent) on the node that hosts the RTM data source stops running. The performance dashboard title bar shows no data point.

**Solution:** When the HPE Operations agent (or the RTM component of the agent) starts running on the node again, the performance dashboard window starts showing the updated data.

## SiteScope Real Time is not working

**Problem:** SiteScope Real Time is not working

**Solution:** To resolve this problem, follow these steps:

1. Check if configured SiteScope version is 11.22 or above.
2. Check connectivity with the SiteScope server from OMI server. You need to ensure that the SiteScope server is up and running.
3. Check `monitored_by` attribute of the Selected CI in OMi contains SiteScope. If SiteScope is not available then there could be a synchronization issue with SiteScope to OMi. Contact SiteScope or OMi team.
4. Check if the Integration XML is available at the following location:

**Windows:** %ovdatadir%\shared\server\conf\perf\pmiworkdir\data\SiteScope\_RTM\_GC\_Integration.xml

**Linux:** /var/opt/OV/shared/server/conf/perf/pmiworkdir/data/SiteScope\_RTM\_GC\_Integration.xml

5. In SiteScope, click **Preferences** and perform the following steps:

### Search/Filter tag

- a. Check if Filter is created
- b. Click group containing monitors or a monitor and click **Properties > Search/Filter tag**. Check if the filter is listed and the option is enabled.

- c. Click **Properties > Monitor run settings > Frequency** and check if frequency is set to 15 seconds for the monitors for which RTM data is not showing up in OMi Performance Dashboard.

### Integration Preferences

- a. Click **Integration Preferences**. Check if Data integration is added. If data integration is not added, see *SiteScope documentation*.
- b. If the data integration is available, select a data integration , click **Edit** and check for the following configurations
  - i. Check if the Receiver URL is OMi Performance Dashboard listener URL. For example, `http://<OMI_HOST_NAME>/OVPM/SiteScopeDataReceiver`
  - ii. Check if the Encoding is UTF-8.
  - iii. Check if the Reporting Interval is 15 seconds.
  - iv. Check if the Time Synchronization Interval is 10 minutes.
  - v. Check if the GZIP compression only.
  - vi. Check the Web Server Security Settings, Specify the username and password to access the OMi Performance Dashboard if the OMi Performance Dashboard is configured to use basic authentication. Otherwise, leave blank
  - vii. In the Reporting Tags, check if the filter applied on monitors is selected.

- 6. Check for the configured receiver URL in SiteScope, if there are any errors in the `data_integration.log` file of SiteScope installed machine.

- a. Check `<Sitescope_Installed_Folder>\log\data_integration.log` file.  
If error exists then configured receiver URL is incorrect. For more information, see *SiteScope documentation*.

- b. If there are no errors in the log file then enable debug mode for SiteScope data integration log file.

- c. In `<Sitescope_Installed_Folder>\conf\core\Tools\log4j\PlainJava\log4j.properties` file , change following text:

`log4j.category.dataIntegration=${loglevel}, data.integration.appender`  
to

`log4j.category.dataIntegration=DEBUG, data.integration.appender`

- d. Enable OMi Performance Dashboard log level to Trace in `log4j.properties`

**Windows:** %TOPAZ\_HOME%\log\pmi\pmi.log

**Linux:** \$TOPAZ\_HOME/log/pmi/pmi.log ( )

6. Check if RTM data as shown in the following text is getting logged for the selected monitor.

```
com.hp.pm.core.adapter.metric.SiSRTMDataReceiver:doPost() -> RTM XML Content

<?xml version="1.0" encoding="UTF-8" standalone="yes"?>

<performanceMonitors collector="SiteScope" collectorHost="martellvm8">

  <group name="Demo_Monitors" desc="">

    <monitor type="Memory" target="example.example.com" targetIP="<IP>"
      time="1417567245958" quality="1" name="Memory monitor on system">

      <counter value="49" quality="" name="percent used"/>

    </monitor>

  </group>

</performanceMonitors>
```

## SiteScope Historical Data is not working

**Problem:** SiteScope historical data is not working

**Solution:** To resolve this problem, follow these steps:

1. Check if configured SiteScope version is 11.22 or above.
2. Check if SiteScope server is configured in **OMi > Administration > Setup and Maintenance > Connected Servers**
3. Check connectivity with the SiteScope server from OMi server. You need to ensure that the SiteScope server is up and running.
4. Check monitored\_by attribute of the Selected CI contains SiteScope. If SiteScope is not available, then there is a synchronization issue with SiteScope to OMi.
5. Check if the Integration XML is available at the following locations:

**Windows:** %ovdatadir%\shared\server\conf\perf\pmiworkdir\data\SiteScope\_GC\_Integration.xml

**Linux:** /var/opt/OV/shared/server/conf/perf/pmiworkdir/data/SiteScope\_GC\_Integration.xml



6. Analyze the OMi Performance Dashboard log file for any errors or exceptions:

**Windows:** %TOPAZ\_HOME%\log\pmi\pmi.log

**Linux:** \$TOPAZ\_HOME/log/pmi/pmi.log

In the log files, check the following:

- a. Check if Connected Server API returns SiteScope server data.

```
com.hp.pm.core.adapter.metric.SiSDAMetricAdapter:loadMeta() -> Sitescope  
Connected Server size : 1
```

- b. Check if RTSM API returns monitors data for the selected CI.

```
com.hp.pm.core.adapter.metric.SiSDAMetricAdapter:loadMeta() -> Number of  
Serversthe selected CI associated with 1
```

```
com.hp.pm.core.adapter.metric.SiSDAMetricAdapter:loadMeta() -> Selected CI's  
Serve Name martellvm8.ind.example.com
```

```
com.hp.pm.core.adapter.metric.SiSDAMetricAdapter:loadMeta() -> Selected CI's  
Topology Monitor Map size 2
```

```
com.hp.pm.core.adapter.metric.SiSDAMetricAdapter:loadMeta() -> Selected CI's  
Monitor Name Demo_Monitors/CPU Monitor on iwfv00127
```

- c. Check if SiteScope DAL API returns data to OMi Performance Dashboard

```
com.hp.pm.core.adapter.metric.SiSDAMetricAdapter:loadMeta() -> Querying  
Sitescope DAL API with query parameters
```

```
com.hp.pm.core.adapter.metric.SiSDAMetricAdapter:getMonitorsForASiSServer()  
-> Full Server Name martellvm8.ind.example.com
```

```
com.hp.pm.core.adapter.metric.SiSDAMetricAdapter:getMonitorsForASiSServer()  
-> Short Server Name martellvm8
```

```
com.hp.pm.core.adapter.metric.SiSHelper:getHistoryData() -> Getting SiS  
History data
```

```
com.hp.pm.core.adapter.metric.SiSHelper:getHistoryData() -> Server Name  
martellvm8
```

```
com.hp.pm.core.adapter.metric.SiSDAMetricAdapter:getMonitorsForASiSServer()  
-> SiS histroy mapsize 1
```

```
com.hp.pm.core.adapter.metric.SiSDAMetricAdapter:getMonitorsForASiSServer()  
->Monitor List size.. 3
```

```
com.hp.pm.core.adapter.metric.SiSDAMetricAdapter:loadMeta() -> Monitor  
Output size via DAL 3
```

```
com.hp.pm.core.adapter.metric.SiSDAMetricAdapter:loadMeta() -> Final Output  
size 2
```

7. If SiteScope server is down then you see the following connection refused exception in the log file:

```
com.hp.pm.core.adapter.metric.SiSDAMetricAdapter:loadMeta() -> Querying  
Sitescope DAL API with query parameters
```

```
com.hp.pm.core.adapter.metric.SiSHelper:getDataFromDALApi() -> Error getting  
data from Sitescope DAL API: ; nested exception is: java.net.ConnectException:  
Connection refused: connect
```

```
com.hp.pm.core.adapter.metric.SiSHelper:getDataFromDALApi() -> AxisFault  
faultCode: {http://schemas.xmlsoap.org/soap/envelope/}Server.userException  
faultSubcode:
```

```
faultString: java.net.ConnectException: Connection refused:connect
```

8. If there is any data request error, you see the following exception in the log file:

```
com.hp.pm.core.adapter.metric.SiSHelper:getDataFromDALApi() -> Error getting  
data from Sitescope DAL API:  
com.mercury.sitescope.api.data.exception.RequestDataExceedLimitException: Error  
Code: 77104.
```

Error Description: Request from start date Tue Sep 02 04:06:14 IST 2014 to Wed  
Sep 03 04:06:14 IST 2014 resources are over the configured maximum limit: 20 MB  
(approximate request resources size is 660MB).

Process succeed for time range: Tue Sep 02 04:06:14 IST 2014 to Tue Sep 02  
04:49:39 IST 2014.

You need to change the resource size limitation. Go to SiteScope infrastructure preferences and  
change Data acquisition API single request size value.

9. Check if the data is getting logged for these monitors in SiteScope Server with status **good** from  
current time to last one day.

```
<Sitescope_Installed_Folder>\logs\Sitescope.log
```

## Favorites to compare same metrics of different CIs does not display data

**Problem:** Favorites to compare same metrics of different CIs does not display data. This happens when the CIs for which the metrics are compared, do not have the system time set as per the time zone of the region.

**Solution:** For the Favorites to display data, make sure that the system time is set to the time zone of the region where the CIs are located.

## OMi Performance Dashboard does not forward data to BVD end point

**Problem:** OMi Performance Dashboard does not forward data to BVD end point.

**Solution:** To resolve this problem, follow these steps:

1. In OMi, check if endpoint details are configured in `bvdconf.json` file.  
**Windows:** `%OvDataDir%\shared\server\conf\opr\bvdconf.json`  
**Linux:** `/var/opt/OV/shared/server/conf/opr/bvdconf.json`
2. In OMi, click **Administration > Setup and Maintenance > Infrastructure Settings**. In the **Applications** list, select **Performance Dashboard**.
3. Check if following settings are configured:
  - a. **Endpoint Name** - Name of the endpoint to which the OMi Performance Dashboard data is forwarded. It must match the endpoint name specified in the `bvdconf.json` file.
  - b. Turn on Data forwarding to Endpoint by setting it to true.
4. In OMi, click **Workspaces > Operations Console > Performance Perspective**, check if Favorites are available and **Enable/Disable data forward to BVD** option is set for the Favorite.
5. After all these configurations are done and still OMi Performance Dashboard is not forwarding data to endpoint then check `bvd.log` file for any errors or exceptions:  
**Windows::** `%TOPAZ_HOME%\log\pmi\bvd.log`  
**Linux::** `$TOPAZ_HOME/log/pmi/bvd.log`
6. If there is any parsing exception related to endpoint, then make sure that you have added proper json endpoint details in `bvdconf.json` file.
7. Check for the following errors or exceptions in the log file:

**BVD - Data not available to post means data not available from datasource** - You need trouble shoot datasource for not getting data.

**BVD - Failed to post data to endpoint with status code** - You need to check if endpoint is accessible from OMi server. If not make sure add proxy settings in `bvdconf.json`

**BVD - Error posting data to endpoint** - Check if configured endpoint URL is valid and also proxy details are valid.

## Predefined performance dashboards are not listed when NIC is selected

**Problem:** When you select the MAC address of an NIC as a CI from the View Explorer, the corresponding predefined performance dashboards are not listed. This is because while creating the Performance Dashboard Mappings, the NIC name is mapped to the predefined performance dashboards and not the MAC address.

**Solution:** You can select the corresponding host to view the predefined performance dashboards.

## Cloud Optimizer integration issues

**Problem:** Unable to integrate OMi Performance Dashboard with Cloud Optimizer.

**Description:** To resolve this problem, follow these steps:

1. Check if the `monitored_by` attribute of the Selected CI in OMi contains Cloud Optimizer. If it does not contain Cloud Optimizer then there could be a synchronization issue with Cloud Optimizer to OMi. Contact Cloud Optimizer team.
2. Check if the Integration XML is available in the following locations:

**Windows:** `%ovdatadir%\shared\server\conf\perf\pmiworkdir\data\vpv_gc_Integration.xml`

**Linux:** `/var/opt/OV/shared/server/conf/perf/pmiworkdir/data/vpv_gc_Integration.xml`

3. Check if the time configured in both OMi and Cloud Optimizer is same.
4. Check instance information in RTSM Response:

```
<graphParameters>
```

```
<systemNames>
```

```
<systems>
```

```
<systemName>16.184.47.225</systemName>

<port>8444</port>

</systems>

<systems>

<systemName>martell.ind.example.com</systemName>

</systems>

</systemNames>

<instanceNames>

<instance>

<instanceName>martell.ind.example.com</instanceName>

<graphParameters>

<systemNames>

<systems>

<systemName>16.184.47.225</systemName>

<port>8444</port>

</systems>

<systems>

<systemName>martell.ind.example.com</systemName>

</systems>

</systemNames>

<instanceNames>

<instance>

<instanceName>martell.ind.example.com</instanceName>
```

5. Check if metadata that is queried using Rest API to Cloud Optimizer server is successful

```
INFO : com.hp.pm.core.adapter.metric.AbstractMetricAdapter:loadMeta() -> In
loadMeta - The selected CI id c751a5dccc27daafd9922abcae1580b4
```

```
INFO : com.hp.pm.core.adapter.metric.AbstractMetricAdapter:loadMeta() -> The
selected CI type unix
```

```

INFO : com.hp.pm.core.adapter.metric.AbstractMetricAdapter:loadMeta() -> The
selected CI Name syspulsevm200.ind.example.com

INFO : com.hp.pm.core.adapter.metric.AbstractMetricAdapter:loadMeta() -> The
selected CI's Server Name 16.184.47.225

INFO : com.hp.pm.core.adapter.metric.AbstractMetricAdapter:loadMeta() -> The
selected CI's Server Port 8444

INFO : com.hp.pm.core.adapter.metric.AbstractMetricAdapter:getRestOutputData()
-> The rest url
https://16.184.47.225:8444/PV/api/v1/loadmeta?name=syspulsevm200.ind.example.co
m&type=unix&context=PMI

INFO : com.hp.pm.core.adapter.metric.AbstractMetricAdapter:queryRestAPI() ->
The response status code 200

INFO : com.hp.pm.core.adapter.metric.AbstractMetricAdapter:getRestOutputData()
-> Connection to vPV Rest url is success

```

6. If querying via Rest API fails, then you see following error in the log file

```

com.hp.pm.core.adapter.metric.AbstractMetricAdapter:getRestOutputData() -> The
rest url
https://goldrch7vm8.ind.example.com:8444/PV/api/v1/loadmeta?name=goldrch7vm7.in
d.example.com&type=unix&context=PMI

com.hp.pm.core.adapter.metric.AbstractMetricAdapter:queryRestAPI() -> Error
occured while connecting to vPV rest url.

com.hp.pm.core.adapter.metric.AbstractMetricAdapter:getRestOutputData() ->
Failed to get response from the vPV rest url with status code 0

com.hp.pm.core.adapter.metric.AbstractMetricAdapter:loadMeta() -> vPV Output
for the selected CI is null or empty

```

7. For checking the URLs, open a new tab in the same browser where OMi is launched. Copy the URL to the new tab and launch them.
8. Valid JSON response should be retrieved
9. Check if data queried from Rest API from Cloud Optimizer is successful.

```

INFO : com.hp.pm.core.adapter.metric.AbstractMetricAdapter:getDataRows() -> In
GetDataRows

INFO : com.hp.pm.core.adapter.metric.AbstractMetricAdapter:getDataRows() ->
Instance Full Name 16.184.47.225/VCENTER_HOST__2

```

```
INFO : com.hp.pm.core.adapter.metric.AbstractMetricAdapter:getDataRows() ->
Instance Name VCENTER_HOST__2

INFO : com.hp.pm.core.adapter.metric.AbstractMetricAdapter:getRestOutputData()
-> The rest url
https://16.184.47.225:8444/PV/api/v1/getdatarows?instanceId=VCENTER_HOST__
2&className=VCENTER_
HOST&metrics=CPUPhysTotalUtil&summarizeMins=5&startEpochMillis=1448321439000&en
dEpochMillis=1448364639000

INFO : com.hp.pm.core.adapter.metric.AbstractMetricAdapter:queryRestAPI() ->
The response status code 200

INFO : com.hp.pm.core.adapter.metric.AbstractMetricAdapter:getRestOutputData()
-> Connection to vPV Rest url is success


INFO : com.hp.pm.core.adapter.metric.AbstractMetricAdapter:getDataRows() -> Get
data rows row count 143
```

10. Open a new tab in the same browser where OMi is launched. Copy the URL to the new tab and launch them. Valid JSON response should be retrieved.
11. If initstring configured in Cloud Optimizer is not correct then you see following exception in the log file:

```
com.hp.pm.core.adapter.metric.AbstractMetricAdapter:getRestOutputData() -> The
rest url
https://goldrch7vm8.ind.example.com:8444/PV/api/v1/loadmeta?name=goldrch7vm7.in
d.example.com&type=unix&context=PMI

com.hp.pm.core.adapter.metric.AbstractMetricAdapter:queryRestAPI() -> Error
occured while connecting to vPV rest url.

com.hp.pm.core.adapter.metric.AbstractMetricAdapter:getRestOutputData() ->
Failed to get response from the vPV rest url with status code 401 (forbidden
access)
```

12. Check if SSO (Single Sign-On ) is configured properly in Cloud Optimizer server similar to OMi.
13. In OMi, navigate to **Administration > Users > Authentication Management**. In the Single Sign-On Configuration section, click  **Edit** to open Single Sign On Editor.
14. Check for Token Creation Key (initString). Log on to Cloud Optimizer server machine and check for initString in the following location:

```
/opt/OV/www/webapps/PV/WEB-INF/classes/lwssofmconf.xml
```

## Performance Dashboard PDF is blank

**Problem:** When a performance dashboard containing more than 15 charts each of height 250 pixels is saved in PDF format, the PDF appears blank.

**Solution:** To resolve this problem, reduce the number of charts on the dashboard and generate the PDF again.

# Troubleshooting OMi Performance Engine

This section provides troubleshooting information for OMi Performance Engine.

## Troubleshooting Scenarios

### OMi Performance Dashboard is not showing data for OpsBridgeStore data source

**Problem:** OMi Performance Dashboard is not showing data for OpsBridgeStore data source

**Solution:** To resolve this problem, follow these steps:

If you have reconfigured Vertica database, you must invoke OMi Performance Engine API in OMi to forcefully update the cache config by running the following URL on the OMi server : `http://<OMi gateway host info>/PE/rest/1.0/admin/reconfigure/cache`

### OpsBridge Store datasource is not listed in OMi Performance Dashboard

**Problem:** OpsBridge Store datasource is not listed in Performance Dashboard

**Solution:** To resolve this problem, follow these steps:

1. To check if OMi Performance Engine is running properly, type the following command in OMi Performance Engine server:  
  

```
#/opt/OV/bin/ovc -status PE
```

  
All the PE services should be running.
2. Check for errors in OMi Performance Engine by verifying the logs at `/var/opt/OV/pe/log/`
3. In OMi console, OMi Performance Engine node should be configured in **Administration > Setup**



### **and Maintenance > Infrastructure Settings**

- a. Choose Performance Engine as the Application.
  - b. Provide the OMi Performance Engine node details and password.
4. Check for errors in OMi logs for OMi Performance Engine:

Windows:

C:\HPBSM\log\PE\perfengine.log

Linux:

opt/HP/BSM/log/PE/perfengine.log

### **Enabling certificate authentication fails with errors**

**Problem:** You are trying to enable HTTPs in OMi Performance Engine, admin tools **reports** unable to create certtrusted file and error message appears.

**Solution:** To resolve this problem, follow these steps:

You are trying to enable certificate based authentication in OMi Performance Engine before OMi certificate reaches the node. You need to verify if the `overcert -list` command is listing the certificates properly before you invoke the admin tool utility.

When OMi Performance Engine is configured for non-root user, Certificate granted from OMi is not updated in the node.

**Problem:** When non-root user is configured in OMi Performance Engine, the BBC port is updated from default 383 to port number higher than 1024.

**Solution:** To resolve this problem, run the following command on the OMi server:

```
(ovinstalldir)/bin/ovconfchg -ns bbc.cb.ports -set PORTS PEHOSTNAME:BBCPORT
```

OMi Performance Engine is retaining the last one month data in Vertica database.

**Problem:** OMi Performance Engine is retaining the last one month data in Vertica database. As a user, I want to change data retention in Vertica database.

**Solution:** Out-of-the-box, OMi Performance Engine can retain data for 30 days. To change the data retention duration, follow these steps:

1. Open `/opt/HP/BSM/HPEPerfEngine/conf/perfengine.conf`
2. Update the **purge** configuration to required number of days

```
# Parameter : purge

# Specify the number of days after which data will be purged in db.

purge=30
```

3. Save the file and run `#!/opt/OV/bin/ovc -restart pelistener`

**Note:** In case of cluster installation, you need to perform the same steps in all the nodes.

## Current throughput of the OMi Performance Engine server

**Problem:** As a user , I want to know the current throughput of the OMi Performance Engine Server.

**Solution:** To resolve this problem, you can check the throughput of the node by following these steps:

1. In OMi Workspace, create a new page.
2. From the component gallery, choose **Performance Engine Throughput** component.
3. The component opens, Performance Engine Throughput data in Performance Dashboard. The dashboard shows the data streamed to PE in Charts.

## Increase the maximum POST request size

**Problem:** You want to increase the maximum POST request size of json data. By default the max size of json is 1MB.

**Solution:** To resolve this problem, follow these steps:

1. Set following properties in the following file:

```
/opt/HP/BSM/HPEPerfEngine/kafka/config/server.properties

message.max.bytes=<SOME_BIG_VALUE_IN_BYTES>

replica.fetch.max.bytes=<SOME_BIG_VALUE_IN_BYTES_GREATER_THAN_EQUAL_TO_THE_ABOVE>
```

2. Change the properties in the following file:

```
/opt/HP/BSM/HPEPerfEngine/conf/perfengine.conf file

max_req_size=<SOME_BIG_VALUE_IN_BYTES_GREATER_THAN_EQUAL_TO_THE_ABOVE>
```

3. Restart PE services.

```
/opt/OV/bin/ovc -restart PE
```

### OMi Performance Engine services are not running post-installation

**Problem:** PE services are not running or are aborted if the host names are not configured properly on the system.

**Solution:** To resolve this problem, you need to re-install the product with the correct IP address or host name in the PE\_Profile file.

### OMi Performance Engine services are not starting after system reboot

**Problem:** OMi Performance Engine services are not starting after the system is rebooted.

**Solution:** To resolve this problem, set the "START\_ON\_BOOT" configuration variable to true. Run the following command:

```
/opt/OV/bin/ovconfchg -ns ctrl -set START_ON_BOOT true
```

### OMi Performance Engine services are starting in root mode

**Problem:** OMi Performance Engine services are starting in root user mode even when OMi Performance Engine is configured in a non-root user mode.

**Solution:** This problem occurs if ovcd is stopped by using `/opt/OV/bin/ovc -kill` and OMi Performance Engine is started by using `/opt/OV/bin/ovc -start PE` as root user. To resolve this issue, do the following:

1. As root user, check if the "START\_ON\_BOOT" configuration variable is set to true. If it is set to false, run the following command:

```
/opt/OV/bin/ovconfchg -ns ctrl -set START_ON_BOOT true
```

2. Start OMi Performance Engine services by running the following command:

```
service OVCtrl start
```

## Chapter 20: 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 Dashboard" on page 244](#).

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 JMS bus event 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 **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 HPE 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 HPE 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 \(HTML\)" on page 103](#).

- **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 Operations Agent**.

For more information on the Top View, see ["Top View Component" on page 170](#).

**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.

# Send documentation feedback

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**Go OMi!**