HP Business Availability Center

for the Windows and Solaris operating systems

Software Version: 8.01

Using Dashboard

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Table of Contents

PART II: FLOW MAPS

PART III: REPORTS

Table of Contents

Welcome to This Guide

This guide describes how to work with HP Business Availability Center Dashboard.

This chapter includes:

➤ How This Guide Is Organized on page 13

➤ Who Should Read This Guide on page 14

➤ Getting More Information on page 15

How This Guide Is Organized

The guide contains the following parts:

Part I   Dashboard

Describes how to work with Dashboard and the Dashboard views, how to use the Top View, Console, Filters, Geographical Map, and Custom Map tabs to display the view's data.

Part II   Flow Maps

Describes how to use the Flow Map tab to display the flow maps of Business Process Insight CIs, TransactionVision CIs, or custom CIs.

Part III   Reports

Describes how to view the Dashboard reports, and how to use the report repository.

Part IV   External Display

Describes how to display Dashboard data outside of Business Availability Center, using the Dashboard Ticker, in a Yahoo! Widget window, or on a mobile device.

Part V   KPIs

Describes how to manage the Key Performance Indicators (KPIs) of a configuration item (CI).

Part VI   KPI Assignments

Describes how to manage the factory and custom KPI assignments that are activated under certain conditions and add KPIs, rules, context menus, and context menu items to specific CIs.

Part VII   Repositories

Describes the KPI Repository, the Business Rule Repository, the Context Menu Repository, the Context Menu Item Repository, and the Tooltip Repository that enable you to manage the Key Performance Indicators (KPIs), business rules, context menus, context menu items, and tooltips available in Dashboard.

Who Should Read This Guide

This guide is intended for the following users of HP Business Availability Center:

➤ HP Business Availability Center administrators

➤ HP Business Availability Center platform administrators

➤ HP Business Availability Center application administrators

➤ HP Business Availability Center data collector administrators

➤ HP Business Availability Center end users

Readers of this guide should be knowledgeable about navigating and using enterprise applications, and be familiar with HP Business Availability Center and enterprise monitoring and management concepts.

Getting More Information

For a complete list of all online documentation included with HP Business Availability Center, additional online resources, information on acquiring documentation updates, and typographical conventions used in this guide, see the *HP Business Availability Center Deployment Guide* PDF.

Part I

Dashboard

1

Introducing Dashboard

This chapter includes general information about Dashboard.

This chapter includes:

Concepts

Tasks

Dashboard Overview

Dashboard enables your team to monitor the health of business services and applications from the point of view of the consumers of those services—the business, its customers, and its partners.

This section includes the following topics:

Collecting and Aggregating Data

Dashboard uses data collected by HP Business Availability Center monitoring components, such as Business Process Monitor, SiteScope, and Enterprise Management Systems (EMS) integration tools, as well as data collected from external monitoring tools. HP Business Availability Center collects metrics about the end-user experience from a range of environments, including ERP, CRM, Web, and Citrix, and about the system performance from a range of back-end infrastructure components, including Web, application, database, and firewall servers.

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

At the top level, Dashboard 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.

Prioritizing IT Operations and Maximizing Business Results

Dashboard helps you to prioritize IT operations and maximize business results by:

➤ Presenting global system component data organized into a logical and relevant framework.

➤ Providing integrated, scalable, cross-application views that reflect the health of mission-critical services and applications in real time. This enables IT operations teams to continuously manage the health of mission-critical services and applications from one central location.

➤ Providing a common view of how IT operations are meeting line-of-business goals. This enables better communication between the teams, and the alignment of management and IT operations around customer-centric values.

➤ Providing the ability to assess actual customer impact, so that IT teams can prioritize response according to business impact and optimize resource utilization to meet critical business objectives. The end result is better quality of service for your end users.

➤ Providing a big-picture perspective, enabling you to see how a performance issue impacts the availability of any part of your business and to quantify the business impact of a potential failure.

➤ Providing operational-level service level management reporting. Dashboard uses Service Level Management data to provide an indication of whether an SLA is in breach of contract, or might be in breach in the near future.

Dashboard Administration and Application

Dashboard administration and application are accessed from two different areas of HP Business Availability Center.

This section includes the following topics:

➤ "Dashboard Administration" on page 22
➤ "Dashboard Application" on page 23

Dashboard Administration

To access the Dashboard Administration tabs, select **Admin** > **Dashboard.**

You use Dashboard Administration to enable you to:

➤ Edit the KPIs attached to a configuration item (CI), and to attach new KPIs to CIs in the KPIs tab. The KPIs you create are displayed in Dashboard to help the user monitor how well the business is achieving its objectives and assess the business impact of problems in the system. For details, see "KPIs Page" on page 408.

➤ Create a custom map to display real-time indicators icons representing CIs in the view on a custom image in the Custom Map tab. For details, see "Custom Map Page" on page 230.

➤ Create an association between geographical locations and status indicators on a geographical map in the Geographical Map tab. For details, see "Geographical Map Page" on page 212.

➤ Configure a KPI assignment in the KPI Assignments tab. For details, see "Define Assignment Configuration Dialog Box" on page 451.

➤ Access the Dashboard Repository in the Repositories tab. The repository provide definitions for objects in the HP Business Availability Center system. Many of these definitions can be customized as required by your organization. For details, see "Repositories Overview" on page 473.

Dashboard Application

To access the Dashboard Application tabs, select **Application** > **Dashboard.**

You use the Dashboard application to:

➤ Display the components of the active view in a hierarchical, top-down graphic in the Top View tab. For details, see "Top View Page" on page 136.

➤ Display comprehensive data in one central location, regarding the CIs selected in View Explorer. For each CI, the Console page tabs provide information regarding the CI's hierarchy, KPIs, business impact, alerts, and changes and incidents. For details, see "Console Page" on page 152.

➤ Display a filtered list of CIs, according to the selected filter option in the Filters tab. For details, see "Filters Page" on page 187.

➤ Display an association between geographical locations and status indicators in a geographical map in the Geographical Map tab. For details, see "Geographical Map Page" on page 212.

➤ Display icons representing CIs in the view on a custom image in the Custom Map tab. For details, see "Custom Map Page" on page 230.

➤ Display the flow map that corresponds to the selected Business Process Insight or TransactionVision CI in the Flow Map tab. For details, see "Introducing Flow Map" on page 237.

➤ Display the Dashboard reports: KPIs Distribution Over Time, KPIs Over Time, KPIs Summary, and KPIs Trend reports. For details, see "Reports User Interface" on page 269.

🍥 **How Dashboard Works**

The physical and logical entities in your system, such as hardware, software, services, business processes, and so on, are represented in Dashboard by configuration items (CIs). The CIs are stored in the HP Universal CMDB, and organized into hierarchical format based on the interdependencies in your organization's IT environment.

Each CI is assigned one or more KPIs showing current operational status or business impact over time by the assignment or propagation mechanism.

The monitor CIs receive real performance metrics from the monitoring data collected by HP Business Availability Center monitoring tools, and KPI status for these CIs is calculated from that data. For more information, see "Statuses or Values" on page 28.

Status propagates up the CI hierarchy, from the monitor CIs, through parent (leaf) CIs, and up to the highest CI. For most parent CIs, KPI status is based on an aggregation of statuses for all child CIs defined by the propagation (the calculation method used for this aggregation varies, according to the KPI's business logic). For details about the propagation, see "KPI Assignment Management Overview" on page 420.

You can view a subsection of the UCMDB CIs in service views in Dashboard. Each service view provides a different aspect of your organization's IT universe, enabling you to focus on the IT area that is of interest.

The child CIs for a CI may not be visible in a view, but the KPI status shown is still based on the status propagated up from both visible and hidden child CIs.

The incoming data is updated every 30 seconds (configurable default value), so that the status information displayed in Dashboard represents the ongoing availability of your organization's infrastructure components.

This section contains the following topics:

➤ "Monitoring Performance Problems" on page 25

➤ "Monitoring Service Level Agreements" on page 25

Monitoring Performance Problems

When a performance problem is identified, you can drill down to locate the source of the problem, view event reports, and track problem handling. You can also move directly to the appropriate pages in HP Business Availability Center to view reports for problematic components, measurement data over time, and general monitoring data.

Dashboard also enables you to view operational status from the viewpoint of geographical locations, so you can see which locations are impacted by problems.

In addition, you can isolate and manage enterprise problems discovered in HP Business Availability Center, and identify likely suspects that are at the root of the problem using the Problem Isolation application.

Monitoring Service Level Agreements

Service Level Management enables you to track applications, infrastructure, and services according to the service contracts you have with internal or external customers.

In Dashboard, you can view an SLA information bar that gives you advanced warning of any potential breaches of contract, and you can act proactively to fix a problem before it causes financial damage.

Impact Modeling

In Dashboard, views show the topology of the CIs that were selected in the UCMDB as being part of the view definition. The views also display the status of the KPIs of the view's CIs.

The status of a KPI is calculated at the monitor CI level and propagated at the group CI level. A KPI's status is propagated from a child CI to a parent CI according to the propagation definition only when the parent CI and the child CI are linked by either an **Impacted By (Directly)** or an **Impacted By (Potentially)** calculated relationship.

For more details about these types of relationships, see "Impact Modeling Overview" in *Model Management.*

🔩 **View Components**

The CIs and relationships produced by the various CI-generating tools that operate within HP Business Availability Center, are stored in the configuration management database (CMDB).

The service views displayed in Dashboard are built from CIs contained in the UCMDB. These CIs are mapped together to build views that meet your business requirements and objectives, and monitor what is important to you. (For a more detailed explanation of how views are built, see "Working with Views in IT Universe Manager" in *Model Management*.)

This section includes the following topics:

➤ "Topology" on page 26

➤ "CIs in Views" on page 27

➤ "KPIs in Views" on page 27

Topology

Each view has a specific set of CIs and a topology that provides a hierarchy of CIs. For details, see "Display a View Structure" on page 56.

Each CI has only one instance in the CMDB. Different views can look at the same CI.

The view displays the topology of the CIs, and the statuses of the different KPIs attached to the CIs. For details on how the KPI statuses are assigned to the CIs at the different levels of the topology, see "Impact Modeling" on page 25.

Details on specific views are provided in subject-related documentation; for example Real User Monitor views are detailed in "About Real User Monitor Views" in *Using End User Management*.

Note: The OMi-related views only appear if you are using HP Operations Manager *i*. For details, see *Using HP Operations Manager i*.

CIs in Views

The CIs at the lowest level of the hierarchy represent the monitor CIs, such as SiteScope monitors, Business Process Monitor transactions, or metrics from other external monitoring sources. The upper levels of the hierarchy represent logical groups. CI names are either taken from the external source, or are defined by the administrator as part of the CI properties.

The views may also contain dynamic hierarchies generated by the Dynamic Node Factory definition file. These hierarchies are created in the CMDB at runtime, based on the incoming samples. The parent for a dynamic hierarchy is a Dynamic Node Factory CI. Note that the CIs under the Dynamic Node Factory parent do not generally have option menus. For more information on dynamic hierarchies, see "IT Universe Manager – Dynamic Node Factory" in *Model Management*.

Note: The OMi-related views only appear if you are using HP Operations Manager *i*. For details, see *Using HP Operations Manager i*.

KPIs in Views

Factory KPIs and factory business rules that can be associated with the KPIs are provided in the Repositories. Those KPIs and business rules can be combined in assignments and propagations. The factory KPIs and business rules can be customized. For details about the repositories, see "Repositories Overview" on page 473.

KPIs and business rules are assigned, using the KPI assignment mechanism, to monitor CIs. KPIs and business rules are propagated, using the KPI propagation mechanism, up the CI's hierarchy in the view. For details about the KPI assignment and propagation, see "KPI Assignment Management Overview" on page 420.

You can also manually assign additional KPIs to CIs in Dashboard Administration. For details, see "Add KPI to Multiple CIs/Edit KPI/Edit KPI for Child Transaction Dialog Box" on page 397.

For each CI in a view, one or more KPI columns are displayed. For example, Availability, System, Performance, and so on. For a list of the KPIs used in Dashboard, see "List of Dashboard KPIs" on page 510.

For each CI, each KPI column contains status icons or values, representing how the KPI objective is met. For details on KPI status, see "KPI Status" on page 355.

In the case of data coming from the Business Process Monitor, the KPIs and business rules assigned to the CIs are defined in the Business Process Monitoring source adapter. For more information, see "Business Process Monitoring Source Adapter Details" in *Model Management*.

Note: The OMi-related KPIs and business rules only appear if you are using HP Operations Manager *i*. For details, see *Using HP Operations Manager i*.

Statuses or Values

The status or value information displayed in Dashboard views is real-time data calculated by the online Business Logic Engine (using the business rules associated with the KPI). The Business Logic Engine takes data directly from the samples sent by the monitors in the bus.

The status or value information is propagated from the monitoring CIs to the higher levels of the CI hierarchy in the view using specific mechanisms.

The monitoring views (for example End-User Monitors view) display the created CI hierarchies for the monitored sources. When data is received over the Bus for a monitor, you can open the monitoring view in Dashboard and view status information for the CIs. You can use the CI hierarchies created in the predefined monitoring views as the building blocks for defining your own customized views. For more information, see "Working with Views in IT Universe Manager" in *Model Management*.

🍥 CIs and Infrastructure Changes

When changes are made to your organization's infrastructure, they are detected by the discovery process or by monitors monitoring external sources. Dashboard checks the engine every 60 seconds (default setting), for configuration changes received from the external sources. The structure and content of the CI hierarchies are then automatically updated and deployed to the Dashboard application. Some settings of the source adapters may affect the hierarchy of the view; for example, **Transactions/locations** in the Business Process Monitor source adapter. For more information, see "Business Process Monitoring Source Adapter Details" in *Model Management.*
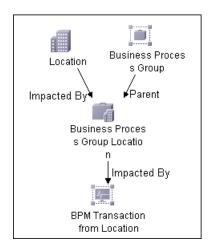
In addition, changes made within HP Business Availability Center, by changing the profiles in End User Management Administration or manually updating CIs in CMDB Administration, are also automatically deployed to Dashboard.

For details on where to see the changes, see "Monitoring Changes in Dashboard Overview" on page 111.
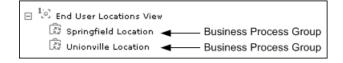
🎲 End User Monitors View and End User Locations View

The End User Monitors View and End User Location View display the data for the monitor CIs corresponding to Business Process Monitor transactions, or metrics from other external monitoring sources, and for the logical group CIs. The End User Monitors View and End User Location View display the data for the monitor CIs corresponding to SiteScope monitors, Business Process Monitor transactions, or metrics from other external monitoring sources, and for the logical group CIs.
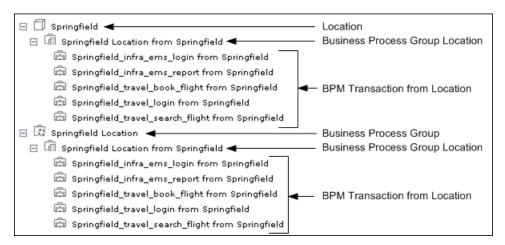
➤ **End User Locations View.** The End User Locations View TQL is as follows:

If you select the **Regular** hierarchy structure, the view displays only the Business Process Group CIs. For details about the **Regular** structure, see Hierarchy Structure in "New/Edit Source Adapter Dialog Box" in *Model Management*.
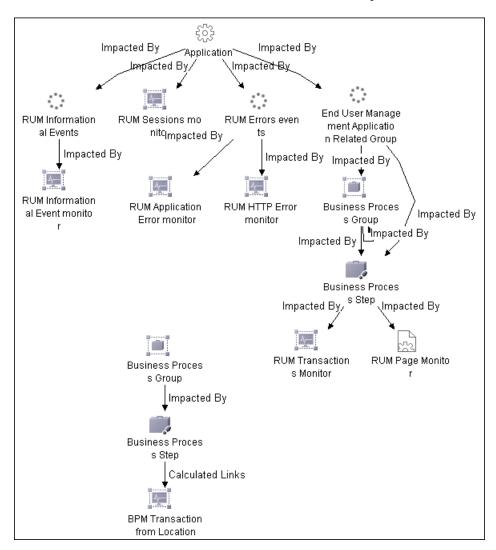
If you select the **Transaction/Location** hierarchy structure, the view displays the following CIs. For details about the **Transaction/Location** structure, see Hierarchy Structure in "New/Edit Source Adapter Dialog Box" in *Model Management.*
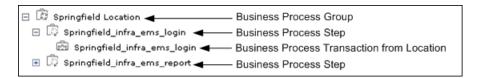
The End User Locations View provides relevant information (apart from a list of Business Process Group CIs) only if you select the **Transaction/Location** hierarchy structure.

➤ **End User Monitors View.** The End User Monitors View TQL is as follows:
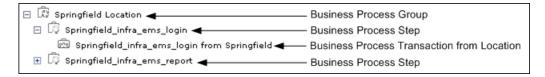
If you select the **Regular** hierarchy structure, the End User Monitors View displays the following hierarchy.

Note that the Business Process Transaction from Location CIs do not display the location information.
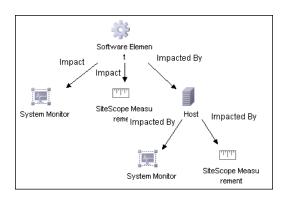
If you select the **Transaction/Location** hierarchy structure, the view displays the following CIs:

The Business Process Transaction from Location CIs display location information.
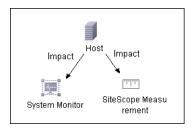
System Software Monitoring and System Hardware Monitoring Views

The System Software Monitoring view displays the applications connected to the system monitors and to the SiteScope measurements.

The System Hardware Monitoring displays the hardware elements (for example, the host machines) connected to the system monitors and the SiteScope measurements.
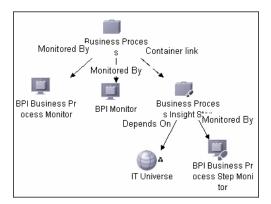
Business Processes View for Business Process Insight

Business Process Insight data collectors send data and topology to Business Availability Center. The topology and data are about the business process flows and business process steps that you monitor to obtain meaningful impact data about the health of your business. For more information on defining business processes in Business Process Insight, see *Reference Information for Business Process Insight*.

The HP Business Availability Center templates for Business Process Insight create the processes topology in the CMDB using the Universal CMDB API. The topology includes group CIs and monitor CIs for the monitored Business Process Insight system.

In HP Business Availability Center, the Business Processes view has the following topology:

This section includes the following topics:

➤ "Business Process Insight CIs" on page 35

➤ "HP Business Process Insight KPI Assignment Group" on page 36

➤ "Access HP Business Process Insight Application" on page 36

➤ "Drill Down to HP Business Process Insight-Related Reports" on page 36

➤ "Topology for Business Process Insight" on page 37

➤ "KPI Assignments for Business Process Insight" on page 38

Business Process Insight CIs

The CIs are as follows:

➤ The **Business Process** CI represents the Business Process flow in Business Process Insight.

➤ The **BPI Business Process Monitor** CI is a child of the **Business Process** CI. It represents the Business Process Insight business process.

➤ The **Business Process Insight Step** CI represents an activity (a step) in the Business Process flow in Business Process Insight. The **Business Process Insight Step** CI is a child of the **Business Process** CI.

➤ The **BPI Business Process Step Monitor** CI monitors the corresponding activity in the Business Process flow in Business Process Insight.

➤ The **BPI Monitor CI** monitors as defined by the BPI monitor definer. At the same time as each new monitor definition is created in the BPI database tables, a BPI Monitor CI is created in the UCMDB. The BPI Monitor CI stores the Monitor Name, Description, Type, Units, Collection Interval, Threshold Operator, Server Name and Instance Threshold limits (where specified) as defined in Business Process Insight.

For details, see "Configuration Items Stored in the UCMDB in *Using Business Process Insight.*

HP Business Process Insight KPI Assignment Group

In Dashboard, the HP Business Process Insight KPI assignments group adds KPIs, rules, context menus, context menu items, and tooltips to those CIs. Status for these CIs can be viewed in Dashboard in the Business Processes view.

Note: Service Level Management has its own sets of KPIs and rules that are attached to CIs within agreements.

Access HP Business Process Insight Application

You can access the Business Process Insight application using a context menu option in the Business Availability Center application. For details, see "Menu Options" on page 75.

Drill Down to HP Business Process Insight-Related Reports

You can drill down to Business Process Insight-related reports using context menu options in the Business Availability Center application. For details, see "Menu Options" on page 75.

Topology for Business Process Insight

All the sample information sent by Business Process Insight data collectors is displayed by the **Backlog**, **Volume**, **Business Impact**, **Value**, and **Duration** KPIs attached to the **BPI Monitor**, **BPI Business Process Step Monitor**, **Business Process Insight Step**, **BPI Business Process Monitor, BPI Value Monitor**, **BPI Duration Monitor**, and **BPI Custom Value Monitor** CIs and propagated to the **Business Process** CI. To display BPI Value Monitor or BPI Duration Monitor CIs, you must define a value or a duration monitor in the BPI Monitor Definer.

In addition, the **Business Process** CI is assigned the **Business Health** and **Operational Status** KPIs. The rules listed in the table below calculate the statuses of those KPIs based on data obtained from Business Process Insight samples.

Note: The Business Health KPI in version 7.50 was renamed Business Impact in version 8.0. A new Business Health KPI has been added to the topology.

The **Business Process Insight Menu**, and the **Business Process Monitor Group Menu** context menus, **Go to BPI** context menu item, and the tooltips corresponding to the rules listed in the table below, are preconfigured to provide the appropriate infrastructure to work with the Business Process Insight-related CIs in Dashboard. For details about the KPIs, rules, context menus, context menu items, and tooltips, see "Repositories – Overview" on page 474.

In Dashboard, the KPIs that are preconfigured to work with Business Process Insight are:

➤ "Backlog" on page 512

➤ "Business Health" on page 513

➤ "Business Impact" on page 514

➤ "Duration" on page 516

➤ "Value" on page 531

➤ "Volume" on page 533

Descriptions of the KPIs, and lists of which rules are relevant for each KPI, can be found in "List of Dashboard KPIs" on page 510.

Note: The KPIs listed in the table use special icons in Top View in Dashboard. For details, see "KPI Icons in Top View" on page 140.

KPI Assignments for Business Process Insight

The KPI assignments for Business Process Insight when working in Dashboard are different from the KPI assignments for Business Process Insight when working with Service Level Management.

Business Transactions View for TransactionVision

In the Business Availability Center Dashboard tabs, you can use the Business Transactions view to monitor the real-time performance and health of your business transactions. For information on setting up business transactions, see "Introducing TransactionVision" in *Using TransactionVision*.

The business transaction KPIs in the view reflect the data received in the latest sample (there is no aggregation of the sample data in Dashboard). For example, if a KPI has a value of $2000, this value is only for the data received in the last sample, the value from the previous sample was not added to it. For information on the KPIs used for the TransactionVision data, and how to see status for the KPIs, see "KPIs and Rules for TransactionVision Data" on page 41.

This section includes the following topics:

➤ "Mapping End User Transactions to Business Transactions" on page 39
➤ "KPIs and Rules for TransactionVision Data" on page 41

Mapping End User Transactions to Business Transactions

The Business Transactions view provides status information for back-end monitoring from TransactionVision, including CIs representing business transactions, and CIs representing the infrastructure elements that the business transactions are dependant on, as discovered by the TransactionVision sensors. For more information on the creation of the infrastructure CIs, see "CMDB Population Job" in *Using TransactionVision*.

You can add the end-user perspective by mapping end-user transactions from Business Process Monitor and Real User Monitor to the business transactions. As a result of this mapping, the following information is available in Dashboard:

➤ the branch for a Business Transaction CI includes KPI status information from the end-user perspective.

➤ the Flow Map page displays the Transaction Topology Flow Map for a transaction, including worst status Application and Performance measurements for the Web Clients component. For details, see "Transaction Topology Flow Map" in *Using TransactionVision*.

You set up the mapping in End User Management Administration, when defining Business Process profile and Real User Monitor transactions, or while editing existing transactions. Each transaction can be mapped to only one Business Transaction CI (but multiple Business Process Monitor and Real User Monitor transactions can be mapped to a single Business Transaction CI). For details, see "Map End-User Transactions to TransactionVision Business Transactions" in *Using End User Management*.

See the following pages for information on where you perform the mapping:
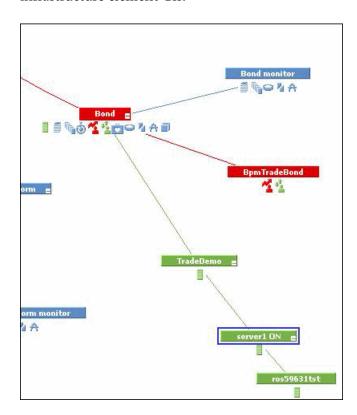
➤ For mapping Business Process Monitor transactions while creating new Business Process profiles or adding new transaction monitors to profiles, see "Set Transaction Properties Page" in *Using End User Management*.

➤ For mapping existing transactions in a Business Process profile, see "Edit Transaction Page" in the Business Process Monitor section of *Using End User Management*.

➤ For mapping new and existing Real User Monitor transactions, see "New/Edit Transaction Page" in the Real User Monitor section of *Using End User Management*.

A task flow for performing the mapping is provided in "Map End-User Transactions to TransactionVision Business Transactions" in *Using End User Management*.

The following picture shows part of the Business Transactions view in the Dashboard Top View page. The Business Transaction CI Bond has attached TV Monitor CI (Bond monitor), BPM Transaction from Location CI (BpmTradeBond), and J2EE Application CI (TradeDemo) with its underlying infrastructure element CIs.

KPIs and Rules for TransactionVision Data

There are seven KPIs that are used for TransactionVision data in Dashboard:

➤ "Backlog" on page 513

➤ "Delays" on page 515

➤ "Duration" on page 516

➤ "Exceptions" on page 517

➤ "Failures" on page 518

➤ "Value" on page 532

➤ "Volume" on page 534

Descriptions of the KPIs, and lists of which rules are relevant for each KPI, can be found in "List of Dashboard KPIs" on page 510.

The KPIs and rules used by the TransactionVision data CIs in Dashboard are automatically assigned by the KPI Assignments mechanism, as described in "Edit Group Page" on page 468. **Backlog**, **Delays**, and **Volume** KPIs are always assigned by default to the Business Transaction and TV Monitor CIs; the **Exceptions**, **Failures**, and **Value** KPIs are each assigned by default, only if the corresponding attribute rule is defined for the business transaction in TransactionVision. (You can see which attribute rules are defined in the Properties page for the TV Monitor CI. For more information, see "TransactionVision Data in Business Availability Center" in *Using TransactionVision*.)

The **Duration** KPI must be manually assigned to the CIs.

The rules for the TV Monitor CI are all sample-based, and by default recalculate data for each new sample.

The Business Transaction CIs by default use the Business Transaction Group Rule for each business transaction KPI. This rule assigns value and status to the KPI by taking the value and status directly from the KPI for the child TV Monitor CI.

The business transaction KPIs do not include predefined objective thresholds. (The objective thresholds are used to assign a status to the KPI, based on the KPI value.) As each business transaction represents an individual business event, with individual business objectives, you need to set appropriate objective thresholds for each business transaction KPI, so that it displays a meaningful status. Until objective thresholds are defined, the KPI displays data with **Info** (blue) status in Dashboard.

You can edit the default KPIs and rules assigned to the CIs, and define objective thresholds for each KPI, in the **Admin** > **Dashboard** > **KPIs** tab.

Dashboard Application Components in the Service Report

You can build Service Reports based on data from data sources from the Dashboard application. You can add Service Reports as portlets in My BSM or in Report Manager. After you have added Service Reports to the Report Manager, you can add the reports as custom report components to benefit from all the custom report capabilities. For details, see "Service Report Overview" or "Report Manager Overview" in *Reports*.

About Menu Options

From the Top View, Console Hierarchy, and Filters tabs in Dashboard and from View Explorer in other tabs, you can access context menu options.

You access menu options by right-clicking a CI in View Explorer or by clicking the grey arrow button to the right of the CI in Top View, Console Hierarchy, and Filters tabs.

Depending on the selected view and selected CI, you can, among other possibilities, drill down to other HP Business Availability Center applications or to SiteScope, or open standalone reports or views. For example, you can view a trend report on the End User Management page, including measurement data for the CI over a specified time period.

The menu options that are displayed depend on the selected view and the selected CI. They can be a subset of the available options.

For details on the options, see "Menu Options" on page 75.

For advanced information on the various menu options, see "Context Menu Repository" on page 693.

🎲 Dashboard General Notes and Tips
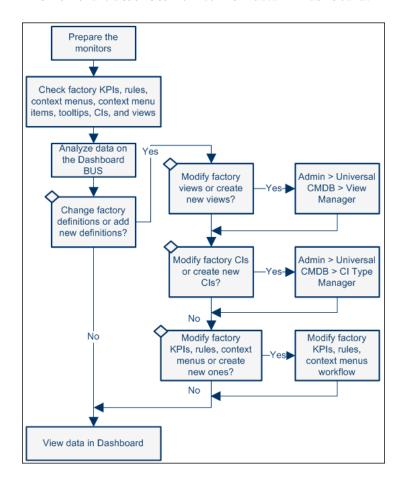
Note the following when working with Dashboard:

➤ It is recommended that you use Microsoft Internet Explorer as your browser when using the Dashboard application.

➤ User access to Dashboard views is limited by the viewing permissions specified for the user. If you cannot see a view, contact your administrator. For details, see "Permissions Overview" in *Platform Administration*.

➤ The first time you access Dashboard, you may experience a short delay while Dashboard compiles the page.

➤ Dashboard uses the timestamp of the database machine hosting the HP Business Availability Center database. The times displayed in the tooltips reflect the time zone setting on that computer. If you customize the time zone setting in HP Business Availability Center using the **Admin** > **Personal Settings** > **General Settings** option, then the customized time zone is also used in Dashboard.

➤ When Dashboard does not receive data for a Business Process profile because a Business Process Monitor is stopped (while the profile itself is not stopped), this is not specifically indicated in the tooltip. In this case, after a while the tooltip **Status** parameter displays **Not up to date**, and the **Warning** parameter displays the number of seconds during which no data has arrived.

🔧 View Data in Dashboard – Workflow

To display data in views specific to your organization, create SiteScope monitors, Business Process and Real User Monitor monitors and run Discovery and Dependency Mapping on your system. The discovery process populates the CMDB. HP Business Availability Center collects data about end-users, business processes, and systems, and displays the data in topologies (views) relevant to your organization. Views display system performance data about your network and applications.

The flowchart describes how to view data in Dashboard.

This section describes the processes to follow to view data in Dashboard.

This task includes the following steps:

➤ "Prepare the Monitors" on page 45

➤ "Analyze Data on the Dashboard Bus" on page 47

➤ "Check Factory KPIs, Rules, Context Menus, Context Menu Items, Tooltips, CIs and Views" on page 47

➤ "Create Views" on page 48

➤ "Customize Dashboard Display" on page 48

➤ "Customize the Views in Dashboard" on page 48

➤ "Access External Applications from Dashboard" on page 48

➤ "Results – Display Data in Dashboard" on page 48

1 Prepare the Monitors

To import data into HP Business Availability Center you must set up monitors as follows:

a **Create SiteScope Monitors.** Create SiteScope Monitors to collect network and system data about your system for use in HP Business Availability Center. SiteScope monitors information is displayed in System views. For details, see "Configure SiteScope for Monitoring – Workflow" in *Using System Availability Management.*

b **Create Business Process and Real User Monitor Profiles and Monitors.** Create Business Process and Real User Monitor profiles and monitors to collect performance data for HP Business Availability Center. Business Process and Real User Monitor monitors information is displayed in End-User Monitor views. For details, see "General and Administration" in *Using End User Management.*

Note: You can map Business Process Monitor and Real User Monitor transactions in End User Management Administration, to business transactions from TransactionVision. For details, see "Map End-User Transactions to TransactionVision Business Transactions" in *Using End User Management*.

---

c **Configure Diagnostics Servers and Probes to Monitor Your Applications.** Configure the servers and probes that are going to be used by Diagnostics to monitor your applications. For details, see *HP Diagnostics Installation and Configuration Guide*.

You must also specify the Diagnostics server details in **Admin** > **Diagnostics**. For details, see "HP Diagnostics and HP Business Availability Center Integration" in *Solutions and Integrations*.

d **Customize KPI Assignments – Optional.** You can customize the appropriate KPI assignment rules. KPI assignment rules are designed to automatically assign to a specified CI, the appropriate KPIs, rules, and context menus when a specified condition occurs. The condition is usually when one of the CI's attributes has a specified value in the sample that is sent to HP Business Availability Center. For details on customizing KPI assignments, see "Manage KPI Assignment Groups" in *Using Dashboard*.

If required, you can customize the SiteScope KPI Assignments. For details, see "Work with the SiteScope Assignment Group" in *Using Dashboard*.

e **Customize the Source Adapters.** If required, customize the Business Process Monitor, or Real User Monitor source adapters. For details, see "Configure a Source Adapter – Workflow" in *Model Management*.

f **Run Discovery and Dependency Mapping.** Collect information about your system by running Discovery and Dependency Mapping to enable you to discover the IT infrastructure resources and their interdependencies, such as applications, databases, network devices, servers, and so on. Each discovered IT resource is delivered to, and stored in, the configuration management database (CMDB) where the resource is represented as a managed configuration items (CIs).

Discovery is an ongoing, automatic process that continuously detects changes that occur in the IT infrastructure and updates the CMDB accordingly. You do not need to install any agents on the devices to be discovered. Discovery and Dependency Mapping processes have corresponding views that are automatically correlated with the CIs discovered during discovery and displayed in views. For details, see "Discovery and Dependency Mapping Content – Overview" in *Discovery and Dependency Mapping Guide*.

2 Analyze Data on the Dashboard Bus

To view and analyze the data on the bus, check the log file.

The log file contains the samples that are currently on the HP Business Availability Center bus with real data. You can use the data to properly set up selectors for Dashboard KPIs. For details, see "KPIs in Views" on page 27.

For details about the samples and their fields, see "Data Samples" in *Reference Information*.

3 Check Factory KPIs, Rules, Context Menus, Context Menu Items, Tooltips, CIs and Views

Check the factory components to make sure the data and the hierarchy you see in the views is what you want. For details about the factory KPIs, rules, context menus, context menu items, and tooltips, see "Repositories" on page 471.

To check the factory CIs, select **Admin** > **Universal CMDB** > **Modeling** > **CI Type Manager**.

To check the factory views, select **Admin** > **Universal CMDB** > **Modeling** > **View Manager**.

4 Create Views

The IT Universe model in the CMDB can be very large, holding thousands of configuration items (CIs). A view enables you to build a subset of the overall IT Universe model, containing only those CIs relating to a specific area of interest. Some views are automatically created when you use standard SiteScope, Business Process and Real User Monitor profiles and monitors. You can also define your own pattern, perspective, or template-based views to display only the information that is relevant to your organization's business needs. For details, see "Create a Template Based View" in *Model Management*.

5 Customize Dashboard Display

You can customize some aspects of the Dashboard display and the refresh rate of the display. For details, see "Customize Dashboard Display and Refresh Rate" on page 69.

6 Customize the Views in Dashboard

You can customize the views themselves. You can set up geographical maps and custom maps. You can customize the display of the view in the other Dashboard tabs. For details on customizing the views in Dashboard, see "Customize the Way HP Business Availability Center Displays Views in Dashboard" on page 49.

7 Access External Applications from Dashboard

To access external applications from Dashboard, create a Dynamic URL context menu option. For details, see "Create a Dynamic URL – Scenario" on page 493.
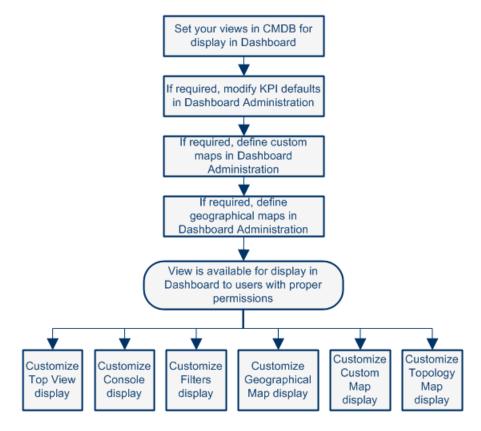
8 Results – Display Data in Dashboard

Use views, Dashboard tabs, and other capabilities to display data in Dashboard. For details, see "Display Data in Dashboard" on page 53.

🪝 Customize the Way HP Business Availability Center Displays Views in Dashboard

You can customize the way HP Business Availability Center displays views in Dashboard.

The flowchart describes the process of customizing the way a view is displayed in Dashboard to reflect your organizational requirements.

This task includes the following steps:

➤ "Set Your Views in CMDB For Display in Dashboard" on page 50

➤ "Modify KPI Defaults in Dashboard Administration – Optional" on page 50

➤ "Specify the Time Format Used in a CI Last Status Update Time – Optional" on page 51

➤ "Define a Custom Map in Dashboard Administration – Optional" on page 51

➤ "Configure Geographical Map in Dashboard Administration – Optional" on page 52

➤ "Acknowledge Performance Problems" on page 52

➤ "Display Data in Dashboard" on page 52

➤ "Customize Dashboard Tabs – Optional" on page 52

1 Set Your Views in CMDB For Display in Dashboard

HP Business Availability Center provides several default views. If required, you can create custom views (pattern, perspective, or template views) in CMDB Administration.

For details on pattern, perspective, or template views, see "Create a Template Based View" in *Model Management*.

2 Modify KPI Defaults in Dashboard Administration – Optional

Monitor CIs associated with default sources generally have default KPIs. For example, Business Process Monitor, Real User Monitor, and SiteScope monitor CIs that you configure in End User Management Administration or System Availability Management Administration, all have default KPIs.

Note that CIs with default KPIs that are placed under other CIs in a view generally propagate their KPIs upward to the parent CIs.

You can:

➤ Change the default business rule assigned to a KPI.

➤ Change the properties of the default business rule.

➤ Modify or delete a KPI associated with a higher level CI in a view if the KPI has the following characteristics:

➤ It originates from a lower level CI.

➤ It was propagated upward.

➤ It is not appropriate for the higher lever CI (for example, if you want to only see performance and not availability).

➤ Add a new KPI to a higher level CI. Proceed as follows: select **Admin > Dashboard**, select a view, and click the **KPIs** tab. For details, see "KPIs Page" on page 408.

➤ Save historical data for a KPI if you want to see the associated data in the KPI over Time report. For details, see "Persistent Data and Historical Data" on page 366.

3 Specify the Time Format Used in a CI Last Status Update Time – Optional

You can modify the default time format (am/pm hh:mm:ss) used in a CI Last Status Update Time. A CI Last Status Update Time information is usually displayed in tooltips. The time format is specified using a key. The key is translated into a localized format in the **LocaleDate_<locale>.properties** file.

To modify the time format, select a valid key from **<Gateway server root directory>\AppServer\resources\ LocalDate_<locale>.properties**, select **Admin > Platform > Setup and Maintenance > Infrastructure Settings**, choose **Applications**, select **Dashboard Application**, and enter the selected key in the **Time Format Key of CI Last Status Update Time** entry in the Dashboard Application - Filtering Properties table.

4 Define a Custom Map in Dashboard Administration – Optional

You can add status indicators to a custom image. The status indicators display the real time status for specified CIs. Each status indicator displays the worst status from all KPIs associated with that CI. For example, if you place on the image a status indicator for a Line of Business CI, the status indicator displays the worst status of all KPIs associated with the Line of Business CI.

The custom image can be useful for representing data centers, geographical distribution of IT resources, and so on. To add a custom image, select **Admin > Dashboard**, select a view, and click the **Custom Map** tab. For details on creating a custom map, see "Display a View in a Custom Map" on page 225.

 **5 Configure Geographical Map in Dashboard Administration –
   Optional**

You can specify a geographical location in the location parameters for a CI
in CMDB Administration. To define geographical locations for CIs, select
Admin > **Universal CMDB** > **Modeling** > **It Universe Manager.** Select a CI in
View Explorer. In the Information Pane, select the **Properties** tab and click
Edit.

Those status indicators automatically appear, at the defined location, on the
geographical map corresponding to views that include those CIs. When
there are multiple CIs with the same defined location, one status indicator is
displayed for the location, showing the worst status for all KPIs associated
with all CIs at that location.

You can zoom and center the geographical map to focus on the parts of the
map relevant to the associated view. To zoom and center the geographical
map, select **Admin** > **Dashboard**, select a view, and click the **Geographical
Map** tab. For details, see "Display and Customize a View in Geographical
Map" on page 200.

 6 Customize Dashboard Tabs – Optional

You can customize the way the Dashboard tabs display the data. For details,
see each tab description. For a list of the tabs and links to their descriptions,
see "Dashboard Administration and Application" on page 22.

 7 Acknowledge Performance Problems

For details, see "Acknowledge Performance Problems" on page 102.

 8 Display Data in Dashboard

You can use views, Dashboard tabs, and other capabilities to display data in
Dashboard. For details, see "Display Data in Dashboard" on page 53.

🪓 Display Data in Dashboard

You can display different aspects of the data obtained from different profiles and monitors using views, Dashboard tabs, and other capabilities.

Each step is optional. You can perform the steps in any order.

This task includes the following steps:

➤ "Display the Components of the Active View in the Console page" on page 53

➤ "Display a Filtered List of CIs, According to the Selected Filter Option" on page 54

➤ "Display an Association Between Geographical Locations and Status Indicators Using a Maps Applet" on page 54

➤ "Display Icons Representing the View's CIs on a Custom Image" on page 54

➤ "View the Dashboard Reports" on page 55

➤ "Display Sample Details" on page 55

➤ "Display Real-time Change Information" on page 55

➤ "Find Visible and Hidden Children CIs in a Specific View" on page 55

1 Display the Components of the Active View in the Console page

To display the components of the active view:

➤ In a Hierarchical, Top-down Graphic, select **Applications** > **Dashboard** > **Top View**. For details, see "Display and Customize View Information in Top View" on page 121.

➤ Arranged in a Hierarchical Tree, select **Applications** > **Dashboard** > **Console** > **Hierarchy**. For details, see "Hierarchy Tab" on page 157.

You can also:

➤ Display KPI Over Time Status and Federated KPI Values for CIs in the Active View. Select **Applications** > **Dashboard** > **Console** > **KPIs**. For details, see "KPIs Tab" on page 159.

➤ Display Business CIs and SLAs Impacted by CIs in the Active View. Select **Applications** > **Dashboard** > **Console** > **Business Impact.** For details, see "Business Impact Tab" on page 161.

➤ Display CI Status Alerts Triggered by CIs in the Active View. Select **Applications** > **Dashboard** > **Console** > **Alerts**. For details, see "Alerts Tab" on page 164.

➤ Display Planned Changes and Actual Changes Made to CIs, and Incidents Opened for CIs. Select **Applications** > **Dashboard** > **Console** > **Changes and Incidents**. For details, see "Changes and Incidents Tab" on page 165.

2 **Display a Filtered List of CIs, According to the Selected Filter Option**

Select **Applications** > **Dashboard** > **Filters**. For details, see "Display and Customize a View Information in Filters" on page 173.

3 **Display an Association Between Geographical Locations and Status Indicators Using a Maps Applet**

Select **Applications** > **Dashboard** > **Geographical Map**. For details, see "Display and Customize a View in Geographical Map" on page 200.

4 **Display Icons Representing the View's CIs on a Custom Image**

Select **Applications** > **Dashboard** > **Custom Map**. For details, see "Display a View in a Custom Map" on page 225.

5 View the Dashboard Reports

Select **Applications** > **Dashboard** > **Reports**, and select one of the following reports: KPIs Distribution Over Time, KPIs Over Time, KPIs Summary, and KPIs Trend reports. For details, see "Reports User Interface" on page 269.

6 Display Sample Details

For details, see "View Sample Details" on page 57.

7 Display Real-time Change Information

For details, see "Analyze Real-Time Change Information" on page 112.

8 Find Visible and Hidden Children CIs in a Specific View
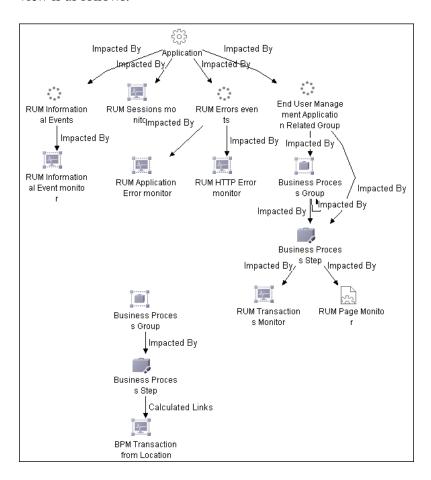
For details, see "Find Visible and Hidden Child CIs" on page 64.

🔨 **Display a View Structure**

To display the components and the topology of a view, select **Admin > Universal CMDB > Modeling > View Manager**, select the view in the tree to display the view structure in the central pane.

Example

To display the components and topology of the End User Monitors View, select **Admin > Universal CMDB > Modeling > View Manager**, expand **Monitors** in the tree, and select the **End User Monitors View** in the tree. The view is as follows:

⚒ View Sample Details

If required, you can set up Dashboard to provide data from the last sample that arrived for a monitor CI. This data is viewed in the Event Details dialog box for the CI. The Event Details dialog box displays all of the parameters for the CI, and provides the values of the parameters at the last update.

This task includes the following steps:

➤ "Set Up to Display Last Sample Details in Dashboard" on page 57

➤ "Display the Last Sample Information" on page 57

1 Set Up to Display Last Sample Details in Dashboard

You can set up an individual rule attached to a KPI or all rules to save the last sample details in memory. For details, see "Set Up Rules to Display the Last Sample Details" on page 576.

2 Display the Last Sample Information

Click the **Console** or **Filters** tabs in Dashboard, and click the status icon for a monitor CI to open the Event Details dialog box. (If there is an associated Event Details dialog box for a CI, then the cursor changes to a hand when you hold the cursor over the status icon for the CI.)

For details, see "Event Details Page" on page 406.

🔧 View Business Impact Report

The Business Impact report displays information about how a CI impacts the Business Services it belongs to. Data about the affected Business Service, Application, and Business Process CIs includes KPI data, over-time data, and SLA data. For example, if a host CI has critical status, you can use the report to display the status of the Business Service CIs to which the host CI is attached.

This task includes the following steps:
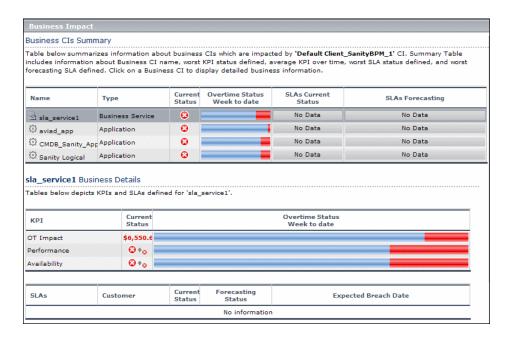
➤ "Access the Business Impact Report for a CI" on page 59

➤ "Modify the Default KPIs and Rules Used to Display Data in Business Impact" on page 60

➤ "Send a Business Impact Report URL Using Direct Login" on page 61

➤ "Send a Business Impact Report URL With the Login Page" on page 62

1 Access the Business Impact Report for a CI

To view the Business Impact Impact report for a CI, right-click the CI and select the **Show Business Impact** option. For details, see "Business Impact Report" on page 95.

Example

The following Business Impact report lists the Business Service CIs impacted by the DefaultDlient_SanityPBPM_1 CI. It also indicates, in the Business Details area, the status of the KPIs, the current and forecasting statuses of the SLAs that include the Business CI selected in the Business CIs Summary table.

2 Modify the Default KPIs and Rules Used to Display Data in Business Impact

The system derives the parameters needed to get the data displayed in Business Impact from default KPIs and rules. For example, from the **Number of Open Incidents Rule** the system derives the state and severity of tickets to be counted in the over time number of open incidents.

If you change the KPI or rule to be used in the Business Impact report, you must configure the new KPI ID in Infrastructure Settings.

To modify the settings, select **Admin** > **Platform** > **Setup and Maintenance** > **Infrastructure Settings**, choose **Applications**, select **Dashboard Application**, and locate the relevant entries in the **Dashboard Application - Business Impact** table. Modify the value of the following parameters:

➤ **Number of Open Incidents KPI.** Sets the ID number of the KPI that defines open incidents in the report. The default is 2600 for the Open Incidents KPI.

➤ **Number of Open Incidents Rule.** Sets the ID number of the rule that defines open incidents in the report. The default is 2600 for the Open Incidents rule.

3 Send a Business Impact Report URL Using Direct Login

You can send a Business Impact report to a recipient using one of the following options:

➤ **An XML file containing all the relevant data for generating the report in any application.** The information included in the report can then be used by another application, like Change Control Management or HP operation applications (Network Node Manager, Service Desk, and so on).

Use the following URL:
http://<server_name>/<HP_BAC_web_application_context_name (usually topaz)>/TopazSiteServlet?createSession=true &requestType=login&directLogin=true&directLoginEncrypted=true &userlogin=<user_name>&userpassword=<password> &applicationId=bam&customerId=<customer_id> &portlet_url=/service-impact/main/xml.do?ciId=<CI_id>

➤ **A URL that accesses the HTML report.**

Use the following URL:
http://<server_name>/<HP_BAC_web_application_context_name (usually topaz)>/TopazSiteServlet?createSession=true &requestType=login&directLogin=true&directLoginEncrypted=true &userlogin=<user_name>&userpassword=<password> &applicationId=bam&customerId=<customer_id> &portlet_url=/service-impact/main/page.do?ciId=<CI_id>

The following parameters are used in the URLs:

➤ **<user_name>** and **<password>** are the HP Business Availability Center user name and password and must be encrypted according to what HP Business Availability Center is using.

➤ **<customer_id>** is the code of the customer.

➤ **<CI_id>** is the internal number of the CI. Select **Admin** > **Universal CMDB** > **Modeling** > **IT Universe**, select the CI in the tree. The internal number of the CI appears in the **ID** box in the Properties tab in the Information pane.

4 Send a Business Impact Report URL With the Login Page

Note to HP Software-as-a-Service: Sending a Business Impact report URL with the login page is not supported.

You can send a Business Impact report to a recipient using the following options:

➤ **An XML file containing all the relevant data for generating the report in any application.** The information included in the report can then be used by another application, like Change Control Management or HP operation applications (Network Node Manager, Service Desk, and so on).

Use the following URL, to display the login page: **http://<server_name>/<HP_BAC_web_application_context_name (usually topaz)>/login.jsp?portlet_url=/service-impact/main/xml.do?ciId=<CI_id>**

The URL displays the login page and, after you enter the user name and password information, opens the report.

➤ **A URL that accesses the HTML report, included in an alert notification.** For example, if an alert assigned to a host CI is triggered and the alert includes the URL of the Business Impact report for the host CI, the user can view information about the impact of the host CI on the Business Service CI. For details, see "Create Event-Based Alert Schemes – Workflow" in *Alerts*.

Use the following URL, to display the login page: **http://<server_name>/<HP_BAC_web_application_context_name (usually topaz)>/login.jsp?portlet_url=/service-impact/main/page.do?ciId=<CI_id>**

The URL displays the login page and, after you enter the user name and password information, opens the report.

The following parameter is used in the URL: **<CI_id>** is the internal number of the CI. Select **Admin > Universal CMDB > Modeling > IT Universe**, select the CI in the tree. The internal number of the CI appears in the **ID** box in the Properties tab in the Information pane.

🐾 View the SAR Compliancy Report

HP Service Automation Reporter (SAR) manages service compliance through dynamic discovery, capture, and enforcement of entire software stacks.

You can access the SAR Compliancy report from the Dashboard tabs.

This task includes the following steps:

➤ "Specify the URL of the SAR Server" on page 63

➤ "Display the SAR Compliancy Report" on page 63

1 Specify the URL of the SAR Server
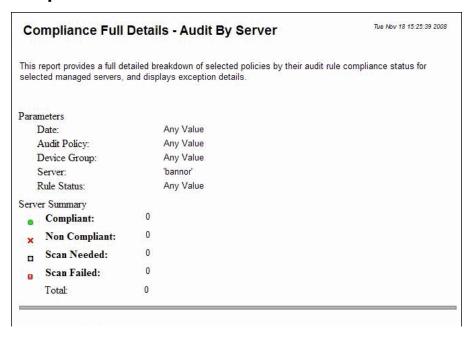
To specify the URL of the SAR server, select **Admin > Platform > Setup and Maintenance > Infrastructure Settings**, choose **Foundations**, select **Integrations with other applications**, and locate the **HP Service Automation Reporter application URL** entry in the Integrations with other applications - HP Service Automation Reporter table. Enter the URL of the SAR server.

2 Display the SAR Compliancy Report

To view the SAR Compliancy report for a Host CI, in the Top View, Console, or Filters tab, right-click a Host CI and select the **Go to Report > SAR Compliancy Report** option.

For details about the SAR Compliancy report, see HP Service Automation Reporter documentation.

Example

🦖 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 **Hide CIs from View** option in "View Editor" in *Model Management*.

This task includes the following steps:

➤ "Find the Visible and Hidden Child CIs For a Specific CI" on page 65

➤ "Search for the Views That Include a Specific Child CI" on page 65

 1 Find the Visible and Hidden Child CIs For a Specific CI

In either the Top View tab, Console Hierarchy tab or Filter tab in Dashboard, right-click the CI and select the **Find Visible and Hidden Child CIs** option to open the Find Visible and Hidden Child CIs dialog box and list all of the selected CI's child CIs that appear in the CMDB (visible and hidden).

For details, see "Find Visible and Hidden Child CIs Dialog Box".

 2 Search for the Views That Include a Specific Child CI

In View Explorer, click **Search** to perform a search for the CIs whose names include the selected child CI's name string in all views, and display the results in the View Explorer search page. For details, see "Search for CIs in Search Mode" in *Model Management*.

Click the appropriate CI in the list to display more information about the selected CI in the selected view.

If the CI is not visible in any view, in Dashboard, the following message is displayed: **Search is complete. There are no results to display for the current search parameters**. The CI is not visible in any view in the following situations:

➤ It is included in the CMDB but does not belong to any view.

➤ It belongs to a view but the **Hide CIs from View** option has been selected for its parent CI in that view. 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 **Hide CIs from View** option in "View Editor" in *Model Management*.

Example

You might have the situation where, in a specific view, the **Availability** KPI's status of the parent CI's is Critical while the **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 **Availability** KPI to be Critical.

Use the **Find Visible and Hidden Child CIs** option to list all of the child CIs of the selected CI in the CMDB. 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.

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 CMDB, 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.

🐦 Set Up Sound Notification When KPI Status Changes to Critical

You can set up Dashboard to play an alert sound when the status of a KPI changes to **Critical** in the Console or Filters tab.

When the 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:

➤ **In the Console tab.** When the Console tab is currently displayed, and a KPI in the view changes status to **Critical** (red). The Critical status icon flashes until the next screen refresh. 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.

➤ **In the Filters tab.** When the Filters tab is currently displayed, and a KPI in the view changes status to **Critical** (red). The Critical status icon flashes until the next screen refresh.

This task includes the following steps:

➤ "Set Up the Sound Notification Option" on page 68

➤ "Switch On the Sound Option in the Console or Filters Tabs" on page 68

➤ "Modify the Alert Sound – Optional" on page 68

➤ "When Using Mozilla, Download a Plug-in" on page 68

1 Set Up the Sound Notification Option

Select **Admin > Platform > Setup and Maintenance > Infrastructure Settings**, choose **Applications**, select **Dashboard Application**, and locate the **Sound Notification** entry in the Dashboard Application - Sound Notification table. Modify the value to **true** to enable the sound notification or to **false** to disable it. The change takes effect immediately.

2 Switch On the Sound Option in the Console or Filters Tabs

Switch on the sound option using the button in the Console or Filters page. For details, see "Console User Interface" on page 151 or "Filters Page" on page 187.

3 Modify the Alert Sound – Optional

The alert sound is a WAV file downloaded by the browser.

To use another alert sound for Dashboard, if you have administrative permissions, access **<Gateway server root directory>\AppServer\ webapps\site.war \bam\pages\sounds** and replace the **ding.wav** file with your own .wav file (you must rename your file **ding.wav**). The change takes effect immediately.

4 When Using Mozilla, Download a Plug-in

If you are using Mozilla, you must download a plug-in for playing WAV files, otherwise no sound is played.

⚜ Customize Dashboard Display and Refresh Rate

You can customize some aspects of the Dashboard display and the refresh rate of the display.

Note: All the steps in the task are optional and can be performed in any order.

This task includes the following steps:

➤ "Modify the Length of a CI Name" on page 69

➤ "Modify the Maximum Number of CIs to Be Displayed in Dashboard" on page 69

➤ "Modify the Dashboard Tabs Refresh Rate" on page 70

➤ "Customize Tooltips and Icons" on page 70

1 Modify the Length of a CI Name

To change the default length (40 characters) of the CI name, select **Admin > Platform > Setup and Maintenance > Infrastructure Settings**, choose **Applications**, select **Dashboard Application**, and in the Dashboard Application - Dashboard Layout Properties table, modify the **CI name maximum character length** entry. When the CI name is longer than this value, it is shortened in the display and a tooltip displays the complete name.

2 Modify the Maximum Number of CIs to Be Displayed in Dashboard

To change the default number of CIs that can be displayed in Dashboard Console and Filters pages, select **Admin > Platform > Setup and Maintenance > Infrastructure Settings**, choose **Applications**, select **Dashboard Application**, and in the Dashboard Application - Dashboard Layout Properties table, modify the **Displayed CI limit** entry. Default is **3000**.

3 Modify the Dashboard Tabs Refresh Rate

When you open a Dashboard tab for a view tree with a large infrastructure, you may experience a short delay while Dashboard builds the view.

The tab is refreshed every 30 seconds. If no change is made to the view, the display remains the same. If changes have been made to a view, or if CIs have been deleted from the view, that view's information in the tab is automatically reloaded after 30 seconds and displays the changes.

While reloading, the following message is displayed in the top right corner of the screen: **The model has changed. Reloading...** After reloading is complete, the following message is displayed in the top right corner of the screen: **Top view has been updated with model changes**. **Last Update** in the bottom left corner of the screen indicates the last time an update of the top view was reloaded.

The refresh rate of the view can be modified. To modify the refresh rate, select **Admin** > **Platform** > **Setup and Maintenance** > **Infrastructure Settings**, choose **Applications**, select **Dashboard Application**, and locate the **UI Refresh Rate** entry in the Dashboard Application - Business Impact table. Change the default.

4 Customize Tooltips and Icons

You can customize some aspects of the user interface.

➤ **Modifying Tooltip Border and Header Colors.** A KPI tooltip border and header have a default color that you can modify. For details, see "Change the Color of the Tooltip Border and Header" on page 817.

➤ **Specifying a Different Icon Set.** A different icon is used for the KPI status for each value range.

You can replace the icons set in the Top View tab and for the KPIs in the other Dashboard. You can also replace the Trend and History icons with customized ones. For details, see "Change the KPI Status Icons" on page 394.

🔨 Use the Troubleshooting Logs

This section describes how to create troubleshooting logs and how to use those logs to debug errors.

This task includes the following steps:

➤ "Use Dashboard Administration Logs" on page 71

➤ "Monitor Usage in the System" on page 72

1 Use Dashboard Administration Logs

To facilitate the creation of troubleshooting logs, you must enable Debug mode. For details, see "About HP Business Availability Center Logs" in *Reference Information*.

The logs are located in the **<Data Processing server root directory>\log\EJBContainer** folder:

➤ **bam.app.rules.log.** To verify the status of a KPI, scan the log file manually or use a script for errors in the rule calculations. The log should not contain any errors, such as Java exceptions.

➤ **TrinitySamples.log.** To verify that samples have reached the HP Business Availability Center bus, scan the log file manually or use a script for samples coming from SiteScope or Business Process Monitor.

You can use the BusDiscovery utility to search for samples transmitted on the bus. The utility is available under the **<Gateway server root directory>\tools\BusDiscovery** directory.

Use the following command to activate the utility:
D:\Temp\drv.log: sprinter -dc_attach localhost -dc_print_format sample_per_line -drv_log_file

The utility dumps the arriving samples into the following directory:
D:\Temp\drv.log

2 Monitor Usage in the System

You can monitor usage of the Dashboard application in a sessions log file. A line stating the number of users is added to the **<HP Business Availability Center Gateway server root directory>\log\EJBContainer\bam.sessions.log** file for each time period. For example, if a user accesses Dashboard, then closes HP Business Availability Center, then accesses Dashboard again, this counts as two user sessions in the log file.

To change the default time period, open the **<HP Business Availability Center Gateway server root directory>\conf\settings\BACAppSettings.xml** file, look for the keys: **session.log.interval.0**, **session.log.interval.1**, or **session.log.interval.2**., and change the key to match the required time period as follows:

Key	Represents:
session.log.interval.0	a 6 hour period
session.log.interval.1	a 12 hour period
session.log.interval.2	a 24 hour period

Dashboard User Interface

This section describes:

🔍 Find Visible and Hidden Child CIs Dialog Box

Description	Enables you to list all of the selected CI's child CIs that appear in the CMDB (visible and hidden).
	To access: In the Console Hierarchy or Filter tabs in Dashboard, right-click the CI and select the **Find Visible and Hidden Child CIs** option.
Important Information	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 **Hide CIs from View** option in "View Editor" in *Model Management*.
Included in Tasks	"Find Visible and Hidden Child CIs" on page 64

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
<KPI>	The name of the child CI's KPI and its status.
<Top part of page>	Displays the name of the selected CI, whose child CIs you want to list, the CI's KPIs, and their status in the current view.
Name	The name of the child CIs (visible and hidden) that appear in the CMDB.

GUI Element (A-Z)	Description
Search	Click the **Search** button to perform a search for the CIs whose names include the selected child CI's name string in all views, and display the results in the View Explorer search page. For details, see "Working with View Explorer" in *Model Management*. From the View Explorer search page, click the appropriate CI in the list to display more information about the selected CI in the selected view. If the CI is not visible in any view, in Dashboard, the following message is displayed: **Search is complete. There are no results to display for the current search parameters**. **Note:** The CI is not visible in any view in the following situations: ➤ It is included in the CMDB but does not belong to any view. ➤ It belongs to a view but the **Exclude all child CIs** option has been selected for its parent CI in that view. For details on including or excluding child CIs, see the **Hide CIs from View** option in "View Editor" in *Model Management*. For more details, see "Find Visible and Hidden Child CIs" on page 64.
Visible	A checkmark indicates that the child CI is visible in the view. An X indicates that the child is hidden in the view.

🔍 Menu Options

The menu options displayed in Dashboard tabs depend on the selected view and the selected CI. They can be a subset of the options described in this section.

For more information about menu options, see "About Menu Options" on page 42.

The available options are:

Main Option (A-Z)	Description and Sub-Options	
Acknowledgment	This menu lists options that enable you to use the acknowledgment utility.	
	Acknowledgment Details	This option is available for all CIs.
		Opens the Acknowledgment details page that displays information about the CI's acknowledgment.
		For details, see "Acknowledgments Details Dialog Box" on page 109.
	Set/Unset Acknowledgment	This option is available for all CIs.
		Opens the Set/Unset Acknowledgments page where you can set or clear the CI's acknowledgment.
		For details, see "Acknowledgment History and Details Dialog Box" on page 108.
Business Transaction Flow Map	This option is available for TV Monitor CIs.	
	This menu lists options that enable you to open specific capabilities filtered by the selected CI.	
	Completed	Opens the TransactionVision Flow Map for completed instances of the business transaction. For details, see "Transaction Topology Flow Map for the Dashboard" in *Using TransactionVision*.
	In-Process	Opens the TransactionVision Flow Map for instances of the business transaction that are in process. For details, see "Transaction Topology Flow Map for the Instance Topology" in *Using TransactionVision*.

Main Option (A-Z)	Description and Sub-Options	
Drill to Diagnostics	This menu lists options that enable you to open specific pages in the Diagnostics application filtered by the selected CI. This option is displayed only if you have Diagnostics installed.	
	Layers View	This option is available for: ➤ All Probe Group, and Probe CIs in the Diagnostics View. ➤ Business Process Step CI, in the End User Monitors View. **Note:** This option is displayed only if you have Diagnostics installed. Opens the Layers (Load) view, with the following characteristics: ➤ For a Business Process Step CI, the view displays the layers of the transaction that corresponds to the Business Process Step CI. ➤ For a Probe Group CI, the view displays the performance metrics for the Probe Group. ➤ For a Probe CI, the view displays the performance metrics for the Probe. For more information about Diagnostics, see the *HP Diagnostics User's Guide*.
	Server Requests	This option is available for the Real User Monitor Business Process Step CIs in the End User Monitors View. **Note:** This option is displayed only if you have Diagnostics installed. **Note:** If you drill down from a RUM Page Monitor CI that is not monitored by HP Diagnostics, the Server Requests View in the HP Diagnostics application you access using the right-click menu option might show incorrect data. Opens the Server Requests View in the HP Diagnostics application with the URLs that correspond to the Real User Monitor Business Process Step CIs selected. For more information about Diagnostics, see the *HP Diagnostics User's Guide*.

Main Option (A-Z)	Description and Sub-Options	
Drill to Diagnostics (continued)	**Summary View**	This option is available for all Diagnostics Probe Group and Diagnostics Probe CIs in the Diagnostics View.
		Note: This option is displayed only if you have Diagnostics installed.
		Opens the Diagnostics Probe Group Summary View for the probe or the probe group in the HP Diagnostics application.
		For more information about Diagnostics, see the *HP Diagnostics User's Guide*.
	Transactions View	This option is available for all Business Process Step CIs in the End User Monitors View.
		Note: This option is displayed only if you have Diagnostics installed.
		Opens the Transactions view that displays performance metrics for the transactions being executed by your applications. The transaction that corresponds to the selected Business Process Step CI is highlighted.
		For more information about Diagnostics, see the *HP Diagnostics User's Guide*.
Expand more levels	**Note:** This option is only available in the Top View tab.	
	Opens a number of levels (7 by default) below the selected level of the Top View tree.	

Main Option (A-Z)	Description and Sub-Options
Expand to problem	**Note:** This option is only available in the Top View tab. Collapses the branches where CIs do not have **Critical** or **Major** statuses. **Example:** In the End User Monitors view, Cust_1_BPM_1 is red. Right-click Cust_1_BPM_1 and select the **Expand to problem** option to get more information about the problem by displaying lower levels of the view and by collapsing non-problematic branches.

Main Option (A-Z)	Description and Sub-Options	
Filters	This menu lists filters that you can use to display subsets of the selected CI's children on the Filters page.	
	Filter Subtree	This option is available for all CIs.
		Opens the Filters page, which displays the selected CI subtree filtered by the active filter.
	Filter Subtree Monitors	This option is available for all CIs.
		Opens the Filters page, which displays the monitor CIs in the subtree of the selected CI filtered by the active filter.
	Show Complete Subtree	This option is available for all CIs.
		Opens the Filters page, which displays the complete subtree of the CI as if it was filtered by the **Show All** active filter. This filter appears in the **Active Filters** box.
	Show Subtree Monitors	This option is available for monitor CIs.
		Opens the Filters page, which displays the monitor CIs in the subtree of the CI as if it was filtered by the **Show Monitors Only** active filter. This filter appears in the **Active Filters** box.
Find Visible and Hidden Child CIs	This option is available for all CIs.	
	Returns all of the visible and hidden child CIs of the selected CI as they appear in the CMDB.	
	For details, see "Find Visible and Hidden Child CIs" on page 64.	
Go to BPI	This option is available for Business Process, BPI Monitor, and BPI Monitor CIs.	
	Opens the Business Process Insight application. For details, see *Using Business Process Insight*.	

Main Option (A-Z)	Description and Sub-Options	
Go to Report	This option is available for all CIs. This menu lists options that enable you to access all types of reports that display information about the selected CI.	
	BPI Monitors Over Time	This option is available for all BPI Duration, Value, or Custom Monitor CIs. Opens the BPI Monitors Over Time report. For details, see BPI Application Reports in *Using Business Process Insight*
	Business Process Over Time	This option is available for all BPI Business Process Step Monitor or BPI Business Process Monitor CIs. Opens the Business Process Over Time report. For details, see BPI Application Reports in *Using Business Process Insight*
	Change Rule	This option is available for all CIs whose properties have changed. Opens the Change report for the CI. The Change report displays information about the changes made to the properties of CIs for all CIs that were assigned to keep this information. For details on the report, see "Change Report Page" in *Model Management*.

Main Option (A-Z)	Description and Sub-Options	
Go to Report (continued)	**Configuration Item Status Alerts**	This option is for all CIs.
		Opens the Configuration Item Status Alerts report for the CI. The Configuration Item Status Alerts report lists all of the alerts that occurred in the specified period of time.
		For details on the report, see "Configuration Item Status Alerts Report" in *Alerts*.
	Diagnostics Web Service Topology	This option is for Web Service CIs.
		Opens the Diagnostics Service Topology view for the selected Web Service CI, for the past half hour. For details on the report, see the *HP Diagnostics User's Guide*.
	End User Summary	This option is for Real User Monitor-specific CIs.
		Opens the End User Summary report. The End User Summary report displays data for specific end users configured for Real User Monitor in End User Management Administration.
		For details, see "End User Summary Report" in *Using End User Management*.
		For details on the Real User Monitor views, see "About Real User Monitor Views" in *Using End User Management*.
	Event Count Over Time	This option is for Real User Monitor-specific CIs.
		Opens the Event Count Over Time report. The Event Count Over Time report displays data for all events, or sessions with events, in monitored applications that you configured in End User Management Administration, broken down by time intervals.
		For details, see "Event Count Over Time Report" in *Using End User Management*.
		For details on the Real User Monitor views, see "About Real User Monitor Views" in *Using End User Management*.

Main Option (A-Z)	Description and Sub-Options	
Go to Report (continued)	**Event Summary**	This option is for Real User Monitor-specific CIs.
		Opens the Event Summary report. The Event Summary report displays a summary of events in monitored applications that you configured in End User Management Administration.
		For details, see "Event Summary Report" in *Using End User Management*.
		For details on the Real User Monitor views, see "About Real User Monitor Views" in *Using End User Management*.
	Event Summary (Errors Monitor)	This option is for RUM Error Events CIs.
		Opens the Event Summary report. For details, see "Event Summary Report" in *Using End User Management*.
	Event Summary (Event Monitor)	This option is for RUM Informational Events CIs.
		Opens the Event Summary report. For details, see "Event Summary Report" in *Using End User Management*.
	Event Summary (HTTP Error Monitor)	This option is for RUM HTTP Error Events CIs.
		Opens the Event Summary report. For details, see "Event Summary Report" in *Using End User Management*.
	Event Summary (Information Event Monitor)	This option is for RUM Informational Event Monitor CIs.
		Opens the Event Summary report. For details, see "Event Summary Report" in *Using End User Management*.
	KPIs Over Time	This option is for all CIs.
		Opens the KPIs Over Time report for the CI. The KPIs Over Time report shows the status or value, over time, of selected CIs and KPIs that are accessible from the Dashboard application.
		For details on the report, see "KPIs Over Time Report".

Main Option (A-Z)	Description and Sub-Options	
Go to Report (continued)	**Operations Health**	This option is for Web Service Operation, SiteScope Monitor, and Diagnostics Web Service Monitor CIs. Opens the Health Report in the HP Business Availability Center for SOA application filtered for the specific operation. For details, see "Health Report" in *Solutions and Integrations*.
	SAP Transaction Changes	This option is for SAP-specific CIs. Opens the SAP Transaction Changes report. The SAP Transaction Changes report displays the SAP transactions and SAP transports and the impact of transports on each transaction. For details on the report, see "SAP Transaction Changes Report" in *Solutions and Integrations*. For details on the SAP System view, see "SAP Systems View" in *Solutions and Integrations*.
	SAP Transport Changes	This option is for SAP-specific CIs. Opens the SAP Transport Changes report. The SAP Transport Changes report displays the changes inside the Transport and the impact on the SAP transaction. For details on the report, see "SAP Transport Changes Report" in *Solutions and Integrations*. For details on the SAP System view, see "SAP Systems View" in *Solutions and Integrations*.
	SAR Compliancy Report	This option is for Host CIs. Opens the SAR Compliancy report. For details, see "View the SAR Compliancy Report" on page 63.

Main Option (A-Z)	Description and Sub-Options	
Go to Report (continued)	**Server Summary**	This option is for Real User Monitor-specific CIs. Opens the Server Summary report. The Server Summary report displays data for the servers monitored by the Real User Monitor probe. For details on the report, see "Server Summary Report" in *Using End User Management*. For details on the Real User Monitor views, see "About Real User Monitor Views" in *Using End User Management*.
	Session Analyzer	This option is for Real User Monitor-specific CIs. Opens the Session Analyzer report. The Session Analyzer report displays session data for specific applications configured for Real User Monitor in End User Management Administration. For details, see "Session Analyzer Report" in *Using End User Management*. For details on the Real User Monitor views, see "About Real User Monitor Views" in *Using End User Management*.
	Siebel Cross-Performance	This option is for the Siebel Application Server, Siebel Web Server Extension, Siebel Component Group, Siebel Component, and Siebel Web Application CIs. Opens the Cross-Performance report for the CI. The Cross-Performance report displays the behavior of a measurement running on several monitored servers, or the behavior of several measurements from various types of monitors running on one monitored server. For details on the report, see "Cross-Performance Report" in *Using System Availability Management*.

Main Option (A-Z)	Description and Sub-Options	
Go to Report (continued)	**SiteScope Cross-Performance**	This option is for SiteScope Profile, SiteScope Group, and SiteScope Monitor CIs.
		Opens the Cross-Performance report. For details, see "Cross-Performance Report" in *Using System Availability Management.*
	SiteScope Quick Report	This option is for SiteScope Group and SiteScope Monitor CIs.
		Opens SiteScope Quick Report. For details, see "Quick Report" in *Using System Availability Management.*
	SiteScope Server Centric Report	This option is for Windows Resource Monitor and Unix Resource Monitor CIs under specific conditions described in the report description.
		Opens SiteScope Server Centric Report. For details, see "Server-Centric Report" in *Using System Availability Management.*
	Systinet Web Service Data	This option is for Business Unit CIs, Web Service CIs, and Web Service Operation CIs, when there is an integration between HP Business Availability Center and HP SOA Systinet.
		Opens the HP SOA Systinet application, focused on the relevant Web service. For details, see the HP SOA Systinet documentation.
		For details on the integration with HP SOA Systinet, see "Integration of HP SOA Systinet" in *Solutions and Integrations.*
	Transaction Analysis	This option is for all CIs.
		Opens the Transaction Analysis report for the CI. The Transaction Analysis report provides an in-depth picture of the performance of transactions.
		For details on the report, see "Transaction Analysis Report" in *Using End User Management.*

Main Option (A-Z)	Description and Sub-Options	
Go to Report (continued)	**Transaction Over Time**	This option is available for TV Monitor CIs. Opens the Transaction Over Time report. For details, see "Transaction Over Time Report" in *Using TransactionVision*.
	Transaction Performance Summary	This option is available for TV Monitor CIs. Opens the Transaction Performance Summary report. For details, see "Transaction Performance Summary Report" in *Using TransactionVision*.
	Trend	This option is for all CIs. Opens the trend report for the CI. Trend reports enable you to compare multiple measurements from several profiles. For details on the report, see "Trend Reports" in *Reports*.
	Triage	This option is for Real User Monitor-specific CIs and for Siebel-specific CIs. Opens the Triage report. The Triage report displays transaction data for Business Process Monitor, and Real User Monitor profiles for the past day. For details, see "Triage Report" in *Using End User Management*. For details on the Real User Monitor views, see "About Real User Monitor Views" in *Using End User Management*. For details on the Siebel Sites view, see "Siebel Views" in *Solutions and Integrations*.
	Web Services Health	This option is for Web Services CIs. Opens the Health Report in the HP Business Availability Center for SOA application filtered for the specific. For details, see "Health Report" in *Solutions and Integrations*.

Main Option (A-Z)	Description and Sub-Options	
Go to Siebel Diagnostics	This menu lists options that enable you to open specific pages in the Business Availability Center for Siebel filtered by the selected CI.	
	Show Processes	This option is available for Siebel Application Server, Siebel Component Group, and Siebel Component CIs.
		This option opens the Task Diagnostics Tool filtered by:
		➤ The selected site, and server for Siebel Application CIs.
		➤ The selected site, server, and selected Component Group CI for Component Group CIs.
		➤ The selected site, server, selected Component Group CI, and Component CI for Component Group CIs.
		For details on the Siebel Task Diagnostics Tool, see "Siebel Views" in *Solutions and Integrations*.
		For details on the Siebel CIs, see "Default CITs in the Siebel View" in *Solutions and Integrations*.
		For details on the Process Diagnostics Tool, see "Siebel Views" in *Solutions and Integrations*.

Main Option (A-Z)	Description and Sub-Options	
Go to Siebel Diagnostics (continued)	**Show Running Tasks**	This option is for Siebel Application Server, Siebel Component Group, and Siebel Component CIs.
		Opens a separate page with the Task Diagnostics Tool filtered by:
		➤ The selected site, server, **Running** status, and **Session** type for Siebel Application CIs.
		➤ The selected site, server, selected Component Group CI, **Running** status, and **Session** type for Component Group CIs.
		➤ The selected site, server, selected Component Group CI, selected Component CI, **Running** status, and **Session** type for Component CIs.
		For details on the Siebel CIs, see "Default CITs in the Siebel View" in *Solutions and Integrations*.
		For details on the Siebel Task Diagnostics Tool, see "Siebel Views" in *Solutions and Integrations*.
	Show Tasks in Error	This option is for Siebel Application Server, Siebel Component Group, and Siebel Component CIs.
		Opens a separate page with the Task Diagnostics Tool filtered by:
		➤ The selected site, server, and **Exited with Error** status for Siebel Application CIs.
		➤ The selected site, server, selected Component Group CI, and **Exited with Error** status for Component Group CIs.
		➤ The selected site, server, selected Component Group CI, selected Component CI, and **Exited with Error** status for Component CIs.
		For details on the Siebel CIs, see "Default CITs in the Siebel View" in *Solutions and Integrations*.
		For details on the Siebel Task Diagnostics Tool, see "Siebel Views" in *Solutions and Integrations*.

Main Option (A-Z)	Description and Sub-Options	
Go to Siebel Diagnostics (continued)	**Siebel Database Breakdown**	This option is for the Siebel Site, Siebel Application, and Siebel Enterprise CIs. Opens the Database Breakdown tab in Business Availability Center for Siebel to enable you to create and analyze database logs that record the SQL activity between Siebel components and the Siebel database. For details, see "Siebel Views" in *Solutions and Integrations*.
	Siebel SARM	This option is for the Siebel Site, Siebel Application, and Siebel Enterprise CIs. Opens the SARM - User Trace Breakdown tab in Business Availability Center for Siebel to enable you to create and record the SQL activity in each monitored Siebel site. For details, see "Siebel Views" in *Solutions and Integrations*.
Go to SiteScope	This option is for SiteScope Profile, SiteScope Group, and SiteScope Measurement Group CIs. Opens the appropriate monitor page in SiteScope. For details on SiteScope, see *Using System Availability Management*.	
Go to TransactionVision	This option is for TV Monitor CIs. Opens the relevant report in TransactionVision.	
Go to Problem Isolation	You can access the appropriate pages in the Problem Isolation application filtered by the selected CI. Problem Isolation enables you to isolate enterprise problems discovered in HP Business Availability Center, and to identify likely suspects to help in solving the root cause of the problem. This option is available for all CIs. Opens the Problem Isolation application, which is also accessible through **Applications** > **Problem Isolation**. The user enters the application on the Problems List page.	

Main Option (A-Z)	Description and Sub-Options
HP Service Center	This option is available for Business Service CIs or EMS Monitor CIs under Business Service CIs.
	Opens the HP ServiceCenter application.
Invoke Run Books	This option is available for all CIs whose CI type is mapped to an HP Operations Orchestration (OO) run book.
	Opens the **Related Run Books** page in a new window, where you can view the mapped run books and invoke them in OO. For details on the user interface, see "Related Run Books Area" of the Invoke Run Book page in Problem Isolation.
	For details on integrating Business Availability Center with OO, see "HP Operations Orchestration Integration Overview" in *Solutions and Integrations*.
	Note: To invoke run books from the Related Run Books page, you must have the necessary permissions for 00 in Business Availability Center. To access the Permissions page, select **Admin** > **Platform** > **Users and Permissions**. For details on this topic, see "Permissions Overview" in *Platform Administration*.
OVO Drill Down	This option is available for HP Operations Manager-related CIs in Dashboard and Service Level Management views.
	It enables you to access the HP Operations Manager application.
	For details on this topic, see "Use the EMS Integration Tool for HP Operations Manager Server Events" in *Solutions and Integrations*.
Properties	This option is available for all CIs.
	Opens the Properties dialog box appropriate for the CI.
	For details, see "Configuration Item Properties Dialog Box" in *Model Management*.
Show Business Impact	This option is available for all CIs.
	Opens the Business Impact report that displays the impact of the current CI on the services that depend on that CI. If there are no services attached to the CI, the report is empty. For details, see "Business Impact Report" on page 95.
Show Event	This option is available for Application Monitor CIs in the Netscout view.
	Opens the Netscout application.

Main Option (A-Z)	Description and Sub-Options
Show Impacting SAP Transports	This option is available for SAP-specific Transaction and group CIs. For Transaction CIs, enables you to display all of the selected CIs and their child CIs that were affected by any SAP Transport CIs. For details, see "Show Impacting SAP Transports Report" on page 170. Groups CIs represent the following CIs: , SAP System and SAP Application Component.
Show SAP Transport Impact	This option is available for SAP-specific Transport CIs. Enables you to display all sap transactions that are impacted by the selected transport. For details, see "Show SAP Transport Impact Report" on page 169.
Show Related CIs	This option is available for all CIs. Performs a search for related CIs and displays the result in the Search tab of View Explorer. For details on the Search tab, see "Search for CIs in Search Mode" in *Model Management*.

Main Option (A-Z)	Description and Sub-Options	
Top View	This menu lists options that enable you to display, in a standalone window, the Top View tree with the requested structure.	
	Show Path to Root	This option is available for all CIs. Opens a Top View page that displays the path from the selected CI to the root CI, in the Filters or Console tab. For example:

Main Option (A-Z)	Description and Sub-Options	
Top View (continued)	**Show Problematic Subtree**	This option is available for all CIs.
		Opens a popup with the same capabilities as the Top View tab. The popup displays all of the child CIs with **Critical**, **Major**, or **Minor** status and enables you to find the problematic child CI that causes the selected parent CI to have a status other than **OK**. It is enabled only for CIs that have at least one KPI with a status other than **OK**.
		Example: The QTWeb medium CI has the following children:
		Select the **Top View** >**Show Problematic Subtree** option for the CI to display the following children:

🔍 Node Details Dialog Box
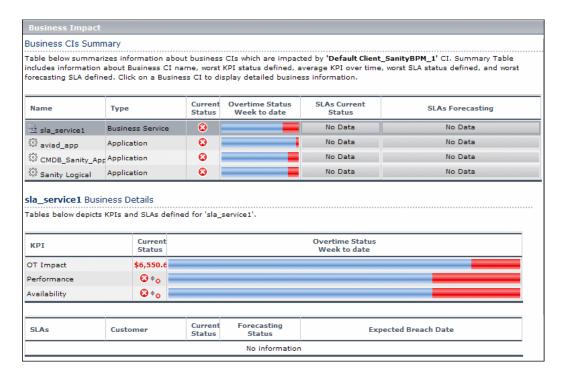
Description	Enables you to view CMDB details on the CI.
	To Access: In the Console Hierarchy or Filters tabs, click **Details** for the appropriate CI.
Important Information	By default, Details links are not displayed.
	To display Details links, select **Admin** > **Platform** > **Setup and Maintenance** > **Infrastructure Settings**, choose **Applications**, select **Dashboard Application**, and in the Dashboard Application - Dashboard Layout Properties table, modify the **Show element CMDB details link in UI** entry. Default is **false**.

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
Calc Rule ID	The ID number of the calculating rule.
CMDB ID	The internal CMDB ID corresponding to the CI (the value returned by the field entity_id).
CMDB Property Name	The name of the CMDB property.
CMDB Property Value	The value of the CMDB property.
KPI CMDB ID	The internal CMDB ID corresponding to the KPI (the value returned by the field kpi_id).
Result	The result of the calculation.
System KPI (x)	Where x is the KPI ID (the value returned by the field kpi_type).

🔍 Business Impact Report

The following is an example of the Business Impact report.

Business Impact

Business CIs Summary

Table below summarizes information about business CIs which are impacted by **'Default Client_SanityBPM_1'** CI. Summary Table includes information about Business CI name, worst KPI status defined, average KPI over time, worst SLA status defined, and worst forecasting SLA defined. Click on a Business CI to display detailed business information.

Name	Type	Current Status	Overtime Status Week to date	SLAs Current Status	SLAs Forecasting
🖳 sla_service1	Business Service	⊗		No Data	No Data
⚙ aviad_app	Application	⊗		No Data	No Data
⚙ CMDB_Sanity_App	Application	⊗		No Data	No Data
⚙ Sanity Logical	Application	⊗		No Data	No Data

sla_service1 Business Details

Tables below depicts KPIs and SLAs defined for 'sla_service1'.

KPI	Current Status	Overtime Status Week to date
OT Impact	$6,550.6	
Performance	⊗ ◆ ⊗	
Availability	⊗ ◆ ⊗	

SLAs	Customer	Current Status	Forecasting Status	Expected Breach Date
			No information	

Description	Displays information about the Business CIs impacted by the selected CI.
	To access: In the Console or Filter tab, right-click the relevant CI and select **Show Business Impact**.
Important Information	➤ If there are no Business CIs attached to the CI, the report is empty.
	➤ You can hide KPIs so they do not appear in the report. To hide KPIs, select **Admin** > **Platform** > **Setup and Maintenance** > **Infrastructure Settings**, choose **Applications**, select **Dashboard Application**, and locate the **KPIs to hide in the report** entry in the Dashboard Application - Business Impact table and add the KPI numbers separated by a comma.
	For example, to remove the **Performance** and **Availability** KPIs, enter 6,7. Removing KPIs has an impact on the value/status of the CIs to which those KPIs are assigned.
Included in Tasks	"View Business Impact Report" on page 58

Business Services Summary Area

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
Current Status	The worst status of the KPI assigned to the selected Business CI.
Name	The name of the Business CI impacted by the selected CI.
	Click one of the Business CI in the list to display KPIs and SLA details in the <service> Service Details area.

GUI Element (A-Z)	Description
Over Time Status Week to Date	The average status of the KPI over a predefined time period. The default is: **week to date**.
	To modify the predefined time period, select **Admin > Platform > Setup and Maintenance > Infrastructure Settings**, choose **Applications**, select **Dashboard Application**, and locate the **Default Over-Time Time Period** entry in the Dashboard Application - Business Impact table and modify the entry value.
SLAs Current Status	The worst status of all the SLAs where the Business CI is included.
	If the SLA Current Status is **No Data** and the SLAs table below the main table indicates: **No information**, the Business CI is not included in any SLA.
	If the SLA Current Status is **No Data** and the SLAs table below the main table indicates: **No Data**, the Business CI is included in the SLA and the SLA worst status is **No Data**.
SLAs Forecasting	The worst expected status of the SLAs where the Business CI is included.
	If the SLA Forecasting Status is **No Data** and the SLAs table below the main table indicates: **No information**, the Business CI is not included in any SLA.
	If the SLA Forecasting Status is **No Data** and the SLAs table below the main table indicates: **No Data**, the Business CI is included in the SLA and the SLA Forecasting worst status is **No Data**.

Service Details Area

The area includes the KPI and the SLAs tables.

KPI Table

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
Current Status	The current status of the KPI assigned to the selected Business CI, as it appears in Dashboard.
KPI	The list of KPIs attached to the selected Business CI.
Over Time Status	The status of the KPI over a predefined time period, as it appears in the KPI Over TIme Report in Dashboard.

SLAs Table

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
Current Status	The current status of the SLA.
Customer	The customer related to the SLA.
Expected Breach Date	The expected breach date of the SLA.
Forecasting Status	The expected status of the SLA, based on extrapolation. For additional information, see "Business Services Summary Area" on page 96.
SLAs	The list of SLAs where the selected Business CI is included. For additional information, see "Business Services Summary Area" on page 96.

🔍 Troubleshooting and Limitations

This section includes troubleshooting and limitations for Dashboard.

Loss of Data after Renaming Transactions

If you rename a transaction in an HP Virtual User Generator script, Business Availability Center considers it as a new transaction. A new BPM Transaction from Location CI is created in the CMDB using the new name, and the CI with the old transaction name is removed after it stops receiving samples. In Dashboard, the new CI does not display trend and history status data from the period before the transaction name change.

2

Acknowledge Problems

This chapter includes information about acknowledging problems in
Dashboard.

This chapter includes:

Concepts

Acknowledging Performance Problems Overview

The Acknowledging utility enables you to track performance problems
identified in your system and network infrastructure by keeping a record of
when the problem was acknowledged and by which user.

For details on how to perform the task, see "Acknowledge Performance
Problems" on page 102.

🔧 Acknowledge Performance Problems

This section describes how to acknowledge a problem in Dashboard.

This task includes the following steps:

➤ "Display/Hide the Ack Column in the Console Tab – Optional" on page 102

➤ "Display/Hide the Ack Column in the Filters Tab – Optional" on page 103

➤ "Acknowledge a Problem" on page 103

➤ "View a Problem's History" on page 104

1 Display/Hide the Ack Column in the Console Tab – Optional

By default, the **Ack** column is displayed. The **Ack** column can be hidden by users with administrative permissions. To hide/display the **Ack** column, select **Admin** > **Platform** > **Setup and Maintenance** > **Infrastructure Settings**, click the **Applications** context, select **Dashboard Application**, and locate the **Show CI Acknowledgment column** in the Business Console area, and select **false** (hide the Ack column), or **true** (display the Ack column). The change takes effect immediately.

Note: When you hide the **Ack** column, the Acknowledgment-related context menu options remain available. For details, see "Menu Options" on page 75.

---

2 Display/Hide the Ack Column in the Filters Tab – Optional

By default, the **Ack** column is displayed. The **Ack** column can be hidden by users with administrative permissions. To hide/display the **Ack** column, select **Admin** > **Platform** > **Setup and Maintenance** > **Infrastructure Settings**, click the **Applications** context, select **Dashboard Application**, and locate the **Show CI Acknowledgment column** in the Filtering Properties area, and select **false** (hide the Ack column), or **true** (display the Ack column). The change takes effect immediately.

Note: When you hide the **Ack** column, the Acknowledgment-related context menu options remain available. For details, see "Menu Options" on page 75.

---

3 Acknowledge a Problem

You can acknowledge a problem by clicking the **Ack** check box for a CI in the Console, and Filters tabs (you can clear the acknowledgment by selecting the check box again). For details, see "Acknowledgments Details Dialog Box" on page 109.

The acknowledgment icon is displayed in Top View for CIs corresponding to acknowledged problems.

You can unset the acknowledgement by clicking the icon, in the Console and Filters tabs.

You can also set/unset acknowledgment and view the CI acknowledgment history by using the context menu in the Top View, Console, and Filters tabs.
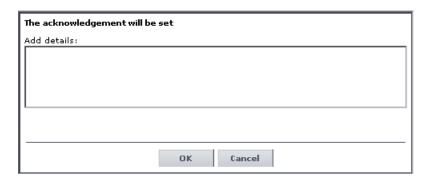
Note: The **Ack** check box is enabled only if there is at least one KPI defined for the CI, and at least one of the KPIs has a status other than **OK** (green).

Example – Set an Acknowledgment

To acknowledge a problem, click the down arrow to the right of a CI and select **Acknowledgement > Set/Unset Acknowledgment** (you can unset the acknowledgement by selecting the same option and clicking **OK**).

In the **Add details** box, enter information about the acknowledgment.
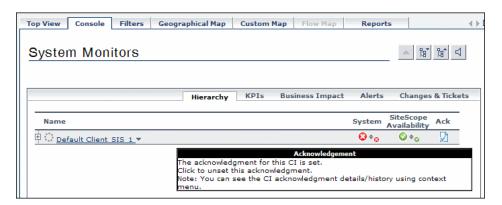
Click **OK** to set or unset the acknowledgment depending on the previous status of the dialog box.

4 **View a Problem's History**

After a problem CI is acknowledged, or the acknowledged status is cleared, you can view the history in the Acknowledgment History and Details dialog box. For details, see "Acknowledgment History and Details Dialog Box" on page 108.

Example – View Acknowledgment Details

A tooltip for the **Ack** icon displays the current status of the CI's acknowledgment.

To view the details of the current acknowledgment or the acknowledgment history of the CI, click the down arrow to the right of a CI and select **Acknowledgement** > **Acknowledgment Details**. You can then select one of the following options:

➤ **Acknowledgment details.** Displays the details of the currently opened acknowledgment in the **Acknowledgment details** box.

➤ **CI history.** Displays the details of all of the acknowledgments over time in the **Acknowledgment details** box.

The **Acknowledgment details** box displays the date and time when the acknowledgment status was modified, the name of the user who modified the status, and the type of action that was performed. For details, see "Acknowledgment History and Details Dialog Box" on page 108.

You can add information about the actions you are going to perform to solve the problem in the **Add details** box and then click **Add** to add the information you entered to the acknowledgment history.

⚒ Switch Off the Alert Sound When CI is Acknowledged

If you set up for sound notification when a KPI's status changes to **Critical**, you can select to turn the sound off when the KPI's CI is acknowledged. This way, you do not get sound notification when any of the acknowledged CI's KPIs status changes to **Critical**.

This task includes the following steps:

➤ "Set Up Sound Notification" on page 107

➤ "Set Up Mute When Acknowledge Option" on page 107

1 Set Up Sound Notification

Set up the sound notification. For details, see "Set Up Sound Notification When KPI Status Changes to Critical" on page 67.

2 Set Up Mute When Acknowledge Option

Select **Admin** > **Platform** > **Setup and Maintenance** > **Infrastructure Settings**, choose **Applications**, select **Dashboard Application**, and locate the **Mute When Acknowledged** entry in the Dashboard Application - Sound Notification table. Modify the value to **true** to mute the alert or to **false** to hear the alert. The change takes effect immediately.

🔍 Acknowledge Problems User Interface

This section describes:

➤ Acknowledgment History and Details Dialog Box on page 108

➤ Acknowledgments Details Dialog Box on page 109

🔍 **Acknowledgment History and Details Dialog Box**

Description	Enables you to view the details of the current acknowledgment or the acknowledgment history of the CI.
	To Access: Click the down arrow ▼ to the right of a CI or right-click a CI in View Explorer and select **Acknowledgment** > **Acknowledgment details**.
Included in Tasks	"Acknowledge Performance Problems" on page 102

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
Acknowledgment details	Select to display the details of the currently opened acknowledgment in the **Acknowledgment details** box.
Action	The type of action that was performed: ➤ **Clear.** When the acknowledgment history was cleared. ➤ **Unset.** When the acknowledgment was unset. ➤ **Info.** Details were added to the acknowledgment without changing the acknowledgment status. ➤ **Open.** When the acknowledgment was set. ➤ **Edit.** When details were added to the acknowledgment.
Add	Click the **Add** button to add the contents of the **Add details** box to the acknowledgment history.
Add details	Add information about the actions you are going to perform to solve the problem. You can add information whether the acknowledgment is **Open** or **Closed**.
CI history	Select to display the details of all of the acknowledgments over time in the **Acknowledgment details** box.
Clear	Click the **Clear** button to clear the acknowledgment history.

GUI Element (A-Z)	Description
Date	The date and time when the acknowledgment status was modified.
Message	Displays the status of the acknowledgment or the information that was entered in the **Add details** box.
User	The name of the user who modified the status.

🔍 Acknowledgments Details Dialog Box

Description	Enables you to set or unset a CI acknowledgment. **To Access:** ➤ Click the down arrow ▼ to the right of a CI and select **Acknowledgment > Set/Unset Acknowledgment** to open the Set/Unset Acknowledgment dialog box. ➤ Click the Ack icon ☑ to the right of the CI.
Important Information	The **Ack** check box is enabled only if there is at least one KPI defined for the CI, and at least one of the KPIs has a status other than **OK** (green). A tooltip for the **Ack** icon displays the current status of the CI's acknowledgment. The dialog box is a toggle dialog box. If you have acknowledged the CI, the top line in the dialog box is: **The acknowledgment will be unset**. If you have not acknowledged the CI, the top line in the dialog box displays: **The acknowledgment will be set**.

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
Add details	Add information about the actions you are going to perform to solve the problem. You can add information whether the acknowledgment is **Open** or **Closed**.
OK	Click the **OK** button to set or unset the acknowledgment depending on the previous status of the dialog box.

3

Monitor Changes in Dashboard

This chapter includes information about monitoring changes in Dashboard.

This chapter includes:

Concepts

➤ Monitoring Changes in Dashboard Overview on page 111

Tasks

➤ Analyze Real-Time Change Information on page 112

➤ View Changes for a Specific CI on page 115

Monitoring Changes in Dashboard Overview

You can monitor changes made to CIs using the following capabilities:

➤ You can monitor the changes to CI properties in Dashboard by selecting the properties you want to monitor for changes for up to 20 CITs. Change icons displayed for the appropriate CIs, in the Console tab and in the Filters tab, indicate that changes were made to their change-monitored properties, in real time. You can view changes made to the monitored properties of additional CIs in the Change report. For details, see "Analyze Real-Time Change Information" on page 112.

➤ You can monitor the detailed changes logged by Change Control Management for a selected CI, if you are working with Change Control Management. For details, see "View Changes for a Specific CI" on page 115.

➤ You can monitor the planned and actual changes made to the following CITs: History Attribute Change, History Relation Change, Planned Change, and IT Incident. For details, see "Changes and Incidents Tab" on page 165.

🔧 Analyze Real-Time Change Information

This section describes the steps to follow to display real-time change information in the Console and Filters tabs, and in the Change report.

This task includes the following steps:

➤ "Set the CIT to Monitor Changes to Its Properties" on page 112

➤ "Set Dashboard to Monitor Changes" on page 113

➤ "Customize the Change Period" on page 113

➤ "Customize the Number of CIs Monitored for Real-Time Change" on page 114

➤ "View Real-Time Changes" on page 114

1 Set the CIT to Monitor Changes to Its Properties

Configure up to 20 CIs that you want to monitor for changes to a specific property. The significant properties vary for each CIT.

When the monitor changes option has been set for a CI, Dashboard continuously monitors that CI and all its child CIs, to see if a change occurs in one of the significant properties defined for the CIs.
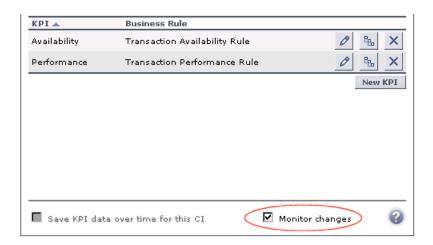
You can set the monitor changes option for up to 20 CIs. After you configure 20 CIs, a message is displayed when you try to set the option for another CI, stating that the limit has been reached.

For each configuration item type (CIT) properties you want to monitor, select **Admin > Universal CMDB > Modeling > CIT Type Manager**, click the **Attributes** tab, select the CIT, click the **Add** button , and select **Change Monitored** in the Advanced area in the Add/Edit Attribute dialog box. For details, see "Add/Edit Attribute Dialog Box" in *Model Management*.

2 Set Dashboard to Monitor Changes

To display real-time changes for a CI and its children, select **Admin > Dashboard** > **KPI**, select the appropriate CI and select the **Monitor changes** check box.

If you clear the option for one or more of the configured CIs, the option becomes available for all CIs, until the 20 CIs limit is reached.

3 Customize the Change Period

By default the Change icon is displayed for 24 hours (default value) after a change occurs. To modify the default time period (set at 1440 minutes (24 hours)) select **Admin** > **Platform** > **Setup and Maintenance** > **Infrastructure Settings**, click **Applications context**, select **Dashboard Application**, locate the **Changes period** in the **Change Impact Properties** area, and enter the time period (in minutes) in the **Value** box. The recommended value is the default: 1440 minutes.

Note: The change takes effect after the server has been restarted.

---

4 Customize the Number of CIs Monitored for Real-Time Change

In the Console tab and in the Filter tab, a limited number (20 by default) of CIs and their child CIs can be monitored for real-time changes at any one time. This number can be customized.

Note: You can increase the default number of CIs that can be monitored but be aware that this might overload HP Business Availability Center.

To modify the default number of CIs that can be monitored for change in real-time, select **Admin** > **Platform** > **Setup and Maintenance** > **Infrastructure Settings**, click **Applications context**, select **Dashboard Application**, and modify the value of the **Maximum monitored CIs** parameter in the **Change Impact Properties** area. The recommended value is 20.

Note: The change takes effect after the server has been restarted.

For more information about real-time monitoring for change, see "Analyze Real-Time Change Information" on page 112.

5 View Real-Time Changes

If a change occurs in one of the significant properties of the CI or the CI's child CIs, you can view real-time changes as follows:

➤ Changes made to the first 20 CIs set to display real-time changes are displayed with change icons in the Console tab or in the Filters tab. To access the tabs, select **Applications** > **Dashboard**, select a view and click the **Console** or **Filters** tab.

➤ Changes made to other CIs are displayed in the Change report. The Change report enables you to view the changes made to CI's properties for all properties that were selected to keep this information. For details, see "Change Report Page" in *Model Management*.

🜛 View Changes for a Specific CI

To view details of the changes logged by Change Control Management for a selected CI, select **Applications** > **Dashboard**, select the relevant CI in View Explorer, and select the **Changes and Incidents** tab in the **Console** tab. For details, see "Changes and Incidents Tab" on page 165.

4

Dashboard Top View

This chapter describes Dashboard Top View.

This chapter includes:

Concepts

➤ Top View Overview on page 118

Tasks
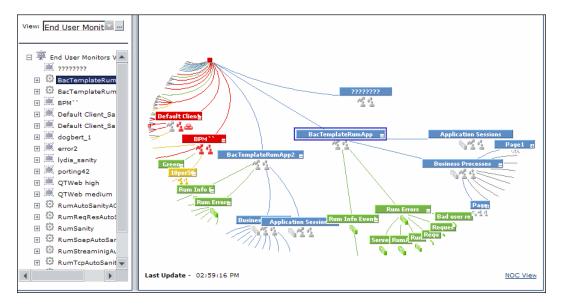
➤ Display and Customize View Information in Top View on page 121

➤ Customize Top View Display on page 122

➤ Access an External Application from Top View on page 132

Reference

➤ Dynamic URL Parameters on page 134

➤ Top View User Interface on page 135

🔺 Top View Overview

Top View enables you to see the business availability of your system
components at a glance. The CI bars in the tab provide a visual
representation of real-time IT performance metrics mapped onto business
applications, based on the hierarchy tree structure defined for each view.
The connecting lines between the bars define the relationships between the
CIs. For a detailed description of Top View, see "Top View Page" on
page 136.

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 instantly assess how
a performance issue impacts the availability of any part of your business.
Each CI in the active view is color coded to indicate the worst status held by
the CI's KPIs.

This section includes the following topics:

➤ "Interactive Map" on page 119
➤ "Understanding the Colors and the Icons" on page 119
➤ "Virtual Containers" on page 120

Interactive Map

The Top View tab presents an interactive map of the CIs that can be intuitively manipulated using the mouse, enabling you to drill down to specific branches of the tree and to focus on particular business areas or problem areas.

By default, the Top View tab displays four levels of CIs. The rest of the CIs are collapsed. You can expand CIs from the fourth level and see their child CIs.

The lines connecting the bars represent the branches of the tree. The bars and lines can be manipulated to change the amount of information displayed and the overall layout of the diagram, as described in "Top View Page" on page 136.

Understanding the Colors and the Icons

Each CI contained in the view is displayed as a bar, color-coded according to the current worst operational status for that CI. For details on color coding, see "KPI Status" on page 355.

The icons displayed under a CI bar identify the relevant KPIs for the CI. These icons are also color coded to indicate the status of that KPI.
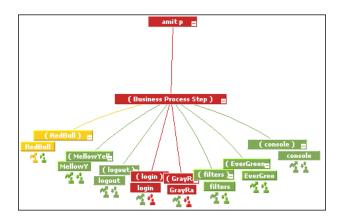
Note: The root CI does not display KPI icons because it is a container and not a real CI.

For a list of the KPIs used in Dashboard, see "List of Dashboard KPIs" on page 510.

Virtual Containers

Virtual container CIs are displayed in Top View in regular CI bars, but their names appear between brackets. The bar is color-coded according to the current worst operational status for the group CI's children CIs. You cannot right-click the bar to display context menu options.

Virtual containers are created by selecting the attribute by which you want to group the CIs in pattern views. For details, see "Node/Relationship Grouping Dialog Box" in *Model Management*.

🔧 Display and Customize View Information in Top View

This section describes the steps needed to display a view information in Top View, and gives examples.

This task includes the following steps:

➤ "Access Top View and Display the View Information" on page 121

➤ "Customize the Top View Display" on page 121

➤ "Filter the Relevant Information in Top View" on page 121

1 Access Top View and Display the View Information

Select **Applications** > **Top View** to display the CIs of the selected view in a top-down, graphical diagram. Select the required view from View Explorer. The name of the selected view is displayed in the central bar of the diagram.

The configuration items (CIs) in the view are displayed in hierarchical format within a single, interactive graphical interface.

For details, see "Top View Page" on page 136.

2 Customize the Top View Display

You can customize the layout of the hierarchy, use Chinese or Japanese characters, change the background or the bar's colors, the fonts, and more.

For details on the available customizations, see "Customize Top View Display" on page 122.

3 Filter the Relevant Information in Top View

Use context menu options to filter parts of the hierarchy and to handle acknowledgments.

For details, see "Menu Options" on page 75.

🔧 Customize Top View Display

You can customize the Top View display.

Note: All the steps in this task are optional and can be performed in any order.
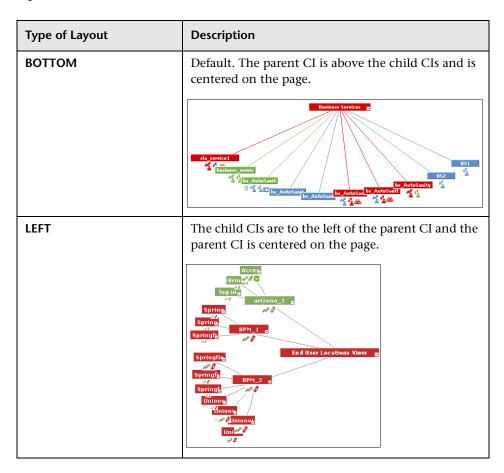
This task includes the following steps:

➤ "Customize the Layout of the Hierarchy in Top View" on page 123

➤ "Modify the Default Refresh Rate of Top View" on page 125

➤ "Change the KPI Status Icons" on page 125

➤ "Viewing Chinese or Japanese Characters in Top View" on page 126

➤ "Change the Text Color in Top View Bars" on page 126

➤ "Change Fonts in Top View" on page 126

➤ "Change the Caption Font Size in Top View" on page 127

➤ "Modify the Number of CIs Displayed in Top View" on page 127

➤ "Specify the Maximum Length of the Line Between Two CIs" on page 127

➤ "Change the Number of CI Levels Displayed in Top View" on page 128

➤ "Change the Number of CI Levels That Can Be Expanded in Top View" on page 128

➤ "Hide or Display the View Bar in Top View When the View has a Single Root CI" on page 129

➤ "Change the Color of the CI Bar in Top View When the CI Status is OK" on page 129

➤ "Customize the Background Image for Top View" on page 130

➤ "Customize Top View Tooltips" on page 130

➤ "Set Up the Top View Debugging Mechanism" on page 131

1 Customize the Layout of the Hierarchy in Top View

You can customize the layout of the hierarchy in the Top View page. By default, the parent CI is displayed above the child CIs and the child CIs are close to the bottom part of the Top View tab.

To customize the layout of the hierarchy, select **Admin** > **Platform** > **Setup and Maintenance** > **Infrastructure Settings**, choose **Applications**, select **Dashboard Application**, and locate the **Top View Graph Layout** entry in the Top View Properties area. Select the type of layout (listed below in alphabetical order).

Type of Layout	Description
BOTTOM	Default. The parent CI is above the child CIs and is centered on the page.
LEFT	The child CIs are to the left of the parent CI and the parent CI is centered on the page.

Type of Layout	Description
RADIAL	The second level of the tree is distributed around the parent and the parent is centered on the page.
RIGHT	The child CIs are to the right of the parent CI and the parent CI is centered on the page.

Type of Layout	Description
TOP	The parent CI is under the child CIs and is centered on the page.

Note: The change takes place immediately.

---

2 Modify the Default Refresh Rate of Top View

The default refresh rate for Top View is 30 seconds. To modify the default refresh rate, select **Admin > Platform > Setup and Maintenance > Infrastructure Settings**, choose **Applications**, select **Dashboard Application**, and enter the required refresh rate in the **Top View data refresh rate** entry in the Dashboard Application - Top View Properties table.

3 Change the KPI Status Icons

You can use different status icons. For details, see "Change the KPI Status Icons" on page 394.

4 Viewing Chinese or Japanese Characters in Top View

To view Chinese or Japanese characters in Top View, install the Chinese or Japanese packages. For details, see "Working in Non-English Locales" in *Reference Information*.

5 Change the Text Color in Top View Bars

You can improve readability or customize Top View by changing the color of the text in Top View bars.

Select **Admin** > **Platform** > **Setup and Maintenance** > **Infrastructure Settings**, choose **Applications**, select **Dashboard Application**, and locate the **Top View Text Color Property** entry in the Dashboard Application - Top View Properties table. Enter the appropriate color in the **Value** box, using the #RRGGBB format. Default is white (#FFFFFF).

You must close all browser instances for the change to take effect.

Note: The setting affects both Top View in Dashboard and the Top View portlet in My BSM.

---

6 Change Fonts in Top View

To change the font displayed in Top View for all locales, select **Admin** > **Platform** > **Setup and Maintenance** > **Infrastructure Settings**, choose **Applications**, select **Dashboard Application**, and locate the **Top View Font Name** entry in the Dashboard Application - Top View Properties table. Enter the appropriate font name in the **Value** box.

You must close all browser instances for the change to take effect.

7 Change the Caption Font Size in Top View

By default the size of the fonts used for Top View CI names (in the bars) is 9.

To change the default size, select **Admin** > **Platform** > **Setup and Maintenance** > **Infrastructure Settings**, choose **Applications**, select **Dashboard Application**, and enter the required value in the **Top View caption font size** entry in the Dashboard Application - Top View Properties table.

The change is immediate.

8 Modify the Number of CIs Displayed in Top View

The maximum number of CIs displayed in Top View is 3000 by default.

To change the default value, select **Admin** > **Platform** > **Setup and Maintenance** > **Infrastructure Settings**, choose **Applications**, select **Dashboard Application**, and enter the required value in the **Maximum number of nodes** entry in the Dashboard Application - Top View Properties table.

The change is immediate.

9 Specify the Maximum Length of the Line Between Two CIs

The default percentage by which you can extend the line between two CIs is 1.5. This is a parameter of the applet that displays the view tree.

To modify the default percentage, select **Admin** > **Platform** > **Setup and Maintenance** > **Infrastructure Settings**, choose **Applications**, select **Dashboard Application**, and enter the required value in the **Top View Line Extension Percentage** entry in the Dashboard Application - Top View Properties table.

The change is immediate.

10 Change the Number of CI Levels Displayed in Top View

By default, the Top View tab displays four levels of CIs. The rest of the CIs are collapsed. You can then expand a CI at the fourth level and see its children.

To modify the number of levels displayed when you open the Top View tab, select **Admin** > **Platform** > **Setup and Maintenance** > **Infrastructure Settings**, choose **Applications**, select **Dashboard Application**, and locate the **Top View Number of Levels** entry in the Dashboard Application - Top View Properties table. Modify the value. Valid values are 2 to 100. This change is performed during the next log in. If you select 2, the name of the view and the top level CIs are displayed.

11 Change the Number of CI Levels That Can Be Expanded in Top View
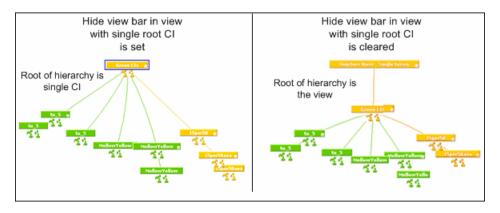
To change the default setting (7) for the number of levels of CIs that are displayed when you select the **Expand more levels** context menu item, on the Infrastructure Settings page, select **Admin** > **Platform** > **Setup and Maintenance** > **Infrastructure Settings**, choose **Applications**, select **Dashboard Application**, and locate the **Top View expand levels** entry in the Dashboard Application - Top View Properties table. Modify the value. Valid values are 2 to 12. This change is performed during the next log in.

12 Hide or Display the View Bar in Top View When the View has a Single Root CI

You can select to hide or display the view bar in the Top View tab, when the view has a single root CI.

To hide or display the view bar in Top View when the view has a single root CI, select **Admin** > **Platform** > **Setup and Maintenance** > **Infrastructure Settings**, choose **Applications**, select **Dashboard Application**, and locate the **Hide view bar in Top View** entry in the Top View Properties table. Set the parameter to:

➤ **true.** The view bar is not displayed as the root of the hierarchy, the root of the hierarchy is the single root CI.

➤ **false**. The view bar is the root of the hierarchy.

13 Change the Color of the CI Bar in Top View When the CI Status is OK

You can modify the default green color (#66CC00) of the CI bar when the CI status is OK to another color or a different green.

To modify the color, select **Admin** > **Platform** > **Setup and Maintenance** > **Infrastructure Settings**, choose **Applications**, select **Dashboard Application**, and enter a different color in the **Top View Green Color Property** entry in the Top View Properties table.

14 Customize the Background Image for Top View

To change the background color or add a background image to the Top View tab or to the NOC standalone page, select **Admin > Platform > Setup and Maintenance > Infrastructure Settings**, choose **Applications**, select **Dashboard Applications**, and locate in the Dashboard Application - Top View table:

➤ **Top View Background Color Property.** Modify the default value to change the color of the Top View tab background or of the NOC standalone page background. For example, you can display the Top View tab with a black background (#000000). You must close all browser instances for the change to take effect.

➤ **Top View Background Image.** Enter the name of the image you want to use as a background image for the Top View tab or the NOC standalone page and put the appropriate image in the following location: **<Gateway server root directory>/AppServer/webapps/site.war/bam/**

You must close all browser instances for the change to take effect.

15 Customize Top View Tooltips

You can:

➤ **Limit the number of lines displayed in the tooltip**

If the tooltip includes more lines than the default number of lines, **More...** is displayed on the last line.

To change the default number of lines (8) displayed in the tooltip, select **Admin > Platform > Setup and Maintenance > Infrastructure Settings**, choose **Applications**, select **Dashboard Application**, and enter the required number of lines in the **Max lines in tooltip** entry in the Dashboard Application - Top View Properties table.

➤ **Modify the tooltip font size**

The size of the fonts in Top View tooltips is 8 by default.

To change the default font size, select **Admin > Platform > Setup and Maintenance > Infrastructure Settings**, choose **Applications**, select **Dashboard Application**, and enter the required font size in the **Top View Tooltip font size** entry in the Dashboard Application - Top View Properties table.

➤ **Display the weight information in the tooltip**

You can add the weight of a CI's KPIs to the CI's tooltip for any CI in Top View.

Select **Admin** > **Platform** > **Setup and Maintenance** > **Infrastructure Settings**, choose **Applications**, select **Dashboard Application**, and locate the **Show weight property in tooltip** entry in the Dashboard Application - Top View Properties table. Modify the value to **true**. Default is **false** (weight is hidden).

Note:

➤ The setting affects both Top View in Dashboard and the Top View portlet in My BSM.

➤ Using this option might affect the performance.

➤ Adding a weight to a CI is explained in "Relationship Page" in *Model Management*.

---

16 Set Up the Top View Debugging Mechanism

To debug Top View, set the debug mode. Log messages are printed to the Java console.

To debug Top View, select **Admin** > **Platform** > **Setup and Maintenance** > **Infrastructure Settings**, choose **Applications**, select **Dashboard Application**, and set the **Top View Debug** entry in the Dashboard Application - Top View Properties table to **true**. Default is **false**.

🔨 **Access an External Application from Top View**

You can configure Dashboard Top View so that a user can open an external application from the right-click menu.

This task includes the following steps:

➤ "Specify the URL of the External Application" on page 132

➤ "Attach the Open in New Window Context Menu Item to the Top View Context Menu" on page 133

➤ "Result" on page 133

1 **Specify the URL of the External Application**

The **Open in New Window** option calls the specified URL in another window and supplies it with the values of the parameters you specified in the URL. The URL page uses the values of the parameters to display what is necessary.

To specify the URL of the external application, select **Admin** > **Platform** > **Setup and Maintenance** > **Infrastructure Settings**, choose **Applications**, select **Dashboard Application**, and locate the **Top View URL to Open** entry in the Top View Properties table. Enter the appropriate URL:

➤ Enter the URL of the application.

➤ Enter a dynamic URL that can be used, for example, to integrate external tools with HP Business Availability Center.

Use the following syntax (HTTP GET format):

```
http://<URL>?nodeName=NODE.NAME&nodeId=NODE.ID
&nodeStatus=NODE.STATUS&nodeParentId=NODE.PARENTID
&nodeChildId=NODE.CHILDIDS
```

Use only the parameters you need in any combination. For details about the parameters, see "Dynamic URL Parameters" on page 134.

For example:
http://<URL>?nodeName=NODE.NAME&nodeParentId=NODE.PARENTID
adds the CI name and the ID of the parent CI to the URL.

➤ To reset the URL to the default (empty), click **Default**.

Note:

➤ The change takes place immediately.

➤ You must disable your browser's pop-up blockers to open a window with the external application.

---

2 Attach the Open in New Window Context Menu Item to the Top View Context Menu

By default, the **Open in New Window** option does not appear in the context menus in Top View. To enable it you must assign it to the **Top View** context menu.

a Select **Admin** > **Dashboard** > **Repositories** > **Context Menus**, and override the **Top View** context menu.

b In the **Custom Context Menus** area, click the **Edit** button for the Top View context menu.

c In the Context Menu Details dialog box, click **New**.

d In the Menu Entity Details, in the **Context Menu Item** list, select **Show in top view** and in the **Sub–context Menu Items** list, select **Open in a new window**.

e Click **OK**.

3 Result

The **Open in New Window** option is added to the right-click menu available in Top View.

🔍 Dynamic URL Parameters

The parameters for a dynamic URL are:

Constant	Description	
NODE.NAME	The name of the CI. When the URL is executed, **NODE.NAME** is replaced by the name of the CI from which you want to open the URL The page specified in the URL opens and is filtered to display only information related to the CI.	
NODE.ID	The ID number of the CI. When the URL is executed, **NODE.ID** is replaced by the ID number of the CI from which you want to open the URL The page specified in the URL opens and is filtered to display only information related to the CI.	
NODE.STATUS	The status of the CI. When the URL is executed, **NODE.STATUS** is replaced by the status of the CI from which you want to open the URL The page specified in the URL opens and is filtered to display only information related to status. The available statuses are:	
	-4	downtime
	-3	stop
	-2	no data
	-1	uninitialized
	0	critical
	5	major
	10	minor
	15	warning
NODE.PARENTID	The ID of the parent CI. When the URL is executed, **NODE.PARENTID** is replaced by the ID of the parent of the CI from which you want to open the URL. The page specified in the URL opens and is filtered to display only information related to the parent CI.	

| Constant	Description
NODE.CHILDIDS	The ID number of the CI children. When the URL is executed, **NODE.CHILDIDS** is replaced by a list of the IDs of the children of the CI from which you want to open the URL. The page specified in the URL opens and is filtered to display only information related to the children CI.
NODE.NAME	The name of the node.
NODE.ID	The ID number of the node.
NODE.STATUS	To filter by status, use **NODE.STATUS**.
NODE.PARENTID	The ID of the parent CI.
NODE.CHILDIDS	The ID number of the CI children.
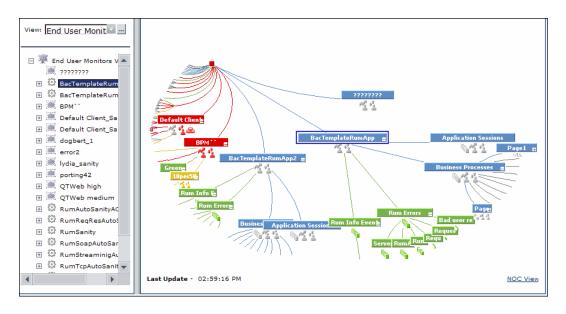
Top View User Interface

This section describes:

➤ Top View Page on page 136

🔍 Top View Page

The following is an example of the Top View page.

Description	Enables you to see the business availability of your system components at a glance. The CI bars in the tab provide a visual representation of real-time IT performance metrics mapped onto business applications, based on the hierarchy tree structure defined for each view. The connecting lines between the bars define the relationships between the CIs.
	To Access: Select **Applications** > **Dashboard**, select a view in View Explorer, and click the **Top View** tab.
Important Information	Do not select a new view in the Role-Based Views list until the currently selected view has finished loading. Doing so may cause the browser to freeze. If this happens, close the Top View page, then close any other open pages, and reopen the page.
	Note: You can add this report as a portlet in My BSM. For details, see "Add Portlets to <page_name>/Add Portlets Dialog Box" in *Using My BSM*.
	Functionality:
	➤ Click anywhere in the tab to change the emphasis of the graphic. The graphic rotates to display the components of the subtree for the nearest bar.
	➤ Click and drag anywhere in the tab to move and rotate the graphic around that point.
	➤ Increase or reduce the gap between each branch by holding down the ALT button on the keyboard and dragging the relevant bar.
	➤ When you open the Top View tab, it displays by default the active view at the root level, centered around the view name bar. Any manipulation you do to the graphic is not saved; if you move to another tab, then when you return to Top View, the graphic reverts to the default display format.
	➤ Double-click one of the following icons ⊞ ⊟ to expand or collapse the CI's subtree.

Included in Tasks	"Display and Customize View Information in Top View" on page 121.
Useful Links	"Top View Overview" on page 118
	For details on the functionality of View Explorer, see "Working with View Explorer" in *Model Management*.

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
<CIs, Child CIs, and Root CIs>	The tree is built from branch parent and child configuration items (CIs) and monitor CIs. For details, see "Working with CIs" in *Model Management*.
	Right-click a bar to display the context menu options. For details, see "Menu Options" on page 75.
	Click a bar to move the bar to the center of the graphic.
	When you select a CI in View Explorer, Top View displays the selected CI centered in the tree with all its sub-branches expanded. If you select a CI in the Top View tree, it is highlighted in the View Explorer.
<KPIs and their statuses/values>	For each CI, Dashboard displays the CI's KPIs and their real-time status as a color-coded icon. For details, see "KPI Status" on page 355.
	For details on the icons, see below.
<Right-click menu options>	Right-click a CI bar to list the available menu options. For details, see "Menu Options" on page 75.

GUI Element (A-Z)	Description
<View bar>	When you select a view in View Explorer, Top View displays the selected view bar centered in the tree with all its root CIs expanded. ➤ Expand and collapse the branches of a subtree by clicking the expand (+) or collapse (-) symbols, displayed in the bottom right corner of the bar. ➤ When branches are too long to fit on the screen, Top View displays lines emerging from the bar, to indicate the number of branches and leaves that are hidden. Click the end of one of these lines to display the entire hidden branch. Hold the cursor over a bar to enable the following functionality: ➤ The bar is outlined in grey. ➤ If the CI has a long name, the bar expands to display the full name. ➤ A tooltip provides status and performance data for all the KPIs of the CI. When you hold the cursor over a KPI icon a tooltip is displayed and provides status and performance data for the KPI itself. Right-click the bar to display the available menu options. For details, see "Menu Options" on page 75.

GUI Element (A-Z)	Description
<View Explorer>	When you select a CI in View Explorer, Top View displays the selected CI centered in the tree with all its sub-branches expanded. If you select a CI in the Top View tree, it is highlighted in the View Explorer.
Last Update	Shows connectivity with the Dashboard servlet, running on the Tomcat servlet engine by displaying the time the information in the tab was last updated.
NOC View	Click to display the top view tree in a separate window to be used by a Network Operations Center (NOC).
	To return to the Top View tab, close the Top View standalone window.
	Only one instance of Top View can be displayed at a time; this means that if you are displaying the top view in the NOC View standalone window, you do not see it in the Top View tab and vice versa.
	Right-click a bar, in the view, to display the available menu options. For details, see "Menu Options" on page 75.

🔍 KPI Icons in Top View

A CI can have one of the following icons:

Icon	Description
	All other KPIs (with OK status)
	Availability KPI (with OK status)
	Backlog KPI (with No data Status)
	Business Health KPI (with Major status)
	Customer KPI (with OK status)

Icon	Description
	Duration KPI (with OK status)
	OT Impact KPI (with OK status)
	Performance KPI (with OK status)
	PNR KPI (with OK status)
	RT Impact KPI (with OK status)
	System/HP System KPI (with OK status)
	The CI has been acknowledged
	User KPI (with OK status)
	Volume KPI (with OK status)

Note:

In the Top View tab, the icon for a CI with a **Stopped** or **Downtime** status CI is gray with a green border.

You can customize the set of icons used in Dashboard. For details, see "Change the KPI Status Icons" on page 394.

5

Dashboard Console

This chapter describes the Dashboard Console.

This chapter includes:

Concepts

➤ Console Overview on page 143

Tasks

➤ Customize the Console Page on page 146

➤ Customize the Hierarchy Tab on page 148

➤ Customize the Business Impact Tab on page 149

Reference

➤ Console User Interface on page 151

Console Overview

The Console page enables you to view, in one central location, comprehensive data regarding the CIs selected in View Explorer. For each CI, the Console page tabs provide information regarding the CI's hierarchy, KPIs, business impact, alerts, and changes and incidents.

For details on the Console page user interface, see "Console Page" on page 152. For customization options, see "Customize the Console Page" on page 146.

This section includes the following topics:

Hierarchy

This tab enables you to see child CIs and their KPI statuses. If you select a view in View Explorer, the top level CIs in the view are displayed. If you select a CI in View Explorer, this tab shows its child CIs. For each CI, the tab shows its assigned KPIs and their statuses.

For details on the Hierarchy tab user interface, see "Hierarchy Tab" on page 157. For customization options, see "Customize the Hierarchy Tab" on page 148.

KPIs

This tab enables you to see KPI status over time for the CI selected in View Explorer.

In addition, if you have configured federation adapters to collect KPI values for this CI from outside HP Business Availability Center, this tab also displays the federated KPI's status, last status change, and the source of the federated KPI. For details on setting up federation, see "The Federation Framework SDK" in *Model Management*.

For details on the KPIs tab user interface, see "KPIs Tab" on page 159.

Business Impact

This tab enables you to see the business CIs and SLAs that are impacted by the CI selected in the active Dashboard view.

The following impacted CI types are monitored by default: Business Services, Business Processes, and Applications. For details on how to customize business impact information, see "Customize the Business Impact Tab" on page 149.

From this tab you can also access the selected CI's corresponding Business Impact Report. For details, see "Business Impact Report" on page 95.

For details on the Business Impact tab user interface, see "Business Impact Tab" on page 161.

Alerts

This tab enables you to see the CI status alerts triggered by the CI selected in View Explorer.

To view information on the action taken following the alert, you can access the selected CI's Status Alerts Report directly from this tab. For details, see "Configuration Item Status Alerts Report" in *Alerts*.

For details on the Alerts tab user interface, see "Alerts Tab" on page 164.

Changes and Incidents

This tab enables you to see the incidents opened for the CI selected in View Explorer, as well as planned changes and actual changes made to the CI.

Information on incidents and planned changes is collected from CMDB federation adapters. Federation adapters may be set up within HP Business Availability Center (such as the out-of-the-box adapter History Data Source), or outside HP Business Availability Center (such as Release Control or HP Service Manager). For details on setting up federation, see "The Federation Framework SDK" in *Model Management*.

Information on actual changes is collected for CIs on the local machine, directly from the CMDB.

For details on the Changes and Incidents tab user interface, see "Changes and Incidents Tab" on page 165.

Note: Some of the Console tabs show data that is collected from external systems (outside Business Availability Center). If an external system is not responding, the following message appears: **External system is not responding.**

🦴 Customize the Console Page

To customize the Console page, select **Admin** > **Platform** > **Setup and Maintenance** > **Infrastructure Settings** > **Applications**, and select **Dashboard Application**.

Within **Dashboard Application**, you can customize the Console page general settings using the following options:

➤ "Rename or Delete Tabs Displayed in the Console Page" on page 146
➤ "Modify Duration Settings for Console Tabs" on page 147
➤ "Modify Refresh Rates of the Tabs Displayed in the Console Page" on page 147

1 Rename or Delete Tabs Displayed in the Console Page

To rename or delete a tab on the Console page, locate the **View Console tabs configuration** entry in the Dashboard Layout Properties table.

➤ Within this XML file, each of the **title** fields shows a resource string key found in the **<HP Business Availability Center home directory> \HPBAC\AppServer\resources\BamResources.properties** file. If you edit the **title** field so that it no longer shows a valid resource string key, the text in the **title** field is used as the tab name.

For example, to rename the Hierarchy tab as the Child CI tab, replace the text **<title>view360.tab.title.hierarchy</title>** with **<title>Child CI</title>**.

➤ To delete a tab, delete the section within the XML file beginning with
   <**TabConfig**> and ending with </**TabConfig**>, which contains information
   on the tab you want to delete.

2 Modify Duration Settings for Console Tabs

By default, the Alerts tab displays KPI over time data for the previous day,
and the KPIs, Business Impact, and Changes and Incidents tabs display data
for the previous week.

For each of these tabs, you can change these settings to previous week, day,
or hour (up to the current time).

To modify the KPI over time setting, locate the **View Console tabs
configuration** entry in the Dashboard Layout Properties table. Modify the
TimeRange entry value in the **View Console tabs configuration** entry. The
possible values are:

➤ **Scorecard.Portlet.Edit.TimeRange.PastHour**

➤ **Scorecard.Portlet.Edit.TimeRange.PastDay**

➤ **Scorecard.Portlet.Edit.TimeRange.PastWeek**

3 Modify Refresh Rates of the Tabs Displayed in the Console Page

By default, the Hierarchy tab is refreshed every 30 seconds, and the other
Console tabs are refreshed every five minutes.

To modify refresh rates, locate the **View Console tabs configuration** entry in
the Dashboard Layout Properties table. Modify the value of the **refreshRate**
field in the **View Console tabs configuration** entry. Refresh rate is a value in
seconds.

If you leave the refresh rate field blank, the default refresh rates apply.
However, the <**refreshRate**/> field must exist in the xml to enable data
display.

🔧 Customize the Hierarchy Tab

To customize the Console page tabs, select **Admin** > **Platform** > **Setup and Maintenance** > **Infrastructure Settings** > **Applications**, and select **Dashboard Application**.

Within **Dashboard Application**, you can customize the Hierarchy tabs using the following options:

➤ "Modify the Number of Levels Displayed in the Hierarchy Tab" on page 148

➤ "Display Children Expanded in the Hierarchy Tab" on page 148

➤ "Display Hierarchy Information in Columns" on page 149

➤ "Add a Details Link to CIs in the Hierarchy Tab" on page 149

1 Modify the Number of Levels Displayed in the Hierarchy Tab

By default, when you select a CI or view in View Explorer, the Hierarchy tab displays the CI's children (or the parent CIs in the view), which can be expanded to show their children. This represents two levels of hierarchy display.

To modify the number of levels that can be displayed in the Hierarchy tab, locate the **Business Console - Number of display levels** entry in the Dashboard Layout Properties table. You can select a value between 1 and 4. If you specify 1, the child CIs are displayed but cannot be expanded.

2 Display Children Expanded in the Hierarchy Tab

By default, when you select a CI (or view) in View Explorer, the Hierarchy tab displays the CI's children (or the parent CIs in the view), collapsed.

To display the children expanded when accessing the Hierarchy tab, change the **Business Console - Default state** in the Dashboard Application - Dashboard Layout Properties table to **expanded**.

3 Display Hierarchy Information in Columns

By default, the Hierarchy tab displays a single table. To display the Hierarchy tab information in two or three columns, open the **Business Console - Number children sections** in the Dashboard Application - Dashboard Layout Properties table, and specify the number of columns you want to display. You can select a number between 1 and 3.

4 Add a Details Link to CIs in the Hierarchy Tab

You can add a Details link to the CIs displayed in the Hierarchy tab, to display CMDB details such as CMDB ID, CMDB Property names and values, and KPI calculation results.

In the Dashboard Application - Dashboard Layout Properties table, modify the **Show element CMDB details link in UI** entry. Default is false. For a list of the details displayed in this link, see "Node Details Dialog Box" on page 94.

🔧 Customize the Business Impact Tab

By default, the Business Impact tab can show the following CI types (CITs), if they are have an Impact relationship with the selected CI: Business Services, Business Processes, and Applications.

The following section describes how to modify which CITs can be displayed in the Business Impact tab, or which relationships are monitored in this tab.

Note: If you make changes using the following procedure, these changes are also reflected in the Business Impact Report. For example, if you add a CIT to be displayed in the Business Impact tab, this CIT also appears in the Business Impact Report. For details on this report, see "Business Impact Report" on page 95.

To modify which CITs are displayed in the Business Impact tab:

1 Select **Admin** > **Universal CMDB** > **Modeling** > **Query Manager**, and select the **SearchForBusinessImpact** query.

Within this query, the **ITU_Triggered** node represents the CI selected in a view, and the **Business_Impacted** node represents the CITs which can be impacted by this CI.

2 Right-click the **Business_Impacted** node and select **Node Properties** to open the Node Properties dialog box. Within the **Attribute** tab, modify the query to add or remove CITs. For details, see "Create a TQL Query" in *Model Management*.

Important: Do not change the name of the **SearchForBusinessImpact** query, or the name of the **ITU_Triggered** node.

When modifying the query, note the following:

➤ Use an **Or** relationship between CIs, rather than an **And** relationship.

➤ Use the actual name of the CIT, rather than the display name. To see the actual name, select **Admin** > **Universal CMDB** > **Modeling** > **CI Type Manager**, and select a CIT. On the **Details** tab, the **Name** field displays the actual name.

For example, to add the CI type Business Process Step, use the name bp_step, as it appears in the **Name** field on the **Details** tab.

3 After adding or removing CITs from the query, you must add or remove them in View Manager from the **view360_BusinessImpact** view.

Select **Admin** > **Universal CMDB** > **Modeling** > **View Manager**, and select the **view360_BusinessImpact** view.

4 Add or remove CITs to the view, so that it corresponds to the query you defined in Query Manager.

To modify the relationships monitored in the Business Impact tab:

By default, the relationship type monitored in the Business Impact tab is the Impact type relationship. Use the following procedure to modify which relationships are monitored.

 1 Select **Admin** > **Universal CMDB** > **Modeling** > **Query Manager**, and select the **SearchForBusinessImpact** query.

 2 Right-click the **Virtual Compound** relationship and select **Edit Compound Relationship**. Within the **Edit Compound Relationship** dialog box, modify the relationships monitored by the query. For details, see "Compound Relationship" in *Model Management*.

🔍 Console User Interface

This section describes:

🔍 Console Page

Description	The Console page enables you to view, in one central location, comprehensive data regarding the CIs selected in View Explorer.
	For each CI, the Console page tabs provide information regarding the CI's hierarchy, KPIs, business impact, alerts, and changes and incidents.
	To Access: Applications > **Dashboard** > **Console**.
Important Information	For details on customizing the Console tabs, see "Customize the Console Page" on page 146.
Useful Links	"Console Overview" on page 143
	For details on the functionality of View Explorer, see "Working with View Explorer" in *Model Management*.

Console Page Top Pane

The Console page top pane provides KPI status, trend and history for the CI selected in View Explorer (note that this information only appears if you select a CI in the view).

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
▼	Click the down 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. For details on the menu options, see "Menu Options" on page 75.

GUI Element (A-Z)	Description
▲	Click the up arrow (next to the Expand All button) to display information on the parent of the CI currently displayed.
	The acknowledge utility enables you to track handling of performance problems by keeping a record of when the problem was acknowledged and by which user. For details, see "Acknowledge Performance Problems" on page 102.
	Expand All/Collapse All buttons. Click to expand or collapse the CIs displayed in the Hierarchy tab. These buttons are shown only when one or more of the currently displayed CIs can be expanded or collapsed.
	You can set up Dashboard to issue an alert sound when the status of a KPI changes to Critical in the Console. For details, see "Set Up Sound Notification When KPI Status Changes to Critical" on page 67 or "Switch Off the Alert Sound When CI is Acknowledged" on page 107. Click to toggle the sound on or off. The icon tooltip indicates which action is performed if you click the button.
<CI or View>	Displays the name of the CI or the view selected in View Explorer (for example, sla_service1 in the image above).

GUI Element (A-Z)	Description

<KPI and status/value>
 	
	For each CI selected in View Explorer, Dashboard displays real-time KPI status. A color-coded icon represents the status assigned to the KPI for its current performance level. For details, see "KPI Status" on page 355.
	
	The KPIs are ordered, from left to right, according to their Display Order defined in the Repositories. You can change this order by changing the values of one or more of the Display Order fields. See "KPI Repository page" on page 535.
	
	Tooltip:
	➤ **CI Name.** The name of the CI.
	➤ **Status.** The status of the CI (calculated according to one of the status calculation methods). It may also display:
	    ➤ **Not up to date.** For decayed CIs, indicating that the CI has passed its timeout period. (For a SiteScope CI, this status is displayed after a SiteScope monitor is disabled.)
	    ➤ **Stopped**. When a Business Process profile is stopped.
	➤ **Calculation Rule.** The name of the rule that calculates the KPI status or value.
	➤ **Held Status Since.** The date and time since which this CI has held its current operational status.
	➤ **Invisible Children.** Might not appear. The number of child CIs belonging to other views, which are connected to this CI but do not belong to this view. For details, see "Find Visible and Hidden Child CIs" on page 64

GUI Element (A-Z)	Description
<KPI History> Performance	The history status icon displays either the worst status or the average status for the KPI during a specified time period. For details, see "Trend and History" on page 362. Tooltip: ➤ **CI Name.** The name of the CI. ➤ **History Type.** The type of history (worst status or average status) used when calculating history status. ➤ **Historical Event.** The worst or average status of the KPI in the selected time period.
<KPI Trend> Performance	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 "Trend and History" on page 362. Tooltip: ➤ **CI Name.** The name of the CI. ➤ **Trend.** The trend of the KPI in the selected time period.

Console Page Tabs

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
Alerts	Shows the CI status alerts associated with the CI selected in View Explorer. See "Alerts Tab" on page 164.
Business Impact	Shows the business CIs and SLAs impacted by the CI selected in View Explorer. See "Business Impact Tab" on page 161.
Changes and Incidents	Shows planned changes and actual changes made to the CI selected in View Explorer, as well as incidents opened for the CI. See "Changes and Incidents Tab" on page 165.
Hierarchy	Shows the child CIs of the view or CI selected in View Explorer. See "Hierarchy Tab" on page 157.
KPIs	Shows the status of the Dashboard KPIs and external (federated) KPIs assigned to the CI selected in View Explorer. See "KPIs Tab" on page 159.

🔖 Hierarchy Tab

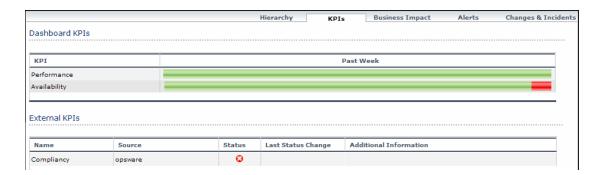The following is an example of the Hierarchy page.

Description	If you select a view in View Explorer, this tab shows the top level CIs in the view. If you select a CI in View Explorer, this tab shows its child CIs.
	For each CI, the tab shows its assigned KPIs and their statuses.
	Click [+] or [-] to expand or collapse the displayed CIs.
	To Access: Applications > **Dashboard** > **Console** > **Hierarchy.**
Important Information	For details on customizing this tab, see "Customize the Console Page" on page 146.

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
←※ ↓※ ↳※	Indicates that the following changes have been made to change-monitored properties: ←※ At least one change-monitored property of the CI has changed. ↓※ At least one change-monitored property of the CI's child CIs has changed. ↳※ At least one change-monitored property of the CI and at least one change-monitored property of the CI's child CIs have changed. A tooltip provides more information about the change. For details on setting this feature, see "Analyze Real-Time Change Information" on page 112.
<CI elements>	The CI element fields on the Hierarchy tab also appear in the Top Pane section of the Console page (for example, KPI and status). These fields are described in the Top Pane section in "Console Page" on page 152.

🔍 KPIs Tab

The following is an example of the KPIs page.

Description	Shows KPI status over time for the CI selected in View Explorer.
	If you have configured federation adapters to collect KPI values for this CI from outside HP Business Availability Center, the External KPIs area displays information about these federated KPIs.
	For details on setting up federation, see "The Federation Framework SDK" in *Model Management*.
	To Access: Applications > Dashboard > Console > KPIs.
Important Information	For details on customizing this tab, see "Customize the Console Page" on page 146.

Dashboard KPIs Area

The following elements are included (unlabeled GUI elements are shown in angle brackets):

| GUI Element (A-Z)	Description
KPI	The list of KPIs attached to the selected CI.
Past <Hour/Day/Week>	The status of the KPI over a predefined time period (default: **Past week**).
	To modify the predefined time period, see "Customize the Console Page" on page 146.
	Tooltip:
	The tooltip displays a text string containing the name of the status, the amount of time the KPI held this status during the time frame, and the percentage of time that the KPI held this status.
	Status duration can be given in hours, minutes, and seconds (for example, 01:10:48) or in days and hours (for example, 30 days, 9 hours).

External KPIs Area

The following elements are included (unlabeled GUI elements are shown in angle brackets):
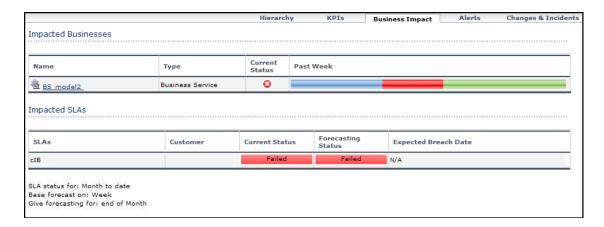
GUI Element (A-Z)	Description
Additional Information	Description of the KPI. This is taken from the KPI's Additional Information attribute; if this attribute is blank no information appears.
Last Status Changes	The date and time from when this KPI has held its current operational status.
Name	The name of the KPI which is assigned to the selected CI.

GUI Element (A-Z)	Description
Source	The source outside HP Business Availability Center, from which the federation adapter retrieved the KPI.
Status	The current status of the KPI assigned to the selected CI.

Business Impact Tab

The following is an example of the Business Impact page.

Description	Shows current and over-time KPI status for business CIs impacted by the CI selected in View Explorer. The over-time data is aggregated according to status.
	The following impacted CITs can be displayed by default: Business Services, Business Processes, and Applications.
	If you have configured SLAs, this tab also shows status details of any SLAs impacted by the selected CI. Impacted SLAs can only appear if a Service Level Management license has been installed.
	To Access: Applications > **Dashboard** > **Console** > **Business Impact**.
Important Information	To modify which CITs are monitored for business impact, see "Customize the Business Impact Tab" on page 149.
	For details on customizing this tab, see "Customize the Console Page" on page 146.

Impacted Businesses Area

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
Current Status	The worst status of the KPI assigned to the impacted CI.
Name	The name of the impacted CI.
	You can click on a CI to access its corresponding Business Impact Report. For details, see "Business Impact Report" on page 95.

GUI Element (A-Z)	Description
Past <Hour/Day/Week>	The status of the impacted CI over a predefined time period (default: **Past week**).
	To modify the predefined time period, see "Customize the Console Page" on page 146.
	Tooltip:
	The tooltip displays a text string containing the name of the status, and the percentage of time that the KPI held this status.
Type	CI type of the impacted CI.
	By default the available CITs are Business Services, Business Processes, and Applications. To modify the default types, see "Customize the Business Impact Tab" on page 149.

Impacted SLAs Area

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
Base forecast on:	Time frame used by the Expected Breach Date column (default: Week).
Current Status	The current status of the impacted SLA.
Customer	The customer related to the impacted SLA.
Expected Breach Date	The expected breach date of the impacted SLA.
Forecasting Status	The expected status of the impacted SLA, based on extrapolation. For details, see "Status Forecast for Agreements" in *Using Service Level Management*.
Give forecasting for:	Time frame used by the Forecasting Status column (default: end of Month).
SLAs	The list of SLAs where the selected CI is included.

GUI Element (A-Z)	Description
SLA status for:	Time frame used by the Current Status column (default: Month to date).

🔍 Alerts Tab

The following is an example of the Alerts page.
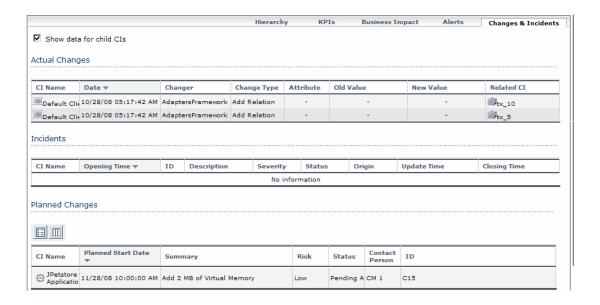
Description	Shows CI status alerts triggered by the CI selected in View Explorer.
	To Access: Applications > **Dashboard** > **Console** > **Alerts**.
Important Information	By default, alerts are shown for the past day. To modify this setting, see "Customize the Console Page" on page 146.

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
Alert Description	Description of the status change that triggered the alert.
Alert Name	The name of the alert.
Alert Time	The time and date when the alert was triggered. The format is: dd/mm/yy hh:mm GMT[<offset>].

GUI Element (A-Z)	Description
Alerts Over Time report	Click to access the selected CI's Status Alerts Report, which includes information on the action taken following the alert. For details, see "Configuration Item Status Alerts Report" in *Alerts*.
KPI	The KPI that triggered the alert.
Status	The status which the KPI entered when the alert was issued, represented by a status icon. For details about the icons, see "KPI Status".

🔖 Changes and Incidents Tab

The following is an example of the Changes and Incident page.

Description	Shows incidents opened for the CI selected in View Explorer, planned changes for the CI, and actual changes made to the CI.
	➤ **Incidents and Planned Changes.** Information on incidents and planned changes is collected from CMDB Federation Adapters. Federation adapters may be set up within HP Business Availability Center (such as the out-of-the-box adapter History Data Source), or outside HP Business Availability Center (such as Release Control or HP Service Manager). For details on setting up federation, see "The Federation Framework SDK" in *Model Management*.
	➤ **Actual Changes.** Information on actual changes is collected for CIs on the local machine, directly from the CMDB. The types of changes displayed are History Attribute Change, and History Relation Change.
	Attribute changes are displayed for each attribute marked as Change Monitored. For details, see "Add/Edit Attribute Dialog Box" in *Model Management*.
	Relationship changes are displayed if a relationship has been defined with a **TRACK_LINK_CHANGES** qualifier. For details, see "Qualifiers Page" in *Model Management*.
	To Access: Applications > **Dashboard** > **Console** > **Changes and Incidents**.

Important Information	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** checkbox, data is only shown for the selected CI.
	By default, actual changes and incidents are shown for the past week. The planned changes area shows the changes planned during the previous week, and those that are planned for the coming week. To modify these settings, see "Customize the Console Page" on page 146.

Actual Changes Area

The following elements are included (unlabeled GUI elements are shown in angle brackets):

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

Incidents Area

The following elements are included (unlabeled GUI elements are shown in angle brackets):

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

Planned Changes Area

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
CI Name	The name of the CI for which the change is planned.
Contact Person	The name of the contact person regarding the change.
ID	Change request ID, as it appears in the source application (such as Release Control).
Impact Severity	The degree of impact of the change, as it appears in the source application (such as Release Control).

GUI Element (A-Z)	Description
Opened By	The name of the person who opened the change request.
Planned End Date	The time at which the change is scheduled to end.
Planned Start Date	The time at which the change is scheduled to start.
Risk	The degree of risk of the change, as it appears in the source application.
Status	The status of the planned change, as it appears in the source application.
Summary	A description of the planned change.

6

Dashboard Filters

This chapter describes the Dashboard Filters.

This chapter includes:

Concepts

➤ Filters Overview on page 172

Tasks
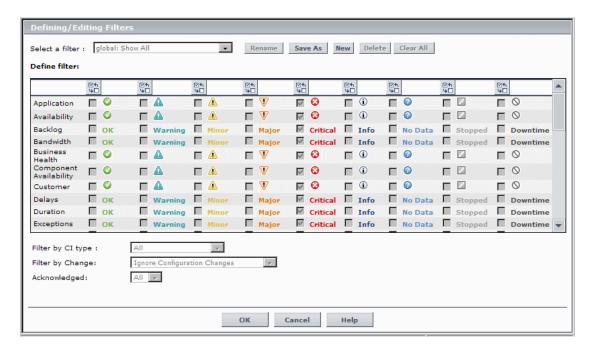
➤ Display and Customize a View Information in Filters on page 173

➤ Search for Specific CIs and Filter the Results on page 174

➤ Create or Customize an Active Filter on page 177

➤ Create a Temporary Filter Using Quick Filter on page 178

Reference

➤ Dashboard Filters User Interface on page 180

🔱 Filters Overview

The Filters tab enables you to view operational status for specific segments or components of your business. The Filters tab displays (in a flat non-hierarchical way) the configuration items (CIs) that match the following criteria: they belong to the selected view, and at least one of their Key Performance Indicators (KPIs) has the status specified in the active filter.

For details on the Filters tab user interface, see "Filters Page" on page 187.

🔧 Display and Customize a View Information in Filters

This section describes the processes for displaying and customizing a view information in the Filters tab, and gives examples.

This task includes the following steps:

➤ "Select a View in View Explorer" on page 173

➤ "Set the Active Filters" on page 173

➤ "Add a Details Link to CIs in the Filters Page – Optional" on page 173

1 Select a View in View Explorer

The data displayed in the Filters tab depends on the view you have selected. For details, see "Filters Page" on page 187.

2 Set the Active Filters

You use the **Active Filters** capability to create filters that enable you to filter the CIs displayed in the Filters tab, enabling you to focus on the specific view, on specific CI types or statuses, or on problematic areas. For details, see "Filters Page" on page 187.

You can also create a new active filter. For details, see "Create or Customize an Active Filter" on page 177.

You can also create a temporary filter. For details, see "Create a Temporary Filter Using Quick Filter" on page 178.

3 Add a Details Link to CIs in the Filters Page – Optional

To add a Details link for every CI in the Filters page, select **Admin** > **Platform** > **Setup and Maintenance** > **Infrastructure Settings**, choose **Applications**, select **Dashboard Application**, and in the Dashboard Application - Dashboard Layout Properties table, modify the **Show element CMDB details link in UI** entry. Default is **false**.

The Details link enables you to view CMDB information about the CI. For details, see "Node Details Dialog Box" on page 94.

🔧 Search for Specific CIs and Filter the Results

You can search for a specific CI using the View Explorer search function to filter the list of CIs that HP Business Availability Center displays. For more details on the Search feature, see "View Explorer" in *Model Management*.

You can locate CIs by their name, by related CIs, by their CITs, in the current view, or in all views. If, in addition to using the Search feature in View Explorer, you display the Filters tab in the right pane of the Dashboard, the resulting filtered report displays only the CIs that have been located by the search filtered by the selected filter in the Filters tab.

For details on the Filters tab, see "Filters Page" on page 187.
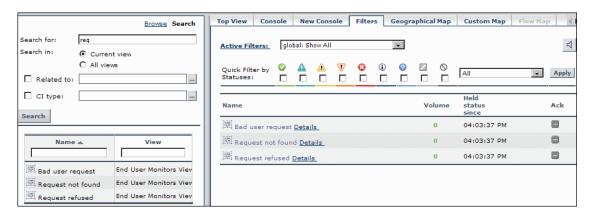
Example – Searching for CIs in the Current View

You can search for CIs in the current view by name, related CIs, or CITs.

➤ The result is a list of all of the CIs corresponding to the search criteria listed in View Explorer. The Filters tab displays a filtered list of the CIs and the CI's children CIs corresponding to the search criteria filtered by the active filter and the current operational status in each KPI for each of the CIs.
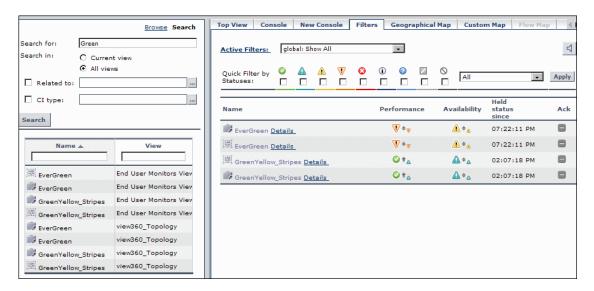
➤ If the search result is a single CI, or if you click one of the CIs in the search list results, the Filters tab displays the selected CI and its child CIs filtered by the active filter, and the current operational status in each KPI for each of the CIs.
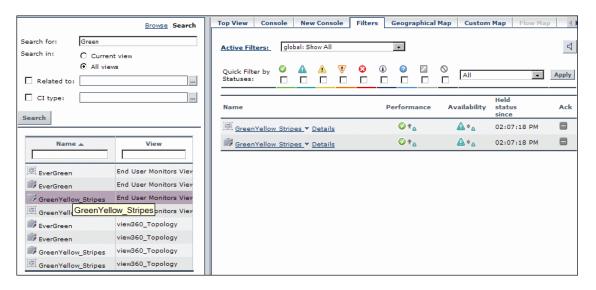
Example – Searching for CIs in More Than One View

You can search for CIs in all views by name, related CIs, or their CITs.

➤ The result is a list of all of the CIs and the views that include them, corresponding to the search criteria listed in View Explorer. The Filters tab displays a filtered list of the CIs corresponding to the search criteria, filtered by the active filter and the current operational status in each KPI for each of the CIs.

➤ You can click a specific CI in the results of the search list to display in the Filters tab a filtered list of the CIs corresponding to the search criteria and to the selected view, filtered by the active filter and the current operational status in each KPI for each one of those CIs.

🖑 Create or Customize an Active Filter

Active Filters enable you to focus on a specific view, CI type or status, or problematic areas.

The currently active filter is displayed in the **Active Filters** box in the Filters tab. You can select a different filter from the **Active Filters** list.

The **Active Filters** list contains the Dashboard predefined filters (shown as gray text strings) and any additional filters you defined (shown as black text strings).

To define or customize filters, access the Filters tab, and select one of the following options:
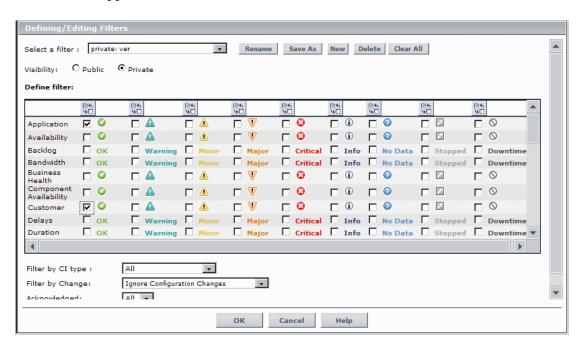
1 To define a new filter, click **New**. The Defining/Editing Filters Page opens.

2 To use an existing filter as the basis for the new filter, select the filter name in the **Select a filter** list and then click **Save As**. The Filter Name dialog box opens, where you can specify a name for the filter you are creating. You are then returned to the Defining/Editing Filters Page.

For details, see "Filters Page" on page 187.

Example

The **private: filter ver** filter shown below is created to display the Application KPIs and Customer KPIs with the **OK** status.

⚒ Create a Temporary Filter Using Quick Filter

Quick Filter enables you to display the selected view's CIs whose KPIs have at least one KPI with the selected statuses. The filter is a temporary filter that persists until you log off, change its selection of statuses, or select another filter.

For details, see "Filters Page" on page 187.

Note: You cannot save the settings you selected in Quick Filter, but you can create a similar filter using Active Filter. For details, see "Defining/Editing Filters Dialog Box" on page 181.

Example

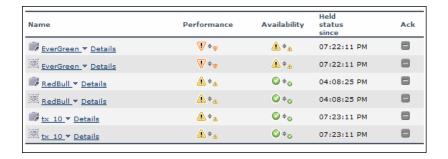The **global: Show All** report shown below includes all KPI statuses for the selected CI.

Name	Performance	Availability	Held status since	Ack
15per50ava ▼ Details			03:08:07 PM	
15per50ava ▼ Details			03:08:07 PM	
EverGreen ▼ Details			07:22:11 PM	
EverGreen ▼ Details			07:22:11 PM	
GrayRay ▼ Details			07:22:11 PM	
GrayRay ▼ Details			07:22:11 PM	
GreenYellow_Stripes ▼ Details			03:08:37 PM	
GreenYellow_Stripes ▼ Details			03:08:37 PM	
MellowYellow ▼ Details			07:22:11 PM	
MellowYellow ▼ Details			07:22:11 PM	
RedBull ▼ Details			04:08:25 PM	
RedBull ▼ Details			04:08:25 PM	
SCDAM031_1 ▼ Details			07:22:11 PM	
tx_10 ▼ Details			07:23:11 PM	
tx_10 ▼ Details			07:23:11 PM	
tx_15 ▼ Details			07:23:11 PM	
tx_15 ▼ Details			07:23:11 PM	
tx_5 ▼ Details			07:23:11 PM	
tx_5 ▼ Details			07:23:11 PM	
YellowRed_Stripes ▼ Details			03:08:37 PM	
YellowRed_Stripes ▼ Details			03:08:37 PM	

To display, temporarily, only the view's CIs whose KPIs have **Minor** statuses, select the status in the Quick Filter bar and click **Apply**.

The filtered report includes only the CIs whose KPIs have the **Minor** status.

Dashboard Filters User Interface

This section describes:

🔍 Defining/Editing Filters Dialog Box

Description	Used to define new filters or customize existing filters
	To Access: Click **Application** > **Dashboard**, and click the **Filters** tab. Select the view in the View Explorer. Click **Active Filters**.
Important	The Filters tab has predefined filters you can use to display commonly required information. For details, see "Predefined Filters" on page 184.
	Note:
	➤ If more than one user is logged in at the same time using the same user name (for example, admin), then 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.
	➤ The information displayed in the Filters tab is not refreshed while the Defining/Editing Filters dialog box is open. (This also applies when the Defining/Editing Filters dialog box is not in focus.)
Included in Tasks	"Create or Customize an Active Filter" on page 177

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
🔳	To invert the selection use the **Invert Selection** button.
Acknowledged	Select one of the following options:
	➤ **All.** To display all of the CIs whether they are acknowledged or not.
	➤ **Yes.** To display the CIs that are acknowledged.
	➤ **No.** To display the CIs that are not acknowledged.

GUI Element (A-Z)	Description
Cancel	Click the **Cancel** button to exit the Defining/Editing Filters dialog box without saving your changes to the filter criteria for the currently displayed filter. **Warning:** The filter you create is saved and appears in the **Active Filters** list.
Clear All	Click the **Clear All** button to clears all the selected filter fields.
Define filter	Select the check box for each KPI status type that you want to include in the filter. Specify any combination of the listed filter criteria. The filter displays the CIs that meet all of the selected criteria, as follows: If no status is selected for a KPI then all statuses are included in the filter.
Filter by Change	Select one of the following options to filter by the CIs that are set to be monitored in real-time for changes (only 20 CIs and their children can be monitored at a time): ➤ **Ignore Configuration Change.** To display all CIs, whether their configuration changed or not. ➤ **Only Changed Configuration Items.** To display only the CIs whose configuration changed. ➤ **Exclude Changed Configuration Items.** To display only the CIs whose configuration did not change. For details about how to set the CIs to be monitored for change, see "Analyze Real-Time Change Information" on page 112.
Filter by CI type	Select one of the following options: ➤ **All.** All the CI types are included (monitor and non-monitor CIs). ➤ **All excluding monitors.** All the CI types are included except for monitor CIs that are excluded. ➤ **Monitors only.** All the CI types are excluded except for monitor CIs that are included.

GUI Element (A-Z)	Description
New	Click the **New** button to define a completely new filter in the Filter Name dialog box that opens. All the KPI's statuses are cleared. **Note:** By default, a filter is called Custom Filter when you create a filter without assigning it a name.
OK	Click the **OK** button to save your changes to the currently displayed filter and to close the Defining/Editing Filters dialog box.
Rename	Click the **Rename** button to rename the filter; for example, when you are want to change the name of a filter you created.
Save As	Select the filter name in the **Select a filter** list, and click the **Save As** button to use the selected filter as the basis for the new filter. The KPIs' statuses that were selected for the filter you are using as a model are still selected. The Filters Name dialog box opens, where you can specify a name for the filter you are creating.

GUI Element (A-Z)	Description
Select a filter	Click to modify an existing filter, select the filter in the box and click **Select a filter**.
	To use the selected existing filter as the basis for the new filter, select the filter name in the box, and click **Select a filter**. Then click **Save As**. The KPI statuses that were selected for the filter you are using as a model are still selected.
	Predefined filters are used to include or exclude CIs according to their type, and KPIs according to their status. These filters cannot be modified or deleted.
	For details, see "Predefined Filters" on page 184.
Visibility	Select the required visibility option:
	➤ **Private** to create a private filter.
	➤ **Public** to create a public filter.
	Note: Visibility is displayed only to the administrator or to a user with the appropriate permissions.
	Different levels of visibility are available. For details, see "Visibility Levels" on page 185.

Predefined Filters

The predefined filters are:

Predefined Filter Name	Description
global: Show All	Displays all of the CIs, all their KPIs, and the status of the KPIs.
global: Show Errors	Displays, for all CI types, only the CIs whose **Availability**, **Customer**, **HP System**, **OT Impact**, **PNR**, **Performance**, **RT Impact**, **System**, **User**, **Volume**, and custom KPIs have a **critical** status.
global: Show Errors – Monitors Only	Displays only the monitor CIs whose **Availability**, **Customer**, **HP System**, **OT Impact**, **PNR**, **Performance**, **RT Impact**, **System**, **User**, **Volume**, and custom KPIs have a **critical** status.

Predefined Filter Name	Description
global: Show Errors and Warnings	Displays, for all CI types, only the CIs whose **Availability**, **Customer**, **HP System**, **OT Impact**, **PNR**, **Performance**, **RT Impact**, **System**, **User**, **Volume**, and custom KPIs have a **minor**, **major**, or **critical** status.
global: Show Monitors Only	Displays only the monitor CIs, their KPIs, and the status of the KPIs.
global: Show PNR	Displays, for all CI types, only the CIs whose **PNR** KPI has an **OK**, **Warning**, **Minor**, **Major**, **Critical**, or **No Data** status.

Visibility Levels

The visibility levels you can select when defining a filter include:

Visibility Level	Filter Description
Global	Global filters are predefined and built-in. They are available for all customer users. They cannot be modified. You can use them as templates to build public or private active filters. Their names have the following syntax: **global:<name>**. They appear in the list of active filters as gray text strings. For a list of global active filters, see "Predefined Filters" on page 184.
Public	Administrators or users with the appropriate permissions can build public active filters. Those filters are available for all users at the specific customer. You can use the global active filters as templates to build public active filters. Their names have the following syntax: **public:<name>**. They appear in the list of active filters as black text strings.

185

| Visibility Level	Filter Description
Private	Users can build their own private active filters. Those filters are available only to the user who created them. You can use the global and public active filters as templates to build private active filters. Their names have the following syntax: **private:<name>**. They appear in the list of active filters as black text strings.
	For each user name used when logging on to HP Business Availability Center, Dashboard creates an associated filters file. When you log on to HP Business Availability Center 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.
Temporary	Another type of private active filter. These filters are created when you select statuses in the Quick Filter and click **Apply** or when you use the **Filter subtree - Monitors only** option in a CI context menu. The name of the temporary filter is **temp: Quick Filter**. For details, see "Create a Temporary Filter Using Quick Filter" on page 178. You cannot save temporary filters.

🔍 Filter Name Dialog Box
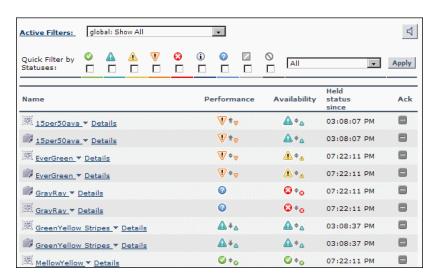
Description	Used to define a new filter name.
	To Access: In Defining/Editing Filters, select **Save As**.

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
Name	Enter the name of the filter.

🔍 Filters Page

The following is an example of the Filters page.

Description	Enables you to view operational status for specific segments or components of your business. The Filters tab displays (in a flat non-hierarchical way) the configuration items (CIs) that match the following criteria: they belong to the selected view, and at least one of their Key Performance Indicators (KPIs) has the status specified in the active filter. **To Access:** Select **Applications** > **Dashboard** and click the **Filters** tab.
Important Information	➤ Sort the information displayed in the Filters tab according to the entries in any column by clicking the column header. Toggle between ascending and descending order by clicking the header again. ➤ If you select (in View Explorer) a specific CI, the filter works only on the CI's subtree. ➤ If you select the view's root, the filter is applied to the whole view. ➤ Hold the cursor over a CI to display its full name in a tooltip. **Customization:** For details, see "Add a Details Link to CIs in the Filters Page – Optional" on page 173.
Included in Tasks	"Display and Customize a View Information in Filters" on page 173
Useful Links	"Filters Overview" on page 172 For details on the functionality of View Explorer, see "Working with View Explorer" in *Model Management*.

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
Last Update	Shows connectivity with the Dashboard servlet, running on the Tomcat servlet engine by displaying the time the information in the tab was last updated.

Filter Definition Area

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
	Click to toggle the sound on or off. The icon tooltip indicates the action you perform if you click the button. For details, see "Set Up Sound Notification When KPI Status Changes to Critical" on page 67 or "Switch Off the Alert Sound When CI is Acknowledged" on page 107.
Active Filters link	Define or modify active filters in the Defining/Editing Filters dialog box. For more information, see "Defining/Editing Filters Dialog Box" on page 181.
Apply	Click the **Apply** button to apply the Quick Filter selection to the display.
List of existing filters	Select a filter from the **Active Filters** list. The filter can be one of the predefined filters or a custom filter.

GUI Element (A-Z)	Description
Quick Filter by Statuses	Quick Filter enables you to display CIs whose KPIs have one of the selected statuses. The filter is a temporary filter that persists until you log off, until you change its selection of statuses, or until you select another filter.
	After you have selected a combination of filters to display a view's data, you can further refine the report by selecting specific KPI's statuses. The CIs that are displayed have at least one of their KPIs with one of the selected statuses.
	Select a combination of KPI statuses in the **Quick Filter** bar. You can also use one of the options in the list to further filter the results:
	➤ **All.** To display all types of CIs whose KPIs match the selected combination of KPI statuses selected in Quick Filter.
	➤ **Monitors only.** To display only the monitor CIs whose KPIs match the selected combination of KPI statuses selected in Quick Filter.
	➤ **All excluding monitors.** To display all types of CIs, except the monitor CIs, whose KPIs match the selected combination of KPI statuses selected in Quick Filter.
	Note: You cannot save the settings you selected in Quick Filter, but you can create a similar filter using Active Filter. For details, see "Defining/Editing Filters Dialog Box" on page 181.

Filtered CIs Area

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
	Indicates that at least one change-monitored property of the CI's child CIs has changed.
	Hold the cursor above the icon to display a tooltip that provides more information about the change. The tooltip header indicates whether the change was made to the CI, the CI's child CIs, or both. The tooltip body lists the CIs that were changed.
	For details on setting this feature, see "Analyze Real-Time Change Information" on page 112.
	Indicates that at least one change-monitored property of CI itself has changed.
	Hold the cursor above the icon to display a tooltip that provides more information about the change. The tooltip header indicates whether the change was made to the CI, the CI's child CIs, or both. The tooltip body lists the CIs that were changed.
	For details on setting this feature, see "Analyze Real-Time Change Information" on page 112.
	Indicates that at least one change-monitored property of the CI and at least one change-monitored property of the CI's child CIs have changed.
	Hold the cursor above the icon to display a tooltip that provides more information about the change. The tooltip header indicates whether the change was made to the CI, the CI's child CIs, or both. The tooltip body lists the CIs that were changed.
	For details on setting this feature, see "Analyze Real-Time Change Information" on page 112.

GUI Element (A-Z)	Description
	To access the context menu options, click the down 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. If no context menu is defined for the CI, the menu arrow is not displayed. If one of the menu options is not supported for the selected CI, that option is disabled. For details on the menu options, see "Menu Options" on page 75.
<Tooltip>	Move the cursor above a KPI status icon to the Details tooltip that includes the following information: the name of the KPI and the name of the CI, the name of the rule used to calculate the KPI status, and the time and date when the KPI status changed to the current status.
	Move the mouse over the Trend icon to display the name of the trend, the name of the CI, and the trend of the KPI in the selected time period. For details on the tooltip, see "Trend" on page 864.
	Move the mouse over the History icon to display the name of the KPI, the name of the CI, and the type of history used when calculating the history status, and the worst or average status of the KPI in the selected time period. For details on the tooltip, see "History" on page 837.
<View Explorer>	When you select a CI in View Explorer, Top View displays the selected CI centered in the tree with all its sub-branches expanded. If you select a CI in the Top View tree, it is highlighted in the View Explorer.

GUI Element (A-Z)	Description
Ack	Displays an icon that represents the CI Acknowledgment status.
	Note: A tooltip for the **Ack** icon displays the current status of the CI's acknowledgment.
	The acknowledge utility enables you to track performance problems identified in the system and network infrastructure by keeping a record of when the problem was acknowledged and by which user. You can access the utility using context menu options or by clicking the **Ack** icon that is displayed in an **Ack** column in some of the Dashboard tabs.
	Note: A user with the appropriate permissions can show or hide the Ack column in the Dashboard application. To display/hide the Ack column, select **Admin** > **Platform** > **Setup and Maintenance** > **Infrastructure Settings**, click **Applications context**, select **Dashboard Application**, and locate the **Show CI Acknowledgment column** in the **Business Console** area. Select **false** (to hide the **Ack** column) or **true** (to display the **Ack** column). The change takes effect immediately.
Held Status Since	The time and date when the KPI status changed to the current status.
KPIs	Displays text or an icon indicating the current operational status of each CI. For an explanation of the color coding for status icons, see "KPI Status" on page 355.
Name	Displays the filtered list of CIs. You can click a specific CI name to move to that CI in the Console tab. The relevant CI is shown highlighted in the View Explorer. The arrow to the right of a CI name opens the options menu for the CI. For details, see "Customize Dashboard Display and Refresh Rate" on page 69.

7

Geographical Map

This chapter describes the Dashboard Geographical Map.

This chapter includes:

Concepts

➤ Geographical Maps on page 196

Tasks

➤ Display and Customize a View in Geographical Map on page 200

➤ Display a Geographical Map With Google Earth on page 204

➤ Create a Geographical Map for an Unavailable Zoom Level of a Specific Area on page 207

➤ Customize Virtual Earth on page 208

➤ Customize Maps Applet on page 210

Reference

➤ Geographical Map User Interface on page 211

🔵 **Geographical Maps**

In Dashboard, you can associate a geographical map with a view. If you have specified geographical locations for the view's CIs, real-time status indicators representing the CIs statuses are displayed on the map at those locations. For details on the geographical map user interface, see "Geographical Map Page" on page 212.

In Dashboard Administration, in the geographical map, you can shift the map's focus and enlarge or shrink the map to fit the view it represents. When you save the changes, the modified map is automatically displayed when you select the view in the Geographical Map tab in Dashboard Application. For details, see "Geographical Map Page" on page 212.

If you have an Internet connection, geographical maps can be displayed using Virtual Earth. For details, see "Understanding Virtual Earth" on page 198.

If you do not have an Internet connection, geographical maps can be displayed using a maps applet. For details, see "Understanding the Maps Applet" on page 199.

Note: The Virtual Earth map is only available in English and cannot be translated. For localization, use the maps applet. The Maps Applet does not display the names of cities or countries.

This section includes the following topics:

➤ "Location Status Information" on page 197

➤ "Understanding Google Earth" on page 198

➤ "Understanding Virtual Earth" on page 198

➤ "Understanding the Maps Applet" on page 199

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 Dashboard. For more information about color coding, see "KPI Status" on page 355.

The location is defined individually for group or leaf (monitor) CIs in a view. You can specify the CI location when you define a new CI or when you edit a CI's properties. For details, see "Configuration Item Properties Dialog Box" in *Model Management*. You can also specify geographical locations for end-user groups in "New/Edit End-User Group Page" in *Using End User Management*. If you do not specify a geographical location for at least one CI in the view, 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.

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 a location is specified for them.

Understanding Google Earth

Note to HP Software-as-a-Service users: This feature is not available when working with HP Software-as-a-Service.

You can view the geographical map information in a three-dimensional map using the Google Earth feature. This feature is available only to the administrator.

Note: The integration of CI locations with your Google Earth installation is at the beta stage.

Understanding Virtual Earth

If you have an Internet connection you can display the geographical map using Microsoft MSN Virtual Earth. HP Business Availability Center integrates Virtual Earth online mapping functionality, available over MSN, to enable you to use the geographical map of a view. If the view's CIs are assigned geographical locations, real-time status indicators are displayed on the map at those geographical locations.

Virtual Earth geographical maps are based on Microsoft Network (MSN) technology and use dynamic HTML.
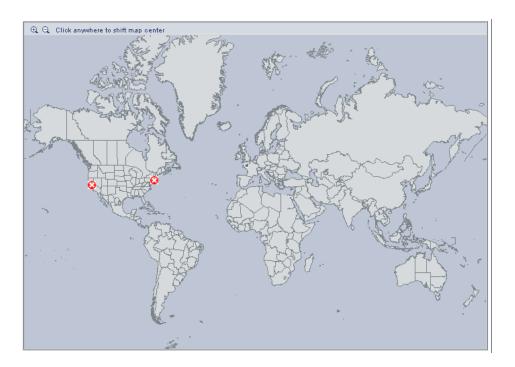
The Virtual Earth geographical map presents a flat geopolitical view of the planet where you can display the country borders, the geographical features, or both.

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

Understanding the Maps Applet

The maps applet presents a flat geopolitical view of the planet.

You can use the maps applet to display the geographical map of a view. The map displays the worst status at each geographical location and detailed information about the CI's KPIs.

🛠 **Display and Customize a View in Geographical Map**

This section describes the processes to view real-time status indicators in a geographical map, and gives examples.

This task includes the following steps:

1 **Setup Requirements for the Map Applet**

The maps applet requires that Sun JRE plug-in 1.6.0_x (latest version recommended) be installed on the client machine.

The city names use UTF8 format. If HP Business Availability Center is working with a Microsoft SQL Server, or an Oracle Server that is not configured for UTF8 support, non-English characters (for example, é) are displayed as empty square brackets [ ].

2 **Assign a Geographical Location to the Appropriate CIs**

To view the real-time status indicators corresponding to a view's CI on the map, you must assign a geographical location to the relevant CIs in the view.

Select **Admin > Universal CMDB > Modeling > It Universe Manager**. Select a CI in the topology map or View Explorer. In the Information Pane, select the **Properties** tab, click **Edit,** enter the country, state, and city information in the Properties dialog box, and click **Apply**.

3 Select the Display Technology

You can display a geographical map using Virtual Earth, a maps applet, or Google Earth. You must select the display technology as follows:

➤ **Virtual Earth.** If you have an Internet connection, use Virtual Earth to display the geographical map. To enable Virtual Earth, select **Admin > Platform** > **Setup and Maintenance** > **Infrastructure Settings**, click **Applications**, select **Dashboard Applications**, and locate the **Use Virtual Earth** entry in the **Dashboard Application - Maps Management Properties** table. Set the property value to **true**. This is the default.

➤ **Maps Applet.** If you do not have access to Internet, use the maps applet to display the geographical map. To enable maps applet, select **Admin > Platform** > **Setup and Maintenance** > **Infrastructure Settings**, click **Applications**, select **Dashboard Applications**, and locate the **Use Virtual Earth** entry in the **Dashboard Application - Maps Management Properties** table. Set the property value to **false**.

➤ **Google Earth.** The Google Earth display technology is available only in Dashboard Administration. If you have access to Internet, you can use Google Earth to display the geographical map. You must specify that you want to display the **Export to Google Earth** button in the Geographical Map tab in Dashboard Administration. To display the **Export to Google Earth** button in the Geographical Map tab in Dashboard Administration, select **Admin** > **Platform** > **Setup and Maintenance** > **Infrastructure Settings**, click **Applications**, select **Dashboard Applications**, and locate the **Enable Export to Google Earth button** entry in the **Dashboard Application - Maps Management Properties** table. Set the property value to **true** (**false** hides the Export to Google Earth button).

Note to HP Software-as-a-Service users: The **Export to Google Earth** button is not available when working with HP Software-as-a-Service.

Note: Google Earth is available only in Dashboard Administration and only to users with administrative permissions.

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4 Assign a Geographical Map to a View

Assign a map to a view by selecting a view in the Geographical Map and saving the map.

To assign a geographical map to a view, select **Admin > Dashboard**, click the **Geographical Map** tab to open the Geographical Map Administration page, select the appropriate view in the **View** list in View Explorer, and click **Save**.

If you assigned geographical location to a view's CIs, the corresponding status indicators are displayed on the map as soon as you assign a map to the view.

Note: To remove CI icons from the map, you must delete their geographical location.

Example

The map shows the status of the jpetstore CI in the Cayman Islands.

5 Refine the Geographical Map

As an administrator, you can refine the geographical display depending on the type of display you have selected. You can:

➤ Adjust the geographical map using the elements described for each type of map. For details, see "Geographical Map Page" on page 212.

➤ Customize the map. For details on Virtual Earth, see "Customize Virtual Earth" on page 208. For details on the Map Applet, see "Customize Maps Applet" on page 210.

You can save the changes.

6 View the Geographical Map

To view the resulting geographical Virtual Earth or maps applet map, click **Application** > **Dashboard**, select the view in View Explorer, and click the **Geographical Map** tab.

7 Adjust the Displayed Geographical Map

As a user, you can adjust the geographical display in different ways depending on the type of display you have selected. The changes are valid until you click another tab. For details, see "Geographical Map Page" on page 212.

🔧 Display a Geographical Map With Google Earth

Note to HP Software-as-a-Service users: This feature is not available when working with HP Software-as-a-Service.

Note:

➤ This feature is only available in Dashboard Administration.

➤ The integration of CI locations with your Google Earth installation is at the beta stage.

You can view the geographical map information in a three-dimensional map using the Google Earth feature. This feature is available only to the administrator. This section describes the processes to view status indicators in Google Earth.

This task includes the following steps:

➤ "Select the Appropriate Display Technology" on page 205

➤ "Import Location Status into Google Earth" on page 205

➤ "Set the Refresh Rate for the View" on page 206

➤ "View Indicators by Status" on page 206

➤ "View Connecting Lines" on page 207

1 Select the Appropriate Display Technology

To use Google Earth you must select the appropriate display technology. For details, see "Select the Display Technology" on page 201.

2 Import Location Status into Google Earth

You can import the location status information shown in the geographical map for the current view into a local Google Earth application. After importing the information, Google Earth displays all the CI status indicators in the appropriate geographical locations.

To list all the views you create in the same folder, create a new folder (for example, an HP Business Availability Center folder) in the **Places** folder in Google Earth, and then add to that folder all the views you create.

You can create a view in Google Earth by creating a network link using the view's URL. This creates a container folder and a sub-folder.

To import location status into Google Earth:

a If you have not already installed Google Earth on your local computer, open the Google Earth site (http://earth.google.com/) and download the application.

b Click the **View in Google Earth** button. Follow the instructions in the **Integration with Google Earth** page.

c Open the Google Earth application.

d Click the **My Places** directory in the **Places** area.

e If this is the first time you are creating a view in Google Earth, in the **Create In** area, click **New Folder** and enter **HP Business Availability Center** to create a new folder called HP Business Availability Center.

If the HP Business Availability Center folder already exists in the **Create In area** tree, select the folder.

f Select **Add > Network Link**.

g The Google Earth - New Network Link dialog box opens.

h Enter the view name in the **Name** box.

    i Paste the URL displayed in the **Integration with Google Earth** page to the **Location** box.

    Note: This URL creates a container folder called by the name you specified in the **Name** box, and a sub-folder called by the name of the view.

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    j Click **OK** to close the New Network Link dialog box.

    The Google Earth page displays the HP Business Availability Center folder in the Places area.

    k Open the HP Business Availability Center directory to list the views you have added.

3 Set the Refresh Rate for the View

You can set the refresh rate of the view sub-folder.

To set the refresh rate for the view:

    a Right-click the view sub-folder.

    b Select **Properties**.

    c Click the **Refresh** tab.

    d In the **Time-Based Refresh** area, select **Periodically** from the **When** list and select **1** minute in the Time.

    e Click **OK**.

4 View Indicators by Status

You can filter the status indicators that are displayed in Google Earth to include specific statuses.

To view the indicators by status:

    a In the **Places** area, expand the **HP Business Availability Center** folder.

    b Select the view you want to display. The folder displays the list of statuses of the CIs in the view.

c Select one or more of statuses. Only the CIs with the selected statuses are displayed in Google Earth.

5 View Connecting Lines

Different locations are connected with a line when you specify different geographical locations for monitor CIs and non-monitor CIs they monitor in the view.

For example, in the End User Locations view, the bpm_profile_1 CI is located in New York, New York, USA, the tx_10 CI is located in Baden-Baden, Germany, while the tx_10 from wall_sanity1 is located in Rome, Italy.

To view the connecting lines:

a In Google Earth, select the view you want to display.

b Select **Connecting Lines** in your view folder to display the connecting lines in Google Earth.

If you select **Connecting Lines** in more than one view, you can see all the lines of all the selected views at the same time.

🐪 Create a Geographical Map for an Unavailable Zoom Level of a Specific Area

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

🦴 Customize Virtual Earth

You can customize a Virtual Earth map.

Note: All the steps in this task are optional and can be performed in any order.

This task includes the following steps:

➤ "Adjust the Virtual Earth Map" on page 208
➤ "Specify the Size of the Indicators" on page 208
➤ "Specify the Statuses to Be Displayed" on page 209
➤ "Specify the Time Delay" on page 209

1 Adjust the Virtual Earth Map

You can zoom or shift the Virtual Earth map so that it shows the information you require. For details, see "Geographical Map Page" on page 212.

2 Specify the Size of the Indicators

You can modify the default size (19 pixels) of the indicators that are displayed on the Virtual Earth map.

To modify the size of the indicators, select **Admin** > **Platform** > **Setup and Maintenance** > **Infrastructure Settings**, click **Applications**, select **Dashboard Applications**, and enter the indicator size (in pixels) in the **Indicator size in Virtual Earth** entry in the **Dashboard Application - Maps Management Properties** table.

3 Specify the Statuses to Be Displayed

You can select the statuses you want to display in the Virtual Earth map.

To specify the statuses to be displayed, select **Admin** > **Platform** > **Setup and Maintenance** > **Infrastructure Settings**, click **Applications**, select **Dashboard Applications**, and locate the **Ignore gray statuses** entry in the **Dashboard Application - Maps Management Properties** table. Select one of the following options:

➤ **ALL.** Locations with gray statuses (downtime, stopped, no data and uninitialized) are not displayed on the map.

➤ **NO.** Locations with gray status are displayed on the map.

4 Specify the Time Delay

You can modify the default time delay between the completion of new location download from the server and the display of the information by Virtual Earth (in seconds). Use larger values if user has slower connection.

To modify the time delay, select **Admin** > **Platform** > **Setup and Maintenance** > **Infrastructure Settings**, click **Applications**, select **Dashboard Applications**, and locate the **Wait after getting data** entry in the **Dashboard Application - Maps Management Properties** table. Enter the delay (in seconds). The default is 4.

🔧 Customize Maps Applet

You can customize a maps applet.

Note: All the steps in the task are optional and can be performed in any order.

This task includes the following steps:

➤ "Adjust the Maps Applet" on page 210

➤ "Specify the Map Refresh Rate" on page 210

➤ "Specify the Maximum Number of CIs Displayed in a Location's Tooltip" on page 211

1 Adjust the Maps Applet

You can adjust the maps applet so that it shows the required information. For details, see "Geographical Map Page" on page 212.

2 Specify the Map Refresh Rate
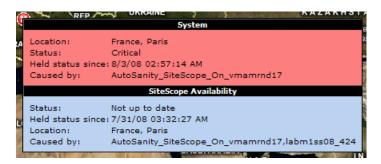
You can modify the default of the map refresh rate. The default is 30 seconds.

To specify the map refresh rate, select **Admin** > **Platform** > **Setup and Maintenance** > **Infrastructure Settings**, click **Applications**, select **Dashboard Applications**, and locate the **Maps Applet Refresh Rate** entry in the **Dashboard Application - Maps Management Properties** table. Enter the refresh rate.

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

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

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

To specify the maximum number of CIs displayed in a location's tooltip, select **Admin > Platform > Setup and Maintenance > Infrastructure Settings**, click **Applications**, select **Dashboard Applications**, and locate the **Maximum CIs in tooltip for location** entry in the **Dashboard Application - Maps Management Properties** table. Enter the new maximum.

🔍 Geographical Map User Interface

This section describes:

🔍 Geographical Map Page

Description	Enables you to display real-time status indicators on a geographical map, with the view's CIs at the geographical locations they were assigned. 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.
	To Access:
	➤ Select **Admin** > **Dashboard**, and click the **Geographical Map** tab.
	➤ Select **Applications** > **Dashboard**, and click the **Geographical Map** tab.
Important Information	When you magnify the map, the main cities appear for the part of the map that is displayed on the screen.
	The geographical map display can be rendered using:
	➤ **Virtual Earth.** For details, see "Using Virtual Earth" on page 213.
	➤ **A maps applet.** For details, see "Using the Map Applet" on page 217.
	➤ **Google Earth.** For details, see "Using Google Earth (Admin)" on page 220.
	The Geographical Map tab shows a different display, depending on the type of setup you have selected. The types of setups are: Microsoft MSN Virtual Earth, a flat, geopolitical map supplied with Business Availability Center, or Google Earth (available only in Dashboard Administration). For details, see "Select the Display Technology" on page 201.
Included in Tasks	"Display and Customize a View in Geographical Map" on page 200
Useful Links	"Geographical Maps" on page 196
	For details on the functionality of View Explorer, see "Working with View Explorer" in *Model Management*.

Using Virtual Earth

The following is an example of a geographical map using Virtual Earth.

Description	If you have an Internet connection, you can display the geographical map using Microsoft MSN Virtual Earth (Version 4.0) in Dashboard Geographical Map tab. HP Business Availability Center integrates Virtual Earth online mapping functionality, available over MSN, to enable you to use the geographical map of a view.
	Virtual Earth geographical maps are based on Microsoft Network (MSN) technology and use dynamic HTML.
	The Virtual Earth geographical map presents a flat geopolitical view of the planet where you can display only the country borders, only the geographical features, or both.
	When you magnify the view, the main cities appear for the part of the map that is displayed on the screen.
Useful Links	"Understanding Virtual Earth" on page 198
	For details on the functionality of View Explorer, see "Working with View Explorer" in *Model Management*.

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
	Enable you to zoom in and out in order to enlarge or shrink the map.
	Note:
	➤ You can save the adjustments that you make in Dashboard Administration.
	➤ You cannot save the adjustments you make in Dashboard Application; they are lost when you change tab or application.
	Click to shift the center of the map to the nearest CI.
	Note:
	➤ You can save the adjustments that you make in Dashboard Administration.
	➤ You cannot save the adjustments you make in Dashboard Application; they are lost when you change tab or application.
	Click to zoom out completely.
	Note:
	➤ You can save the adjustments that you make in Dashboard Administration.
	➤ You cannot save the adjustments you make in Dashboard Application; they are lost when you change tab or application.
	This icon is only available in Dashboard Application.
	Click to open the map on a standalone page.
	Close the page to return to Dashboard.
2D	Click to display the map in two-dimensional format.
3D	Click to display the map in three-dimensional format.
	Note: This is available only if you have Windows XP installed on your local computer.

GUI Element (A-Z)	Description
<Adjustments>	➤ Click the map and drag to move the map in the window. ➤ Double-click the map to zoom in. **Note:** ➤ You can save the adjustments that you make in Dashboard Administration. ➤ You cannot save the adjustments you make in Dashboard Application; they are lost when you change tab or application.
<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 Dashboard. For more information about color coding, see "KPI Status" on page 355. The round icon represents the status of a location when at least one of the CIs is not a monitor CI. The square icon represents the status of a location where all the CIs are monitor CIs.
<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 attached to the location. The tooltip includes the following information: ➤ **KPI Name.** The name of the KPI. The color of the header indicates the worst status of the KPI. ➤ **Location.** The name of the location (country, city, and state, if applicable). ➤ **Status.** The status of the KPI. ➤ **Held status since.** The time and date when the KPI status changed to the current status. ➤ **Caused by.** The names of the CIs/monitors where the problem occurred.

GUI Element (A-Z)	Description
\<View\>	When you select a view in View Explorer, the Geographical Map tab displays the selected view bar centered in the tree with all its root CIs expanded.
Last Update	Shows connectivity with the Dashboard servlet, running on the Tomcat servlet engine by displaying the time the information in the tab was last updated.
open	In a Virtual Earth map, open the map in a standalone page by clicking **open** to explore the map in one window and perform other tasks in the main Dashboard window.
Road/Aerial/Bird's Eye/Hybrid/Labels	Click: ➤ **Road** to display the map with the country borders ➤ **Aerial** to display the map with the topographical features ➤ **Bird's Eye** for future use. ➤ **Hybrid** to display the map with both the country borders and the topographical features ➤ **Labels** to display only the real-time status indicators. **Note:** ➤ You can save the adjustments that you make in Dashboard Administration. ➤ You cannot save the adjustments you make in Dashboard Application; they are lost when you change tab or application.
Search	Use this feature to perform a search in Microsoft MSN Virtual Earth (outside of HP Business Availability Center).

Using the Map Applet

The following is an example of a geographical map using the Map applet.

Description	If you do not have an Internet connection, the Geographical Map page displays a maps applet graphic instead of a Virtual Earth map.
	The Geographical tab displays the worst status at each geographical location and detailed information about the CI's KPIs.
	The map applet present a flat geopolitical view of the planet.
Useful Links	"Understanding the Maps Applet" on page 199
	For details on the functionality of View Explorer, see "Working with View Explorer" in *Model Management*.

The following elements are included (unlabeled GUI elements are shown in angle brackets):
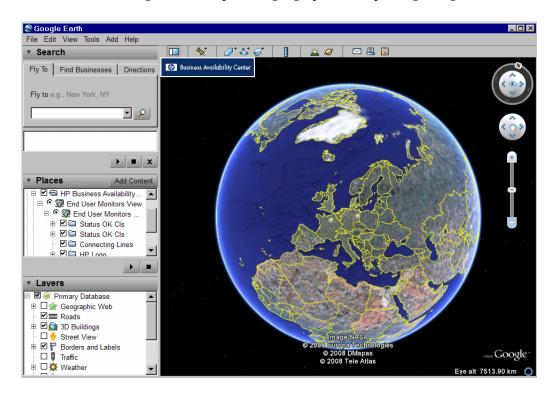
GUI Element (A-Z)	Description
⊖ ⊕	Enable you to zoom in and out to enlarge or shrink the map. **Note:** ➤ You can save the adjustments that you make in Dashboard Administration. ➤ You cannot save the adjustments you make in Dashboard Application; they are lost when you change tab or application.
<Adjustments>	Click the area that interests you. The map shifts to make the location you clicked the new center of the map. **Note:** ➤ You can save the adjustments that you make in Dashboard Administration. ➤ You cannot save the adjustments you make in Dashboard Application; they are lost when you change tab or application.
<Status of a location with group CIs or with monitor CIs>	The geographical map of the view displays the worst status at each geographical location.
<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 Dashboard. For more information about color coding, see "KPI Status". The round icon represents the status of a location when at least one of the CIs is not a monitor CI. The square icon represents the status of a location where all the CIs are monitor CIs.

GUI Element (A-Z)	Description
<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 attached to the location.
	The tooltip includes the following information:
	➤ **KPI Name.** The name of the KPI. The color of the header indicates the worst status of the KPI.
	➤ **Location.** The name of the location (country, city, and state, if applicable).
	➤ **Status.** The status of the KPI.
	➤ **Held status since.** The time and date when the KPI status changed to the current status.
	➤ **Caused by.** The names of the CIs/monitors where the problem occurred.
<View>	When you select a view in View Explorer, the Geographical Map tab displays the selected view bar centered in the tree with all its root CIs expanded.

Using Google Earth (Admin)

The following is an example of a geographical map using Google Earth.

Description	Displays the worst status at each geographical location and detailed information about the CI's KPIs.
	Google Earth presents a three-dimensional view of the planet. When you magnify the view, the main cities appear for the part of the map that is displayed on the screen.
Important Information	**Note to HP Software-as-a-Service:** This feature is not available when working with HP Software-as-a-Service.
	Notes:
	➤ The integration of CI locations with your Google Earth installation is at the beta stage.
	➤ This feature is only available from Dashboard Administration.
Useful Links	"Understanding Google Earth" on page 198
	"Display a Geographical Map With Google Earth" on page 204
	For details on the functionality of View Explorer, see "Working with View Explorer" in *Model Management*.

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
<Places area>	Select the view and filter the CIs you want to display.
<Status of a location>	The geographical map of the view displays the worst status at each geographical location.
	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 Dashboard. For more information about color coding, see "KPI Status" on page 355.
	The round icon represents the status of a location with group CIs.
	The square icon represents the status of a location with monitor CIs.
<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 attached to the location.
	The tooltip includes the following information:
	➤ **KPI Name.** The name of the KPI. The color of the header indicates the worst status of the KPI.
	➤ **Location.** The name of the location (country, city, and state, if applicable).
	➤ **Status.** The status of the KPI.
	➤ **Held status since.** The time and date when the KPI status changed to the current status.
	➤ **Caused by.** The names of the CIs/monitors where the problem occurred.
<Zoom and direction tools>	Enables you to zoom in or out of the current display.

8

Custom Map

This chapter describes the Dashboard Custom Map.

This chapter includes:

Concepts

➤ Custom Maps on page 224

Tasks

➤ Display a View in a Custom Map on page 225
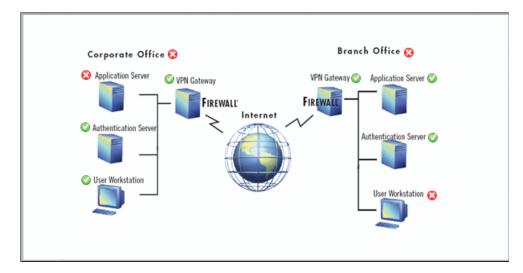
Reference

➤ Custom Map User Interface on page 230

🔵 Custom Maps

The Custom Map feature enables you to associate a view's CIs represented by real-time status indicators with a custom image that describes the real world that your view represents. The graphical representation of a view used by your organization can be a logical network diagram, business logic, or any other graphics. For details on the custom maps user interface, see "Custom Map Page" on page 230.

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

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

You can create a custom map by adding CI icons from the view and associating them with elements of the custom image. The status indicator shows the worst status (worst of all KPIs) for that CI.

When you place the cursor over the status indicator, a tooltip shows the name of the associated CI, and KPI details. For details, see "Custom Map Page" on page 230.

When you click a status indicator, the corresponding CI in the View Explorer is highlighted. If necessary, the View Explorer automatically expands to show the selected CI.

When your site does not have an Internet connection, you can upload an image or the URL of an image to be used as the background image.

Note:

➤ The tab displays the image centered in the image pane. If the image is larger than the image pane, use the scroll bars.

➤ When a CI is removed from the IT universe model, the corresponding CI icon (in Dashboard Administration) and the corresponding status indicators (in Dashboard) are automatically removed from the relevant custom maps.

🐾 Display a View in a Custom Map

This section describes the processes to view real-time status indicators in a custom map, and gives examples.

This task includes the following steps:

➤ "Create a Custom Map for a View" on page 226

➤ "Add CIs to the Custom Map" on page 227

➤ "Display a View's Custom Map" on page 228

➤ "Access Additional Information" on page 229

1 Create a Custom Map for a View

You can create a custom map by selecting a view and attaching the URL of the custom image or the image itself to that view. For details, see "Custom Map Page" on page 230.
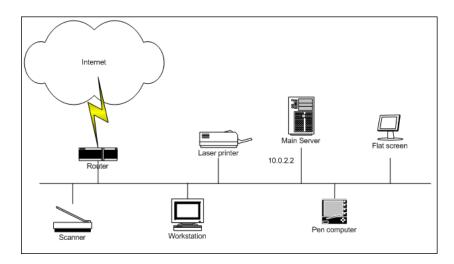
Any type of image supported by the browser can be loaded from any URL (including HTTP protocol and HTTP authentication) but then you must ensure that the URL is available at all times.

You can also upload a file system image if you want the image to be available at all times.

The ideal image to select depends on the customer's environment. The custom map feature does not resize the image, so it might look different in different resolutions. Additionally, you can view the Custom Map tab with or without View Explorer which influences the size of the image you want to display.

Example

You want to use a picture of your network to display the status of each element in the network:
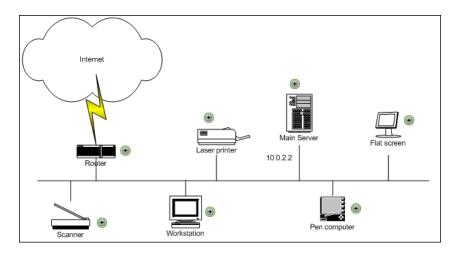
2 **Add CIs to the Custom Map**

You can add CI icons to the image, to create an association between the image and the view. Select the CI in View Explorer, and click **Add CI Icon.** The CI icon is displayed in the left top corner of the diagram with a blue outline. Drag the CI to the required location in the diagram. The CI icon is set at that position.

For details, see "Custom Map Page" on page 230.

Example

You add the appropriate CI to the custom map:
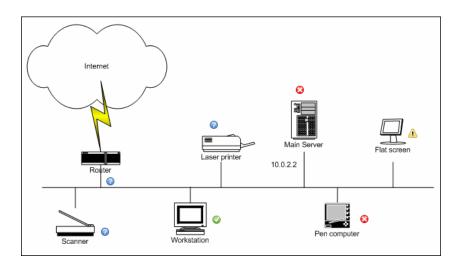
3 Display a View's Custom Map

After you complete the custom map, display it in Dashboard to view the CI's status in the appropriate location in the diagram.
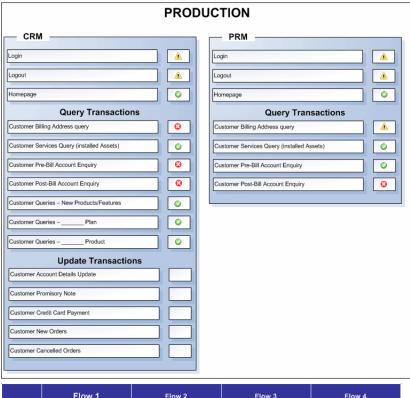
Example – Add CIs to Custom Map

The custom map displayed for the user is as follows:

Example – Examples of Custom Maps

Other examples of custom maps can be:

4 Access Additional Information

Use the context menu options to access more information. For details, see "Menu Options" on page 75.

🔖 Custom Map User Interface

This section describes:

➤ Custom Map Page on page 230

🔖 Custom Map Page

Description	Enables you to create or display a map for the selected view including the view's CIs represented by real-time status indicators and a background custom image.
	To Access:
	➤ Select **Admin** > **Dashboard**, and click the **Custom Map** tab.
	➤ Select **Applications** > **Dashboard**, and click the **Custom Map** tab.
Important Information	➤ You can use, as an image, any diagram or picture, provided that the format is supported by the browser. Recommended formats: GIF, JPG, or PNG.
	➤ Do not overlap CI icons. When icons do overlap, only the top status indicator is visible in the custom map.
	➤ After setting a CI icon on the diagram, you can move the cursor over it to display the CI name in a tooltip.
	➤ You can save the image you want to use as the background to the custom map to HP Business Availability Center or you can use a URL to access an external image.
	➤ You can add this report as a portlet in My BSM. For details, see "Add Portlets to <page_name>/Add Portlets Dialog Box" in *Using My BSM*.
Included in Tasks	"Display a View in a Custom Map" on page 225

Useful Links	"Custom Maps" on page 224
	For details on the functionality of View Explorer, see "Working with View Explorer" in *Model Management*.

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
⊕	This icon appears only in Dashboard Administration. Marks the location of the status indicator for the CI.
↻	Use the **Refresh** button at any time to reload the diagram (for example, if changes have been made to the source file). Reloading the diagram does not affect the position of the indicators.
<**Current image information**>	A string with the image information is displayed above the image. The string starts with Linked URL <URL> or Saved Image.
<**Status indicator**>	Status indicator icons appears only in Dashboard Application. The status indicator indicates the worst status (worst of all KPIs) of the CI. For details on the statuses, see "KPI Status" on page 355.

GUI Element (A-Z)	Description
<Tooltip>	Move the cursor above the status icon of the CI to display additional information about each KPI attached to the CI in a separate section. The tooltip associated with a CI status indicator displays information about each KPI attached to the CI in a separate section. The color of each section represents the color of the corresponding KPI's status. For details on the colors, see "KPI Status" on page 355.

	The tooltip can display any of the following information, depending on the KPI:
	➤ the header of each section displays **Details** followed by the name of the KPI
	➤ **CI name.** The name of the CI.
	➤ **Status.** The status of the KPI.
	➤ **Held status since.** The date and time when the status changed to the current status.
	➤ **Historical worst.** The tooltip of the historical status of the CI. For details, see "Trend and History" on page 362.
Add CI Icon	This button appears only in Dashboard Administration.
	Click the **Add CI Icon** button to add the selected icon. The CI icon is displayed in the left top corner of the diagram with a blue outline ⊕. Drag the CI to the required location in the diagram. The CI icon is set at that position.

GUI Element (A-Z)	Description
Browse	This button appears only in Dashboard Administration.
	Click the **Browse** button to browse the local file system and select the image you want to use as a background for the custom map.
Clear CI Icons	This button appears only in Dashboard Administration.
	Click the **Clear CI Icons** button to clear all the CI icons. A confirmation message is issued: **You are about to clear all nodes from the view. Are you sure?**
Delete Image	This button appears only in Dashboard Administration.
	Click the **Delete** button to delete the image and all the CI icons from the custom map associated with the current view.
Image URL	This field appears only in Dashboard Administration.
	The URL of the image must use the format: **<protocol>://<hostname>/<path_to_image>**
	The protocol can be HTTP or HTTPS.
	To use a local machine as the location of the image, enter the URL with the following format: **file:///<path_to_image>**
	This results in an image that cannot be displayed for a user working outside the local network.
	You can also use a file-sharing path as follows: **\\server\<path_to_image>**
	When you enter a URL, the **Save** and **Link to URL** buttons are enabled.

GUI Element (A-Z)	Description
Link to URL	This button appears only in Dashboard Administration.
	The button is enabled only when the file in the **Image URL** box is not a file system image (shared or URL).
	Click the **Link to URL** button to save the URL of the image.
	Note:
	➤ Only one URL or one image is saved per view.
	➤ If you enter a URL in the Image URL box and click the **Link to URL** button, the URL is saved.
Remove CI Icon	This button appears only in Dashboard Administration.
	Click the **Remove CI Icon** button to remove the CI icons in the custom map.
Revert	This button appears only in Dashboard Administration.
	Click the **Revert** button to revert to the last saved configuration before you save the changes.
Save	This button appears only in Dashboard Administration.
	Click the **Save** button to save the image.
	Note:
	➤ Only one URL or one image is saved per view.
	➤ If you enter a URL in the Image URL box and click the **Save** button, the image itself is saved like a regular image.

Part II

Flow Maps

9

Introducing Flow Map

This chapter describes the Dashboard Flow Map page. The Flow Map page can display flow information for Business Process Insight CIs or transaction topology information for TransactionVision CIs. It can also display other flow maps.

This chapter includes:

Concepts

➤ Flow Map Overview on page 237

➤ Mapping of Other CI Types on page 238

Tasks

➤ Display a Flow Map on page 239

➤ Modify the Flow Map Mapping on page 240

Reference

➤ Flow Map User Interface on page 242

🔷 Flow Map Overview

The Flow Map tab displays a flow map for specific CIs related to Business Process Insight or to TransactionVision.

In the Business Processes view, the flow map displays pre-configured flow map information about specific CIs, according to the level of the CI in the topology (monitor or group CI). For details, see "Business Process Insight Flow Map Overview" on page 245.

In the Business Transactions views, the flow map displays pre-configured transaction topology information about specific CIs, according to the level of the CI in the topology (monitor or group CI). For details, see "Transaction Topology Flow Map Overview" in *Using TransactionVision*.

For the relevant CIs, the Flow Map tab displays the URL of other flow map resources.

For details on the Flow Map user interface, see "Flow Map Page" on page 243.

🍄 Mapping of Other CI Types

The mapping of CIs and their flow map resources is defined in the repository-like **def.xml** file.

You can add other Business Process Insight CIs to the **def.xml** file and map them to Business Process Insight flow maps.

You can also add CIs that are not related to Business Process Insight or TransactionVision to the **def.xml** file and map them to the URLs of other flow map resources.

If you are an advanced user, you can make the following changes in the **def.xml** file:

➤ Add a customized mapping of other CI Types to the URLs of other flow map resources.

➤ Specify the context menus, context menu items, tooltips, and refresh rates that are used in Flow Map.

➤ Modify the default out-of-the-box mapping between the CI Type and the relevant flow map diagram resources using a pre-processor class and a set of parameters for the class instance for Business Process Insight--related CIs.

For details about the **def.xml** file, see "Modify the Flow Map Mapping" on page 240.

⚒ Display a Flow Map

You can display, in the Flow Map tab, the flow map for CIs that have been assigned flow map resources.

This task includes the following steps:

1 View/Edit the def.xml file – Optional

You can add Business Process Insight-related CIs to the out-of-the-box **def.xml** file by mapping CIs to the appropriate flow map resources.

You can also add other CI types to the mapping definitions in the **def.xml** file and associate them to other flow map resources.

To review or edit the mapping definitions, access the **def.xml** file in the **<HP Business Availability Center home directory>\HPBAC\AppServer\webapps\site.war\bam\conf\repositories\ flowmapMapping** directory.

For details, see "Modify the Flow Map Mapping" on page 240.

2 Reset the Repositories

If you have added new CI Types or if you have edited existing CI Types in the **def.xml** file you must save the changes as follows:

a In the browser, enter, using JMX login credentials:
  http://<HP Business Availability Center server name> :8080/jmx-console/

b Double-click **service=repositories_manager** listed under **Topaz**.

c In the JMX MBean View for repositories-manager that opens, click the **Invoke** button corresponding to the **cleanDefaultRepositories()** parameter.

d Restart HP Business Availability Center.

3 Display the Relevant CI's Flow Map

To display a CI's flow map:

a Select **Applications** > **Dashboard** > **Console**.

b Select the appropriate view.

c Select the relevant CI (when the CI is associated with a flow map resource, the Flow Map tab is enabled).

d Click the **Flow Map** tab to display the appropriate Flow Map page corresponding to the selected CI.

For details, see "Flow Map Page" on page 243.

⚒ Modify the Flow Map Mapping

You can view, edit, or modify the mapping specification used by the flow map.

To modify the flow map mapping:

1 Access the **def.xml** file located in the **<HP Business Availability Center home directory>\HPBAC\AppServer\webapps\site.war\bam\conf\repositories\ flowmapMapping** directory.

The **def.xml** file defines the links between the CI types and the relevant flow map diagram resources. A link is expressed as a pre-processor class and a set of parameters for the class instance. The pre-processor class is used to specify the URL of the flow map diagram resource.

2 In the **def.xml** file, create new links or edit existing links between a CI Type and the URL of the corresponding flow map resource using the following format:

```
<FlowMapCIMapping id="ci type" enableAutoRefresh="dashboard auto refresh state">
  <PreProcessing __class="pre-processor class">
      <params>
          <param key="URL" value="flowmap url"/>
          <param key="generalParam" value="constant value"/>
          <param key="queryParam" value="dyna parm" convert_to_key="parm name in query"/>
      </params>
 </PreProcessing>
</FlowMapCIMapping>
```

Use the following parameters to define the links:

➤ **ci type** is the name of the CI Type. To find the internal name of a CIT, select **Admin** > **Universal CMDB** > **Modeling** > **CI Type Manager**, select the appropriate CIT in View Explorer and click the **Details** tab, and view the name of the CIT in the **Name** box.

➤ **dashboard auto refresh state** represents the auto-refresh feature of the mapping mechanism. If it is set to:

➤ **true**. The mapping mechanism uses Dashboard auto-refresh. For details, see "Customize Dashboard Display and Refresh Rate" on page 69.

➤ **false.** The Flow Map refresh is done by the hosted application.

➤ **pre-processor class** is the name of the class used for the URL pre-processing mechanism. The DashboardURLPreprocessor and DashboardMultiSelectURLPreprocessor classes are used by default. You can also use a customized pre-processor class or use the Generic pre-processor class as a template for the customized pre-processor class. For details, see "Dashboard Generic URL" on page 785.

➤ **flowmap url** is the URL of the flow map that opens in the Flow Map tab.

➤ **constant value** represent a constant value used in the URL.

➤ **dyna parm** is the name of the CI attribute that you want to convert into the dynamic parameter for the URL that is specified in **param name in query**.

> ➤ **param name in query** is the name of the dynamic parameter in the URL that corresponds to the CI attribute specified in **dyna parm**. In the resulting URL, the value received from parsing the dynamic parameter is named after this parameter: <resulting url>?<param name in query>=<dynamic parameter value>

3 Save the **def.xml** file and perform the rest of the steps in "Display a Flow Map" on page 239.

🔍 **Flow Map User Interface**

This section describes:

➤ Flow Map Page on page 243

🔍 Flow Map Page

Description	Displays the flow map for the selected CI.
	Depending on the selected CI you can display a flow map for:
	➤ Business Process Insight CIs in the Business Processes view. For details, see "Flow Map Page" on page 255.
	➤ TransactionVision CIs in the Business Transactions view. For details, see "Transaction Topology Flow Map User Interface" in *Using TransactionVision.*
	➤ Other CIs. For CIs that have been associated with flow map resources, select the relevant view in View Explorer, click **Applications > Dashboard > Console,** select the relevant CI (when the CI is associated with a flow map resource, the Flow Map tab is enabled), and click the **Flow Map** tab to display the appropriate Flow Map page corresponding to the selected CI.
Important Information	The context menu options and tooltips available in Flow Map are configured in Business Process Insight or in TransactionVision.
	For customized CIs, the Flow Map framework supplies javascript calls for displaying Dashboard tooltips and context menus in the user configured pages. If you want to use the javascripts, contact HP Software Support.

10

Business Process Insight Flow Map

This chapter includes the main concepts, tasks, and reference information for the Business Process Insight Flow Map.

This chapter includes:

Concepts

➤ Business Process Insight Flow Map Overview on page 245

➤ Business Process Insight Licensing Options on page 249

Tasks

➤ View Data in the Flow Map on page 250

Reference

➤ Business Process Insight Flow Map User Interface on page 254

Troubleshooting and Limitations on page 261

Business Process Insight Flow Map Overview

The Business Process Insight Flow Map gives you a visual overview of the overall status of the health of your Business Process.

Specifically, the Flow Map provides you with visibility into the health of the Business Processes that are running over your IT infrastructure. Using this information, you can assess the business impact of delays or blockages in a Business Process due to an IT performance problem or other incident such as an IT outage.

Note: Flow Map is referred to as a Process Diagram throughout the Business Process Insight Server documentation.

You create a Business Process using the Business Process Insight Modeler and you link individual Steps in the Business Process to CIs, which represent information held for your business and its IT infrastructure.

A Business Process is a high-level model that represents a key business activity within your business or organization, for example, an order processing process, or an insurance claim process. Using the Business Process Insight Modeler, you can model your Business Process,or Processes, and link information held for your business and its IT infrastructure, in the form of CIs, to Steps in the process.

Business Process Insight then checks for changes in the state of the IT infrastructure CIs and presents the change in status as a process diagram located on the Flow Map. As a result, if there is an IT operational resource failure, and a Step in your Business Process relies in this resource, the process diagram provides a visualization of the impact of the IT failure on your Business Process and thus the impact of this failure to your business activity.

For information about how to construct a Business Process using the Modeler, see the *Business Process Insight Integration Training Guide - Modeling Processes* guide. There is also information available within the Modeler from the Modeler **Help** menu option.

This section includes the following topics:
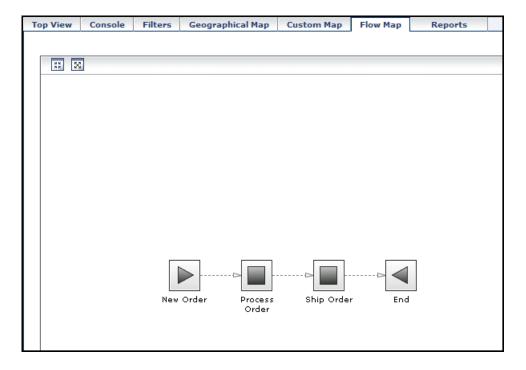
➤ "Business Process Insight Server" on page 247

➤ "Structure of a Business Process Insight Business Process" on page 248

Business Process Insight Server
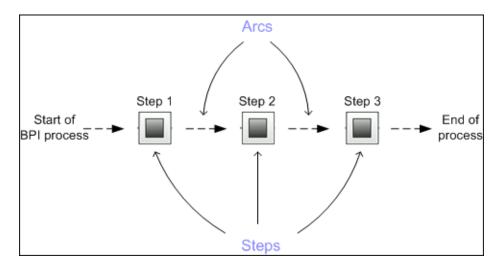
If you have installed the Business Process Insight Server, you are able to model Business Processes and also individual instances of Business Processes (an instance might be a specific customer order with a unique customer identifier). As a result, there is additional information available on the process diagram. This is information that provides data relating to the individual instances of the Business Process; for example, the current value of all orders at a particular Step in the process, or how many orders are currently being processed at a particular Step. The Business Process Insight Server might be maintaining many processes instances, for many customers, at any particular time.

Installing the Business Process Insight Server provides additional features that enable you to visualize and track the state and business health of Business Processes within your organization; this is in addition to monitoring the IT infrastructure. For more information, see the *Reference Information for Business Process Insight* guide.

Structure of a Business Process Insight Business Process

Within Business Process Insight, a Business Process is presented as a series of Steps, and connectors that are called Arcs. The Steps represent the business activities and the arcs connect the Steps to show the expected direction of flow within the Business Process; this is shown in the following diagram.

Business Processes and Business Process Steps are represented as CIs within the UCMDB as follows:

CI Type	Description
Business Process	Stores the Process Name and Process Description as entered using the Business Process Insight Modeler.
	A Business Process CI is created for each Business Process.
	Business Process CIs are logical CIs.
BPI Business Process Step	Stores the Step Name and Description as entered using the Business Process Insight Modeler.
	A BPI Business Process Step CI is created for each Step in a Business Process.
	BPI Business Process Step CIs are logical CIs.

There are no CI types for arcs.

When you install the Business Process Insight Server, additional CI types are defined for Business Process Insight, these additional types are listed in "Enhancing BAC with Process Instance Monitors" in *Using Business Process Insight*.

Business Process Insight Licensing Options

The detail presented on the Flow Map varies according to whether or not you have purchased a suitable license for the Business Process Insight application:

➤ You do not have a license for the Business Process Insight application.

In this case, you can model Business Processes, map process Steps to IT operational resource CIs and monitor the impacts of the IT operational resources using the Flow Map. A Business Process might be the definition of an order processing procedures where individual steps in the procedure rely on IT systems within your organization, for example, an order processing database, or a customer database.

➤ You do have a license for the Business Process Insight application and have installed the Business Process Insight Server.

In this case, additional information is presented on the Flow Map; this information enables you to monitor business and operational data related to individual process instances. As an example, you can monitor and track the progress of an individual customer order and view the business data associated with this particular order. This business data might be the value of the order, or the number of customer orders currently being processed at a particular Step in the process.

For more information about the capabilities of the Business Process Insight Server, see the *Reference Information for Business Process Insight* guide.

🔖 View Data in the Flow Map

This task describes how to create a Business Process CI using the Business Process Insight Modeler, and then view the Flow Map for the CI.

This task includes the following steps:

➤ "Prerequisites" on page 250

➤ "Viewing the Health of Your Business Process" on page 251

1 Prerequisites
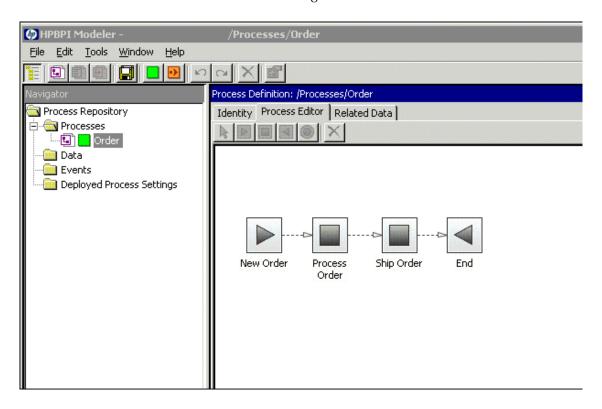
In order to view a Business Process within the Flow Map, you must first create and deploy a Business Process using the Business Process Insight Modeler. To access the Business Process Insight Modeler, select **Admin > Business Process Insight > Modeling,** click the icon for the Modeler on the page, or the Modeler label, and wait for the Modeler to launch as a Java Web Start application.

You might be asked to confirm that you want to download the files to open the Modeler within your Web page. If required, confirm that you want the download to proceed.

For more information about using the Business Process Insight Modeler, refer to the following guides: *HP Business Process Insight Modeler* and *Integration Training Guide - Modeling Processes*.

Example

The following is an example of a Business Process called Order created within the Business Process Insight Modeler.

2 Viewing the Health of Your Business Process

To view the health of your Business Process, relative to the IT operational resource CIs that you have linked to the process Steps:

a Select **Applications** > **Dashboard**

b Select the Business Process View

c Select the specific Business Process CI that you want to view

d Click the **Flow Map** tab
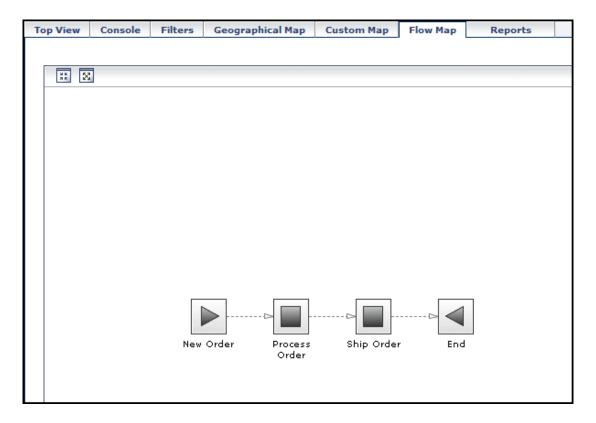
The amount of detail shown on the Flow Map depends on whether you:

➤ have the Business Process Insight Server installed and configured.

➤ are viewing a Business Process that has been created to enable you to monitor the status of business events, in addition to the status of the IT infrastructure.

If this is a standard HP Business Availability Center installation and you have not installed a Business Process Insight Server, the Flow Map shows details of the Business Process and its dependencies on the IT infrastructure CIs that you have configured.

Example

The following is an example of the Order process as viewed within the Flow Map for a HP Business Availability Center installation where there is no Business Process Insight Server installed and configured.

If you have installed a the Business Process Insight Server and deployed a Business Process to additionally enable you to monitor individual instances of Business Processes, the Flow Map shows additional information. This information shows additional information that relates to the business health of your process.
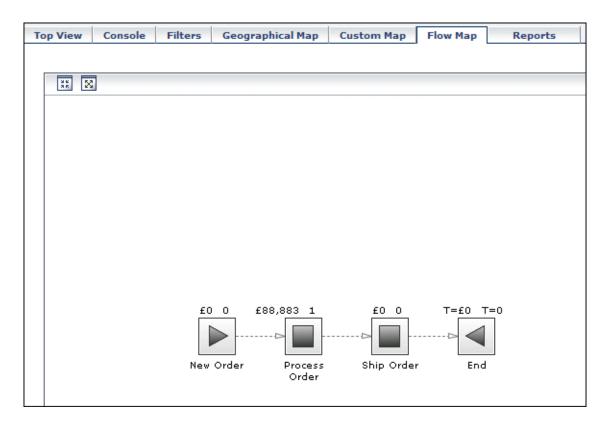
Refer to *HP Business Process Insight Modeler* and *Integration Training Guide - Modeling Processes* for more information on modeling Business Processes to show the business health of the process.

Example

The following is an example of the Order process as viewed within the Flow Map when you have the Business Process Insight Server installed and have configured the system to monitor and track individual instances of the Order process.

The diagram shows the value of orders at each Step in the process, plus the number of instances that are currently being processed at a particular Step, This is in addition to the IT infrastructure information, which is always available.
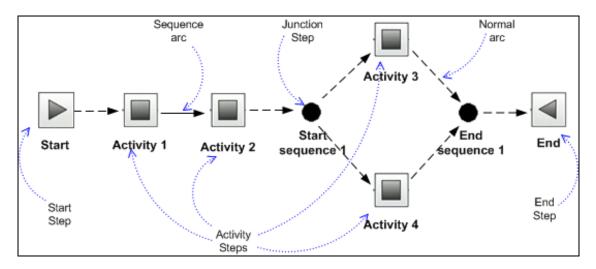
Top View	Console	Filters	Geographical Map	Custom Map	Flow Map	Reports

£0 0   £88,883 1   £0 0   T=£0 T=0

New Order   Process   Ship Order   End
                Order

📌 Business Process Insight Flow Map User Interface

This section describes:

➤ Flow Map Page on page 255

🔍 Flow Map Page

The following diagram shows the structure of a Flow Map.

Description	Shows the components and structure of a Business Process diagram and the health status of the Business Process selected from the Business Process View.
	To access:
	1 Select **Applications** > **Dashboard**
	2 Select the **Business Processes** view from the View Explorer
	3 Select the Business Process CI type or a Business Process Step CI type in the view explorer to view in the Flow Map
	4 Click the **Flow Map** tab.
	Enables you to visualize the Business Process and includes Step annotations, which show information such as how many process instances are active at a particular Step.
	When displayed in the Flow Map, the Business Process has the same layout and structure as that when it was created using the Business Process Insight Modeler.
Important Information	If a Step CI type is selected in the View, the Step is highlighted when the Flow Map is displayed.
	For more information on the Business Process Insight CI types refer to "Enhancing BAC with Process Instance Monitors" in *Using Business Process Insight*.
Included in Tasks	"View Data in the Flow Map" on page 250.

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
	This and the icon that follows enable you to toggle between a fit-to-pane view and a normal view.
	Click this icon to stretch or shrink the Flow Map such that it fits within the available space.
	This and the icon above enables you to toggle between a fit-to-pane view and a normal view.
	Click this icon to revert the Flow Map to the size it was when defined within the Modeler
<Business process icons>	The following icons are shown on the Flow Map. These icons are the same as those used when creating the Business Process using the Business Process Insight Modeler:
	This icon is the Step that represents the normal starting point for a process.
	This icon is the Step that represents an activity within your Business Process, for example, a check for account details.
	This icon is the Step that represents the normal end point for a process.
	This icon represents a junction point within your Business Process and is a visual Step and is used to help define the structure of the Business Process. It shows the start and end point of a structural element in the process.
	Note: A visual representation of the health of the Business Process with respect the IT operational resources on which it depends. The health of each Step is shown as an icon overlay.
	Tooltip: Hold the cursor over the Step to show any business KPIs defined for the selected Step. If there are no KPIs defined there is no tooltip shown.

GUI Element (A-Z)	Description
<Normal arc>	Process Steps are linked using Arcs, which are dotted lines that join Steps. The Arc shows the direction of the flow in the Business Process; they do not imply any sequence or processing order, but they do imply an expected order. Arcs are not enforced; however, they are used when determining the status of the process.
	If you want to know when the Steps in your process are executed in an unexpected order, use a Sequence Arc.
<Sequence arc>	A Sequence Arc is a solid line and is a notification that the Steps, which are connected by the arc, are expected to be executed in the order implied by the direction of the arc. The connect order is determined by the direction of the arc between the Steps. If the Steps are executed in a different order, an Out of Sequence event is generated by the Business Process Insight Server.
<Step name>	This is the text below the Step icon. This is the name of the BPI Business Process Step CI as entered in the Business Process Insight Modeler when the process was created; for example: Process Order.

GUI Element (A-Z)	Description
<Step overlay>	The Step overlays provide additional information on the Flow Map. This information shows the health of the of the selected Business Process with respect to the IT operational resources on which the process depends.
	This is the health of the Business Process in terms of the IT infrastructure of the underlying systems to which the individual Business Process Steps are linked:
	A system health status of **OK**. All the system KPIs fell within their configured settings.
	A system health status of **Warning**. The worst status of any system KPI, for a dependent CI, was reported as a warning (using the worst-child rule).
	A system health status of **Minor**. The worst status of any system KPI, for a dependent CI, was reported as minor (using the worst-child rule).
	A system health status of **Major**. The worst status of any system KPI, for a dependent CI, was reported as major (using the worst-child rule).
	A system health status of **Critical**. The worst status of any system KPI, for a dependent CI, was reported as critical (using the worst-child rule).
	The system health status is **No Data**. This means there is insufficient data to make a decision on the system health status.

GUI Element (A-Z)	Description
\<Text in upper left-hand corner of Step icon\>	This is a value for the Value property at the Step.
	In the case of an Activity Step, this is the total for the Value property of the Business Process for all the instances that are currently active at that Step.
	In the case of an End Step, this represents the total for the Value property for all the instances of the Business Process that have completed at that Step.
	If the locale for the system is set, a currency symbol appears with the text for values that are currencies.
	Customization: You can customize this text as described in "Annotations for Process Diagrams" in *Using Business Process Insight*.
	Note: This element appears only if you have installed the Business Process Insight Server and have configured the system to monitor and track individual instances of the selected Business Process.
\<Text in upper right-hand corner of Step icon\>	This is the count of the number of instances that are currently active at the Step. The End Step shows the total of the completed instances for the business; this is the total of all instances since the process was deployed in the Modeler or the counts were reset.
	If the locale for the system is set correctly, the count is displayed in a locale-sensitive format.
	Customization: You can customize this text as described in Using Business Process Insight.
	Note: This element appears only if you have installed the Business Process Insight Server and have configured the system to monitor and track individual instances of the selected Business Process.

🔍 Troubleshooting and Limitations

This section includes troubleshooting and limitations for the Business Process Flow Map within Dashboard.

Status of Business Process Steps Always Unknown

In order to see the impact of the health of the underlying IT operational resources on your Business Process, you must link the Steps in the process to the CIs that represent the IT infrastructure; these CIs also need to have objectives configured for their KPIs. You link the process Steps to the IT infrastructure CIs using the Business Process Insight Modeler; for details, see the *Business Process Insight Integration Training Guide - Modeling Processes* guide.

Part III

Reports

11

Dashboard Reports

This chapter describes the Dashboard reports.

This chapter includes:

Concepts

➤ Dashboard Reports Overview on page 265

Tasks

➤ View KPIs Over Time Information on page 267

Reference

➤ Reports User Interface on page 269

Troubleshooting and Limitations on page 298

Dashboard Reports Overview

Dashboard reports enable you to view and analyze performance data collected by HP Business Availability Center data collectors and stored in the HP Business Availability Center database.

The Dashboard reports are:

➤ **KPIs Summary.** Displays a summary of KPI status distribution over time for each selected KPI. For details, see "KPIs Summary Report" on page 291.

➤ **KPIs Trend.** Displays the trend for changes in KPI status over time, for selected statuses. For details, see "KPIs Trend Report" on page 294.

➤ **KPIs Distribution Over Time.** Displays KPI status distribution over time for selected statuses. For details, see "KPIs Distribution Over Time Report" on page 273.

➤ **KPIs Over Time.** Displays the status or value, over time, of selected CIs and KPIs that are accessible from the Dashboard application. For details, see "KPIs Over Time Report" on page 277.

You can print the generated report, send the report by email, open the report in different formats, publish the report in different formats, or save the report to the report repository. For details, see "Working in Reports - Overview" in *Reports*.

Note:

➤ Data is displayed in a report starting from the point that data was collected for the selected CIs. For example, if you set the report to show data every week for the past month, but data was collected only for the past two weeks, the report shows data starting from two weeks ago to the present date.

➤ The KPI Summary, KPI Trend, and KPI Distribution Over Time reports are generated only for CIs of type **Application**, **Business Process**, **Business Service**, and **Line of Business**; in addition, the CIs must be flagged to save KPI data over time (historical data). For details, see "Persistent Data and Historical Data" on page 366. (Contact HP Software Support if you need to change the supported CITs.)

➤ HP Business Availability Center records in a reports log errors that occur when generating reports. The reports log can also include the following activities: creating a new report, generating a report, modifying the report filters, drilling down in reports, and so on. For details on the reports log, see "Reports Log" in *Reports*.

➤ HP Business Availability Center enables you to generate Dashboard reports automatically, and to specify a header and a footer for those reports. For details, see "Customizing Reports" in *Reports*.

🐾 View KPIs Over Time Information

The steps below describe the process used to set up to view KPIs over time information in Dashboard.

This task includes the following steps:

➤ "Save KPI Status Information for the KPIs Over Time Reports" on page 267

➤ "Access KPIs Over Time Reports" on page 267

➤ "Drill Down to HP Diagnostics" on page 268

➤ "Access KPIs Distribution Over Time Report" on page 268

➤ "Access the KPIs Summary Report" on page 268

➤ "Access the KPIs Trend Report" on page 268

1 Save KPI Status Information for the KPIs Over Time Reports

Persistent data is used to produce KPIs Over Time reports with status information, as described in "KPIs Over Time Report" on page 277. Set the **Save KPI data over time for this CI** option to save the calculated measurement for each of the CI KPIs, at 15 minute intervals (default value). This is done by activating the **saveValuesToPersistency** global attribute in the Business Rule Repository. For details, see "Persistent Data and Historical Data" on page 366.

This option is selected, by default, for Business Services, Applications, Business Processes and others. This option is not available for Monitor type CIs.

2 Access KPIs Over Time Reports

You can access the KPIs Over Time reports from different locations in HP Business Availability Center.

To access KPIs Over Time report, see "KPIs Over Time Report" on page 277.

Note: The context menu includes the **KPIs Over Time Report** option for all CIs except for monitors. The report displays data only for CIs whose KPIs are persistent. For details, see "Persistent Data and Historical Data" on page 366.

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3 **Drill Down to HP Diagnostics**

If HP Diagnostics integrates with HP Business Availability Center, you can drill down to HP Diagnostics views from the KPIs Over Time report for Business Process Step CIs in the End User Monitors views, and for the Diagnostics Probe Group, and Diagnostics Probe CIs in the Diagnostics View. For details, see "KPIs Over Time Report" on page 277.

4 **Access KPIs Distribution Over Time Report**

KPIs Distribution Over Time report enables you to analyze KPI trend by viewing KPI status distribution over time for selected statuses. For details, see "KPIs Distribution Over Time Report" on page 273.

5 **Access the KPIs Summary Report**

KPIs Summary report enables you to view a summary of KPI status distribution over time for each selected KPI. For details, see "KPIs Summary Report" on page 291.

6 **Access the KPIs Trend Report**

KPIs Trend report enables you to analyze the trend for changes in KPI status over time, for selected statuses. For details, see "KPIs Trend Report" on page 294.

🔍 Reports User Interface

This section describes:

❀ Configuration Items Dialog Box

Description	Enables you to select the CIs to be included in a Dashboard report, for the duration of a Web session. The report provides information based on the selected CIs. **To access:** In a Dashboard report, click **Configuration Items** in the reports settings area.

Important Information	➤ When selecting CIs for the KPI Summary, KPI Trend, and KPI Distribution Over Time reports, only CIs that meet the following criteria are available for selection in the Configuration Items dialog box:
	   ➤ The CIs with attached KPIs.
	   ➤ The CIs that are flagged to save KPI data over time (historical data). For details, see "Persistent Data and Historical Data" on page 366.
	   ➤ The CI types that are defined for inclusion in these reports; by default, **Application**, **Business Process**, **Business Service**, and **Line of Business** CITs are defined for inclusion. (Contact HP Software Support if you need to change the supported CITs.)
	➤ When selecting CIs for the KPIs Over Time report, only non-monitor (leaf) CIs are available for selection.
	➤ Only CIs are flagged to save KPI data over time (historical data) appear in the KPIs Over Time report. For details, see "Persistent Data and Historical Data" on page 366.

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
<**View tree**>	Displays the CIs in the selected view. Select the check boxes for the required CIs.
Browse	The default mode for the Configuration Items dialog box, enabling you to select a view and CIs.
Search	Click the **Search** link to move to Search mode, where you can search for CIs. For details, see "Working with View Explorer" in *Model Management*.
View	Select the relevant view from the dropdown list (start typing in the view name to filter the list), or click the ellipse button to open the Select View dialog box, where you can select a view from the view folders tree.
	Note: Only the CIs selected in the currently displayed view are saved for the report filter when you click **OK**. If you select another view before clicking **OK**, all previous CI selections are discarded.

🔍 KPIs Dialog Box

| Description | Enables you to select the KPIs to be included in a Dashboard report, for the duration of a Web session. The report provides information based on the selected KPIs.

To access: In a Dashboard report, click **KPIs** in the reports settings area. |
|---|---|
| Important Information | You must define at least one CI for the report before you can select KPIs. After selecting CIs, the **Application** KPI is in some cases selected automatically (if it is attached to the selected CIs). |

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
KPIs	Lists the KPIs that are attached to the selected CIs. Availability and Performance are listed first, then all other KPIs in alphabetical order.

Select the check boxes for the required KPIs. |

🔍 KPIs Distribution Over Time Report

The following is an example of the KPI Distribution Over Time report.

Description	Displays KPI status distribution over time for selected statuses.
	To access:
	➤ Select **Applications** > **Dashboard** > **Reports** tab > **KPIs Distribution Over Time**.
	➤ Access the KPIs Distribution Over Time portlet in My BSM.
Important Information	➤ This report is produced only for certain CIs with historical KPI data. For details, see "Configuration Items Dialog Box" on page 270.
	➤ You can add this report as a portlet in My BSM. For details, see "Add Portlets to <page_name>/Add Portlets Dialog Box" in *Using My BSM*.
Useful Links	"Configuration Items Dialog Box" on page 270

Report Settings

GUI Element (A-Z)	Description
<Common report elements>	See "Common Report Elements" in *Reports*.
Configuration Items	Displays the name of the selected CI for the report, and if more than one CI is selected, indicates the number of CIs that the report is based on. For example, **Filtered (4)** means that four CIs are selected for inclusion in the report.
	Click the **Configuration Items** link to open the Configuration Items dialog box where you can select CIs.

GUI Element (A-Z)	Description
KPIs	Indicates the number of KPIs that are included in the report, and the total number of KPIs that are attached to the selected CIs separated by a slash; for example, **Filtered (1/3)**. **All** is displayed when all available KPIs are selected. Click the **KPIs** link to open the KPIs dialog box where you can select KPIs. **Default value:** If the **Application** KPI is attached to any of the selected CIs, then this KPI is selected automatically.
Statuses	Indicates the number of statuses that are included in the report and the 7 possible statuses separated by a slash; for example, **Filtered (5/7)**. Click the **Statuses** link to open the Statuses dialog box where you can select statuses. **Default value:** All statuses that are defined as non-critical are selected, and **All Non-Critical Statuses** is displayed. For details, see "Statuses Dialog Box" on page 298.

Report Content

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
\<Bar chart>	Each KPI instance for each CI is displayed in a separate bar chart (as long as there is relevant data for the KPI on that CI). Each chart shows status distribution (in percentage) for the KPI over the selected time frame.
\<Bar>	Each bar in a chart represents a time interval, according to the granularity selected for the report. For example, if the selected granularity is every 1 week, then each bar represents a week during the overall time frame. The legend for the x-axis shows the time interval for each bar.
	Each bar is divided into colored status sections, according to the statuses selected for inclusion in the report, so that each section represents the percentage of time that the status was held by the KPI during that time interval.
	Tooltip: Hold the pointer over a bar section to display a tooltip containing the following information:
	➤ **Status.** The name of the status represented by the section.
	➤ **Status Duration.** Amount of time that the KPI held this status during the time interval. This can be given in hours, minutes, and seconds (for example, 01:10:48) or in days and hours (for example, 30 days, 9 hours).
	➤ **Status Percentage.** Percentage of the time interval that the KPI held this status.

🔍 KPIs Over Time Report

Description	Enables you to view the status or the value, over time, of selected KPIs and CIs, in table or graph format.
	For example, when you encounter a problem with a specific CI while viewing the Dashboard, and the Performance and Availability KPIs are attached to that CI, you can view the KPIs Over Time report of that CI's **Performance** and **Availability**. You can also receive a daily report showing all CIs statuses in the past day.
	To access:
	➤ Select **Applications** > **Dashboard** > **Reports** > **KPIs Over Time**. The report is also available from the context menu of CIs in Dashboard.
	➤ Access the KPIs Over Time portlet in My BSM.

Important Information	The report displays the status or value of each CI and each instance of the attached KPIs. For example, when you select one CI with the Availability and Performance KPIs, and another CI with the Availability KPI the report has only three rows.
	➤ You can:
	➤ Add this report as a portlet in My BSM. For details, see "Add Portlets to <page_name>/Add Portlets Dialog Box" in *Using My BSM*.
	➤ Add this report to a custom report. For details, see "Customizing Reports" in *Reports*.
	➤ Schedule when to run the report. For details, see "Report Schedule Manager Main Page" in *Platform Administration*.
	➤ If you select a future date in the **To** setting in the report settings, the report is not generated and an error message is issued.
	➤ The report is designed to provide information about the KPIs of higher level CIs; for example, Business Services, Application, Business Processes CIs, and so on, but not about the KPIs of monitor CIs. To obtain similar information about the KPIs of monitor CIs, see "Reports User Interface" in *Using End User Management*, "Alerts and Reports" in *Using System Availability Management*, or "Trend Reports" in *Reports*.
	➤ The context menu of all CIs except monitors CIs includes the **KPIs Over Time Report** option.
	➤ The report displays data only for CIs with persistent KPIs. For details, see "Persistent Data and Historical Data" on page 366.
	➤ There is no limit to the number of lines that can be displayed in the table. If displaying the table slows performance, it is recommended to limit the time period or the number of CIs and KPIs you want to display.
Included in Tasks	"View KPIs Over Time Information" on page 267

Report Settings

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
<Common report elements>	See "Common Report Elements" in *Reports*.
Configuration Items	Indicates the number of CIs that are included in the report. For example, **Filtered (4)** means that four CIs are selected for inclusion in the report.
	To select CIs, click the **Configuration Items** link. For details, see "Configuration Items Dialog Box" on page 270.
KPIs	Indicates the number of KPIs that are included in the report, and the total number of KPIs that are defined for the selected CIs separated by a slash, for example, **Filtered (1/3)**. **All** is displayed when all available KPIs are selected.
	To select KPIs, click the **KPIs** link. For details, see "KPIs Dialog Box" on page 272.
	Default value: When you select one or more CIs and the Performance and Availability KPIs are assigned to those CIs, the KPIs are automatically selected.

GUI Element (A-Z)	Description
Report type	Select: ➤ **Statuses.** To display the status information in the report. For details, see "KPIs Over Time Report with Status Data" on page 280. The KPIs Over Time report with status data displays only the status of the selected KPIs for the selected CIs. Those KPIs may also have values in the HP Universal CMDB but the report does not show the values. ➤ **Values.** To display the value information in the report. For details, see "KPIs Over Time Report with Value Data" on page 287. The KPIs Over Time report with values data displays only the value of the selected KPIs for the selected CIs. Those KPIs may also have statuses in the HP Universal CMDB but the report does not show the statuses.

KPIs Over Time Report with Status Data

The following is an example of the KPI Over Time report with status data.

Important Information	The report displays data only for CIs whose KPIs are persistent. For details, see "Persistent Data and Historical Data" on page 366.
	Ensure that the **Save historical data for this CI** option has been selected for the CI. For details, see "KPIs Page" on page 408.
	Note: The statuses are shown over time, starting with the event and ending with the next event.
	The report displays only the status of the relevant KPIs. Those KPIs may also have values in the HP Universal CMDB but the status report does not show those values.

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
	Click to display status information about the children that contribute to the status of the selected CI's KPI.
	Note: Drilling down to the level of the monitor CI is unavailable as there is no calculated status for those CIs and only raw data is available. To obtain similar information about the KPIs of monitor CIs, see "Real User Monitor Reports User Interface" in *Using End User Management*, "Alerts and Reports" in *Using System Availability Management*, or "Trend Reports" in *Reports*.
	Example: A view has the following hierarchy: the Cust_1_BPM_1 CI, with its tx_10, and tx_15 child CIs.
	The KPIs Over Time report displays information about the status of the Performance KPI for the Cust_1_BPM_1, tx_10, and tx_15 CIs.
	Click the **Drill to influencing children** button for the Cust_1_BPM_1 CI and the Performance KPI. The drilled down report displays the status of the Performance KPIs for all of the children of the Cust_1_BPM_1 CI that have a Performance KPI, as shown in the graph that follows.
	If the selected CI and KPI do not have influencing children, then the report displays the message: **No influencing children found**.

GUI Element (A-Z)	Description
	Click to display status information about the parents of the CI whose status is influenced by the status of the selected CI's KPI. A CI may have more than one parent but the parent CIs that are displayed in the report are the parent CIs that are part of the view. **Note:** You can drill up to influenced parents only when the CIs have persistent data. **Example:** A view has the following hierarchy: the tx_10 CI and its parent the Cust_1_BPM_1 CI. The KPIs Over Time report displays information about the Availability and Performance KPIs of the tx_10 CI. Drill up to influenced parents for the Availability KPI, the report displays the status of the Availability KPI for the Cust_1_BPM_1 CI (parent of tx_10 CI), as shown in the graph that follows. If the selected CI and KPI do not have influenced parents, then the report displays the message: **No influenced parents found**.
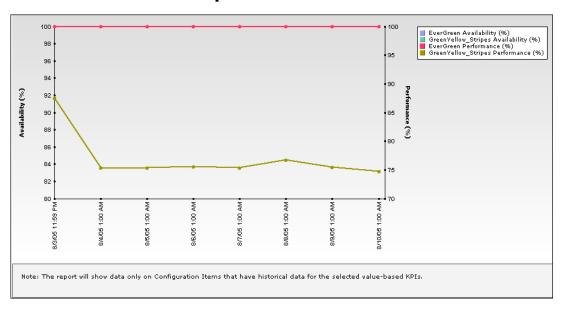
GUI Element (A-Z)	Description
<Drill down>	This capability is available only in graph format. Click any time segment in the graph time footer to drill down (zoom) on all of the CI and KPI information for that period of time. The time segment you zoom on is split into four equal parts that can also be zoomed until each time segment is one minute long. The **From** date and time of the segment you select becomes the **From** date and time of the whole time footer and the **To** date and time of the segment you select become the **To** date and time of the whole time footer. **Example:** If the time period you selected is from 7/13/05 8:51 AM till 7/13/05 4:44 PM, the time footer is split into four equal segments. If you drill down on the first segment of the time footer, the From date and time of that segment is 7/13/05 8:51 AM, and its To date and time is what is indicated under the second tick of the time footer: 7/13/05 11:29 AM. The drilled down report time **From** and **To** fields display those dates and times, and the time footer of the report displays this period of time split into four equal parts: (11:29-8:51)/4=39 mn. The first part starts at 8:51 AM, and ends at 8:51+:39=9:30, the second part starts at 9:30 and ends at 9:30+:39=10:09, and so on.

GUI Element (A-Z)	Description
<Drill down to Diagnostics>	If HP Diagnostics is enabled, you can drill down to HP Diagnostics views from the KPIs Over Time report.
	To access the drill down options, click the down arrow ▼ to the right of a Business Process Step CIs in the End User Monitors View, and of the Diagnostics Probe Group, and Diagnostics Probe CIs in the Diagnostics View and select one of the options. For information about the available options, see "Drill Down to HP Diagnostics" on page 289.
	By default, if HP Diagnostics is enabled, the Application KPI is automatically added to all relevant CIs in the CMDB. The relevant CIs are the logical CIs. For details, see the *HP Diagnostics User's Guide*.
	The context menu options that are available from the KPIs Over Time report are a subset of the Drill to Diagnostics options available in Dashboard. For details, see "Drill Down to HP Diagnostics" on page 289.

GUI Element (A-Z)	Description
<Tooltip>	Move the cursor above the graph to display more information about the KPI. The background of the tooltip reflects the color of the status calculated by the rule attached to the KPI and according to the KPI's objectives. The tooltip displays the name of the KPI in the tooltip title and the following information: ➤ **Configuration Item.** The name of the CI to which the current KPI is assigned. ➤ **Status.** The status of the KPI. ➤ **Start Time.** The time when an event occurred, starting the sampling period for that event. ➤ **End Time.** The time when a new event occurred, ending the sampling period of the previous event. ➤ **Duration.** The duration of the sampling period.
Configuration Item	The name of the selected configuration item.
Duration	**Note:** This field appears only when the report is in table format. The duration of the sampling period.
End Time	**Note:** This field appears only when the report is in table format. The time when a new event occurred, ending the sampling period of the previous event
KPI	The name of the KPI.
Start Time	**Note:** This field appears only when the report is in table format. The time when an event occurred, starting the sampling period for that event.

GUI Element (A-Z)	Description
Status	When the report is in table format, **Status** displays the status of each KPI of each CI, according to the selected granularity, during the selected time period.
	When the report is in graph format, **Status** displays the status of the KPI as a background color during the selected time period. A tooltip is available for each cell in the graph (see <Tooltip> for details).

KPIs Over Time Report with Value Data

Note: The report will show data only on Configuration Items that have historical data for the selected value-based KPIs.

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
<Graph>	Displays the value of the KPI assigned to a specific CI at the specified time (indicated by a colored line).
	When you select two KPIs and more than one CI, each pair of KPIs is displayed in a separate graph. The left y-axis displays the scale of the first KPI and the right y-axis displays the scale of the second KPI.
	When you select one KPI, the Y-axis displays the scale for the KPI, a line displays the value of the KPI over time, and faint colored horizontal lines show the KPI objectives (the colors correspond to the objective colors of the KPI).
	A legend lists the name of the CI, the name of the KPI and the color used to represent the KPI value.

GUI Element (A-Z)	Description
<Time period>	This field appears only in table format.
	Each column represents a time segment corresponding to the selected granularity of the selected time period. The table displays the value of the KPI in the time segment.
<Tooltip>	This field appears only in graph format.
	Move the mouse over any dot in the graph to display the value of the KPI at this point.
Configuration Item	This field appears only in table format.
	The name of the selected configuration item.
KPI	This field appears only in table format.
	The name of the KPI. Each selected KPI is displayed in a separate line.

Drill Down to HP Diagnostics

The following table displays the Diagnostics drill down options for CIs in KPIs Over Time reports:

CI Type	Diagnostics Drilldown Options
Diagnostics Probe Group	➤ **Summary View** (Probe Group Summary) ➤ **Layers View** (Load)
Diagnostics Probe	➤ **Summary View** (Probe Summary) ➤ **Layers View** (Load)
Business Process Step	➤ **Transactions View** ➤ **Layers View**
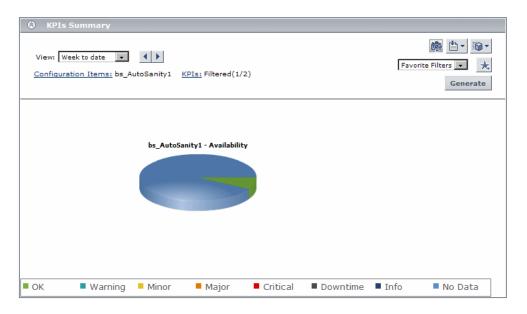
The HP Diagnostics views accessed with the context menu options that are available from the KPIs Over Time report are as follows:

HP Diagnostics Views	Description
Summary View	**Note:** This option is available for all Diagnostics Probe CIs. This option is displayed only if you have Diagnostics installed.
	Opens the Probe Summary View in the HP Diagnostics application, for the probe group and for the time frame specified in the View box in the KPIs Over Time report.
	For more information about Diagnostics, see the *HP Diagnostics User's Guide*.
Layers View	**Note:** This option is available for all Business Process Monitor, and Diagnostics Probe CIs. This option is displayed only if you have Diagnostics installed.
	The Layers (Load) view displays the performance metrics for the Diagnostics layers where processing has taken place in your application, for the transaction that corresponds to the Business Process Monitor CI or for the selected Probe CI and for the time frame specified in the View box in the KPIs Over Time report.
	For more information about Diagnostics, see the *HP Diagnostics User's Guide*.
Transactions View	**Note:** This option is available for all Business Process Step CI. This option is displayed only if you have Diagnostics installed.
	The Transactions view displays performance metrics for the transactions that are being executed by your applications, with the transaction corresponding to the Business Process Step CI highlighted, and for the time frame specified in the View box in the KPIs Over Time report. For more information about Diagnostics, see the *HP Diagnostics User's Guide*.

🔍 KPIs Summary Report

The following is an example of the KPI Summary report.

Description	Displays a summary of KPI status distribution over time for each selected KPI.
	To access:
	➤ Select **Applications** > **Dashboard** > **Reports** > **KPIs Summary**.
	➤ Access the KPIs Summary portlet in My BSM.
Important Information	➤ This report is produced only for certain CIs with historical KPI data. For details, see "Configuration Items Dialog Box" on page 270.
	➤ You can add this report as a portlet in My BSM. For details, see "Add Portlets to <page_name>/Add Portlets Dialog Box" in *Using My BSM*.
Useful Links	"Configuration Items Dialog Box" on page 270

Report Settings
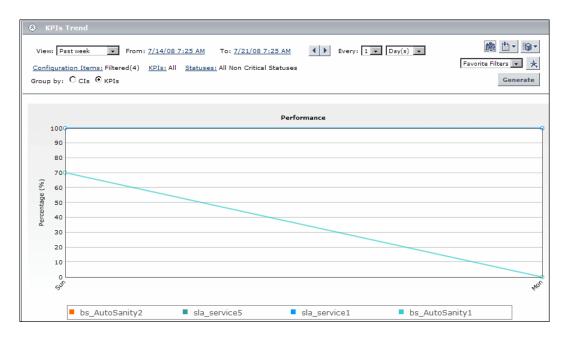
GUI Element (A-Z)	Description
<Common report elements>	See "Common Report Elements" in *Reports*.
Configuration Items	Displays the name of the selected CI for the report, and if more than one CI is selected, the number of CIs that the report is based on. For example, **Filtered (4)** means that four CIs are selected for inclusion in the report.
	Click the **Configuration Items** link to open the Configuration Items dialog box where you can select CIs.
KPIs	Indicates the number of KPIs that are included in the report, and the total number of KPIs that are attached to the selected CIs separated by a slash; for example, **Filtered (1/3)**.
	All is displayed when all available KPIs are selected.
	Click the **KPIs** link to open the KPIs dialog box where you can select KPIs.
	Default value: If the **Application** KPI is attached to any of the selected CIs, this KPI is selected automatically.

Report Content

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
<Pie chart>	Each pie chart represents a KPI instance (name displayed at the top) for a CI (name displayed on the left), and summarizes the statuses for the KPI over the selected time frame (as long as there is relevant data for the KPI on that CI).
	Each pie chart is divided into colored status slices, so that each slice represents the percentage of time that a particular status was held by the KPI.
	Tooltip: Hold the pointer over a pie slice to display a tooltip containing the following information:
	➤ **Status.** The name of the status represented by the slice.
	➤ **Status Duration.** The amount of time that the KPI held this status during the time frame. This can be given in hours, minutes, and seconds (for example, 01:10:48) or in days and hours (for example, 30 days, 9 hours).
	➤ **Status Percentage.** The percentage of the time that the KPI held this status
	Functionality: Right-click a pie for animation functionality. For more information, see "Viewing Reports with Adobe Flash Player" in *Reports*.

🔍 KPIs Trend Report

The following is an example of the KPI Trend report.

Description	Displays the trend for changes in KPI status over time, for selected statuses.
	To access:
	➤ Select **Applications** > **Dashboard** > **Reports** tab > **KPIs Trend**.
	➤ Access the KPIs Trend portlet in My BSM.
Important Information	➤ This report is produced only for certain CIs with historical KPI data. For details, see "Configuration Items Dialog Box" on page 270.
	➤ Data is displayed in the report starting from the point that data was collected for the selected CIs. For example, if you set the report to show data every week for the past month, but data was collected only for the past two weeks, the report shows data from two weeks ago to the present date.
	➤ You can add this report as a portlet in My BSM. For details, see "Add Portlets to <page_name>/Add Portlets Dialog Box" in *Using My BSM*.
Useful Links	"Configuration Items Dialog Box" on page 270

Report Settings

GUI Element (A-Z)	Description
<**Common report elements**>	See "Common Report Elements" in *Reports*.
Configuration Items	Displays the name of the selected CI for the report, and if more than one is selected, indicates the number of CIs that the report is based on. For example, **Filtered (4)** means that four CIs are selected for inclusion in the report.
	Click the **Configuration Items** link to open the Configuration Items dialog box where you can select CIs.

GUI Element (A-Z)	Description
Group by	Select a radio button to determine how the data is organized: ➤ **CIs.** A separate chart is displayed for each CI, containing trend data for all relevant KPIs. ➤ **KPIs.** A separate chart is displayed for each KPI, containing trend data for all relevant CIs.
KPIs	Indicates the number of KPIs that are included in the report, and the total number of KPIs that are attached to the selected CIs separated by a slash; for example, **Filtered (1/3)**. **All** is displayed when all available KPIs are selected. Click the **KPIs** link to open the KPIs dialog box where you can select KPIs. **Default value:** If the **Application** KPI is attached to any of the selected CIs, this KPI is selected automatically.
Statuses	Indicates the number of statuses that are included in the report, and the seven possible statuses separated by a slash; for example, **Filtered (5/7)**. Click the **Statuses** link to open the Statuses dialog box where you can select statuses. **Default value:** All statuses that are defined as non-critical are selected, and **All Non-Critical Statuses** is displayed. For details, see "Statuses Dialog Box" on page 298.

Report Content

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
<Chart in report>	A separate chart is displayed for each included CI, or for each included KPI, depending on the **Group by** filter selection. Each chart shows status trend (in percentage) over time, within the selected time frame (as long as there is relevant data for the KPI on that CI).
<Line on chart>	Each line on the chart represents the status trend for a specific KPI on a specific CI, based on a compilation of all statuses selected in the **Statuses** filter. A legend is given to distinguish each KPI or CI.
	The points for the line are plotted at the intervals defined by the report granularity (the legend for the x-axis shows the time interval for each point), so that each point represents a period of time during the overall time frame.
	Each point shows the percentage of time that the KPI held all included statuses during that time interval. For example, if the KPI had **OK** status for 10% of the time interval, and **Warning** status for 20%, and both of these statuses are included in the **Statuses** filter, then both periods are included in the total percentage (adding 30% to the total).
	Tooltip: Hold the pointer over a point on the line to display a tooltip containing the following information:
	➤ **Status Duration.** The total time that the KPI held the included statuses during the time interval. This can be given in hours, minutes, and seconds (for example, 01:10:48) or in days and hours (for example, 30 days, 9 hours).
	➤ **Status Percentage.** Percentage of the time interval that the KPI held the included statuses.
	Note: When one line is on top of another, the information is the same for both lines.

🔖 Statuses Dialog Box

Description	Enables you to select the KPI statuses to be included in a Dashboard report, for the duration of a Web session. The report provides information based on the selected statuses. **To access:** In a Dashboard report, click **Statuses** in the reports settings area.
Important Information	➤ You must define at least one CI for the report before you can select statuses. ➤ When you first select the CIs for the report or open the report, the default status selection is automatically applied. The default selection is for all statuses that are defined as non-critical, meaning all statuses other than **Critical**. You can modify the definition of non-critical statuses in the Infrastructure Settings page: Select **Admin** > **Platform** > **Setup and Maintenance** > **Infrastructure Settings**, choose **Applications**, select **Dashboard Application**, and locate the **Default Non-Critical Statuses** entry in the **Business Report Properties** table. Modify the value to include or exclude the required statuses.

🔍 Troubleshooting and Limitations

HP Business Availability Center records, in a reports log, errors that occur when generating reports. The reports log can also include information about the following activities: creating a new report, generating a report, modifying the report filters, drilling down in reports, and so on. For details on the reports log, see "Reports Log" in *Reports*.

Part IV

External Display

12

Dashboard Ticker

This chapter describes the Dashboard Ticker.

This chapter includes:

Concepts

➤ Dashboard Ticker Overview on page 301

Tasks

➤ View Data in Dashboard Ticker on page 305

➤ Control Dashboard Ticker on page 307

➤ Set Ticker Preferences on page 308

Reference

➤ Ticker User Interface on page 309

Dashboard Ticker Overview

HP Dashboard Ticker enables you to monitor a selected view in a non-intrusive manner on your desktop in a Ticker Window or in a Message Window without opening HP Business Availability Center.

Using HP Dashboard Ticker, you can, without opening HP Business Availability Center, select a view, select the server where HP Business Availability Center is installed, adjust the rate and the scrolling speed of the Ticker Window, and open the Message Window.

This section includes the following topics:

Understanding Dashboard Ticker

After you install HP Dashboard Ticker, one of HP Dashboard Ticker's icons appears in the desktop tray bar. The type of icon displayed indicates different situations. A tooltip is available for each icon to describe HP Dashboard Ticker's status.

Status Icon	Description	Tooltip
	Online. The ticker has connected with the server and is monitoring status.	**Connected with <server-url>** where **server-url** is the URL of the server.
	Message. An incoming message was received. A KPI has turned to Critical state.	**Incoming message**
	Offline. The server could not be found or the response returned from the server is not recognizable.	**Offline - <reason>** where **reason** explains why the ticker is offline.
	Connecting. Dashboard Ticker is attempting to connect to the server. The indication is an animated icon.	**Connecting...**

For details on installing the Ticker, see "Install Dashboard Ticker" on page 305.

HP Dashboard Ticker attempts to connect with the server using the supplied server address after the period of time specified in the **Update interval** parameter in the Preferences. If the server cannot be found or a connection cannot be established, the tray icon changes to **Offline**. For details on the **Update interval** parameter, see "Ticker Preferences Dialog Box" on page 312.

The tray icon changes to **Connecting** if Dashboard Ticker is trying to connect to the server.

The tray icon changes to **Online** when the server has connected successfully.
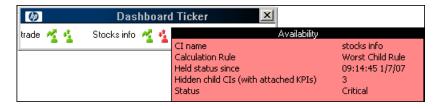
Every KPI in the selected view is checked. Any KPI with an error status is checked against the information already in HP Dashboard Ticker. If it is the first time this KPI appears in the view, or if the KPI's status has changed to an error status, it is displayed in the Message Window and/or the Ticker Window. As soon as a message is put in the queue, the tray icon changes to **Message**, indicating that there is a message to be viewed. HP Dashboard Ticker's internal message queue can contain an unlimited number of messages.

Ticker Window

The Ticker Window displays a scrolling list (from right to left) of the **top level** CIs monitored by Dashboard along with icons that display the status of each one of the CI's KPIs.

Move the mouse above any icon in the Ticker Window to display a tooltip that includes the name of the KPI.

303
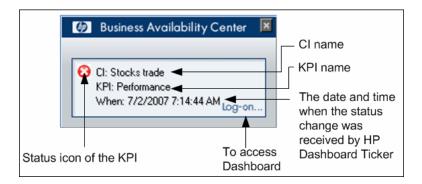
For details, see "Ticker Window" on page 309 in the user interface section.

Message Window

The Message Window is used to inform the user that a KPI's status has changed to error/poor/worst.

The Message Window displays the following information:

For details, see "Message Window" on page 310 in the user interface section.

🔧 View Data in Dashboard Ticker

HP Dashboard Ticker enables you to monitor a selected view in a non-intrusive manner on your desktop in a Ticker Window or in a Message Window without opening HP Business Availability Center. For details, see "Dashboard Ticker Overview" on page 301.

This task includes the following steps:

➤ "Install Dashboard Ticker" on page 305

➤ "Launch Dashboard Ticker" on page 305

➤ "Meet the Requirements" on page 306

➤ "Control Ticker Behavior" on page 306

➤ "Set the Ticker Preferences" on page 306

➤ "View Dashboard Information in Dashboard Ticker" on page 307

1 Install Dashboard Ticker

Install HP Dashboard Ticker as explained in this section.

To install HP Dashboard Ticker, select **Admin** > **Platform** > **Setup and Maintenance** to open the Downloads page, click **HP Dashboard Ticker** and follow the on-screen instructions.

Note: HP Dashboard Ticker 7.5 is compatible with HP Business Availability Center 8.0.

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2 Launch Dashboard Ticker

After HP Dashboard Ticker is installed, you must launch it to configure its behavior.

To launch HP Dashboard Ticker, select **Start** > **Programs** > **HP Dashboard Ticker** > **HP Dashboard Ticker** to launch the application and open the Preferences page. For details, see "Ticker Preferences Dialog Box" on page 312.

3 **Meet the Requirements**

To use the HP Dashboard Ticker you must have the following software installed on your computer:

➤ Win2000 or Windows XP

➤ Microsoft Internet Explorer 6.0 Service Pack 1 or later

Note: The requirements listed above are for the desktop version of HP Dashboard Ticker. To log on to HP Business Availability Center from the Message Window, you must fulfill the requirements detailed in the *HP Business Availability Center Database Guide* PDF.

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4 **Control Ticker Behavior**

You can control the behavior of HP Dashboard Ticker using the options that are displayed by right-clicking the icon in the tray bar. Depending on the icon, a subset of the capabilities described in this section is displayed.

For details, see "Control Dashboard Ticker" on page 307.

5 **Set the Ticker Preferences**

You can set the Ticker preferences so that you can view messages automatically or you can click the **Message** icon to display the Message Window. The Message Window fades out after 5 seconds.

If you click the icon in the Message Window, the message that is currently displayed is removed from the queue as soon as you close the window.

If you select to display the Message Window automatically and you do not click that window, the Message Window fades out after 5 seconds, and the message is considered unread. It is not removed from the queue.

For details, see "Set Ticker Preferences" on page 308.

6 View Dashboard Information in Dashboard Ticker

HP Dashboard Ticker enables you to monitor a selected view in a non-intrusive manner on your desktop in a Ticker Window or in a Message Window without opening HP Business Availability Center.

For details on the Ticker Window, see "Ticker Window" on page 303.

For details on the Message Window, see "Message Window" on page 304.

🔧 Control Dashboard Ticker

You can view an event in the Message Window or in the Ticker Window. You can open the Web browser, connect to the HP Business Availability Center server, and display the view in Dashboard. You can select what information is displayed in HP Dashboard Ticker, and how it is displayed.

You can control the behavior of HP Dashboard Ticker using the options that are displayed by right-clicking the icon in the tray bar. For details, see "Understanding Dashboard Ticker" on page 302.

Depending on the icon, a subset of the following options is displayed:

➤ **Show Current Event.** To display the event if an event is waiting in the queue. For details, see "Message Window" on page 304.

➤ **Show Ticker.** To display the Ticker Window. For details, see "Ticker Window" on page 309.

➤ **Log On.** Opens the default Web browser, connects to the HP Business Availability Center server, and displays the view in Dashboard. For details, see "Dashboard Administration and Application" on page 22.

➤ **Preferences.** To modify the information that is displayed in HP Dashboard Ticker, and how it is displayed. For details, see "Ticker Preferences Dialog Box" on page 312.

➤ **About.** To display the About window.

➤ **Exit.** To exit HP Dashboard Ticker.

🔨 Set Ticker Preferences

You can view messages automatically (defined in Preferences) or you can click the **Message** icon to display the Message Window. The Message Window fades out after 5 seconds.

If you click the icon in the Message Window, the message that is currently displayed is removed from the queue as soon as you close the window.

If you select to display the Message Window automatically and you do not click that window, the Message Window fades out after 5 seconds and the message is considered unread. It is not removed from the queue.

You can:

➤ Reload a View to Display in the Ticker Window or in the Message Window

➤ Select the View to Display in the Ticker Window or in the Message Window

➤ Change the Server You are Accessing

➤ Modify the Refresh Rate of the Ticker Window

➤ Change the Scrolling Speed of the Ticker Window

➤ Select the Dock Orientation of the Ticker Window on Your Desktop

➤ Display a Popup Message Window When a New Message Arrives

➤ Sound an Alert When a New Message Arrives

➤ Automatically Load HP Dashboard Ticker When You Start Your Computer

For details on the steps to follow to view data in Dashboard Ticker, see "View Data in Dashboard Ticker" on page 305.

For details on setting the Ticker preferences, see "Ticker Preferences Dialog Box" on page 312.

❧ Ticker User Interface

This section describes:

➤ Ticker Window on page 309

➤ Message Window on page 310

➤ Ticker Preferences Dialog Box on page 312

❧ Ticker Window

Description	Enables you to view a scrolling list (from right to left) of the **top level** CIs monitored by Dashboard along with icons that display the status of each one of the CI's KPIs. The icons correspond to the icons displayed in the Top View tab in Dashboard. **To Access:** Set up Dashboard Ticker.
Important Information	➤ You set the scrolling speed of HP Dashboard Ticker in the **Scrolling speed** parameter in the Preferences page. For details, see "Ticker Preferences Dialog Box" on page 312. ➤ When you have moved the Ticker Window to a specific location on your desktop, the window is displayed in the same location the next time you select **Show Ticker** in the Preferences page or when you restart your computer. ➤ If you move the mouse to the Ticker Window, scrolling stops; it resumes when you move the mouse out of the Ticker Window. ➤ If you change any parameter in the Preferences page, scrolling restarts from the beginning. ➤ Modify the number of CI levels you want to display by changing the value of the **Number of levels** parameter in the Preferences. For details, see "Ticker Preferences Dialog Box" on page 312.
Included in Tasks	"View Data in Dashboard Ticker" on page 305

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
<icons>	The icons correspond to the icons displayed in the Top View tab in Dashboard. For details, see "KPI Icons in Top View" on page 140.
<tooltip>	Move the mouse above any icon in the Ticker Window to display a tooltip that includes the name of the KPI. For details, see "Ticker Window" on page 303.

🔖 Message Window

Description	Conveys that a KPI's status has changed to error/poor/worst. **To Access:** Setting up Dashboard Ticker.
Important Information	➤ The window is displayed either automatically or manually. For details on how to set this option, see "Ticker Preferences Dialog Box" on page 312. ➤ When you close the message window, the entry that was displayed is removed from the queue. You cannot redisplay that information. When you reopen the window, the next message in the queue is displayed. ➤ If you specified in the Preferences that an alarm should be sounded when a KPI's status changes to error/poor/worst, an alarm sounds when the message is displayed. For details on the Preferences dialog box, see "Ticker Preferences Dialog Box" on page 312.
Included in Tasks	"View Data in Dashboard Ticker" on page 305

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
	The status icon of the KPI.
<first line>	The name of the CI.
<second line>	The name of the KPI.
<third line>	The date and time when the status change was received by Dashboard Ticker.
Log-on	Click the **Log-on** link to automatically open the view you specified in the Preferences, in the Console tab in Dashboard.

🔍 Ticker Preferences Dialog Box

Description	Displays the current preferences for running the Dashboard Ticker.
	To Access: Right-clicking the Dashboard Ticker icon in the desktop tray bar and selecting **Preferences**.
Included in Tasks	"View Data in Dashboard Ticker" on page 305

Connection Settings Area

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
BAC server URL	In the **BAC server URL** box, enter the URL or the IP address of the server you want to access. The URL format must be: **http://<HP Business Availability Center server>/<virtual_Web_URL>** where **virtual_Web_URL** may be, for example: HPAM.
MMS customer	Select if you are an HP Software-as-a-Service customer. In the **ID** box that is displayed, enter the customer ID number.
Update interval box	The update interval timeout (in seconds). The minimum interval is 5 seconds. **Default value:** 15 seconds.

Login Information Area

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
Password	Enter your password.
User name	Enter your user name.

Selection Area

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
Number of levels	Enter the number of levels you want to display in the Ticker. When displayed in the Ticker, all levels are flattened out.
Reload	Click the **Reload** button to reload the views from the HP Business Availability Center server you are accessing.
View name	Select the name of the view you want to display in the ticker.

Ticker Window Area

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
Dock orientation	Select the location of the Ticker on your desktop: ➤ **Top.** The Ticker is docked at the top of the desktop. ➤ **Bottom.** The Ticker is docked at the bottom of the desktop. ➤ **None.** The Ticker is not docked. You can move it around on of the desktop. The default is **None**.
Scroll speed	Select a scrolling speed: **Low**, **Mid**, or **High**. The default is **Mid**.

Options Area

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
Load Dashboard Ticker when my computer starts	Select to automatically load Dashboard Ticker when you start your computer. For details on the Ticker Window, see "Ticker Window" on page 309.
Play incoming message sound alert	To automatically sound an alert when a new message arrives.
	When the sound is switched on, a sound alert is played when the Ticker Window is currently displayed and a CI's KPI changes status to Critical (red). The Critical status icon is also shown flashing until the next screen refresh. The alert sound is a WAV file downloaded by the browser.
	Note:
	➤ The sound is played only if the status of a CI's KPI in the currently displayed tree branches has changed to Critical. 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.
	➤ If the view is being loaded for the first time, no sound is played for the CI's KPIs that are loaded at **Critical** status.
	➤ If you are using Mozilla, you must download a plug-in for playing WAV files, otherwise no sound is played.
	To use another alert sound, access (if you are a user with administrative permissions) **< Gateway server root directory>\AppServer\ webapps\site.war\bam\pages\sounds** and replace the **ding.wav** file with your own WAV file (you must rename your file **ding.wav**). The change takes effect immediately.

GUI Element (A-Z)	Description
Show incoming message desktop alert	To automatically display the Message Window when a new message arrives. If you do not select this option, you have to click the message icon to display the Message Window.
Show Ticker Window when my computer starts	To automatically load Dashboard Ticker Message Window when you start your computer. For details on the Message Window, see "Message Window" on page 304.

13

Dashboard on a Mobile Device

This chapter describes how to view Dashboard data on a mobile device.

This chapter includes:

Concepts

➤ Dashboard on a Mobile Device Overview on page 317

Tasks

➤ View Data on a Mobile Device on page 318

Reference

➤ Mobile Device User Interface on page 319

Dashboard on a Mobile Device Overview

You can display the operational status of components of your business using mobile devices with a browser that supports standard HTML.

The configuration items (CIs) are shown in layers where each parent CI is a link to the layer of its children CIs. The status of the CI's Key Performance Indicators (KPIs) is displayed on the right of the screen.

For details on what to do to display Dashboard data on a mobile device, see "View Data on a Mobile Device" on page 318.

For details on Dashboard data displayed on a mobile device, see "Mobile Device Page" on page 320.

🔧 View Data on a Mobile Device

You can display a view's data on a mobile device using the steps described in this section.

This task includes the following steps:

➤ "Prerequisites" on page 318

➤ "Access the Server URL" on page 318

➤ "Change Display Characteristics – Optional" on page 319

➤ "Navigate to the View and Display the Data" on page 319

1 Prerequisites

➤ Ensure that the server you want to access is open to Internet.

➤ Ensure that the browser of the mobile device you want to use supports standard HTML.

2 Access the Server URL

Enter the following URL in your mobile device:
http://<HP Business Availability Center server>/<HP_BAC_web_application_context_name (usually topaz)>/mobileConsole.do

Tip:

➤ In the mobile device, you can add the URL to your Favorites at any stage (login, view, or drill down). Depending on the stage, clicking the **Back** button might not access higher hierarchy levels or the view selection page.

➤ You must click **Refresh** to refresh the display as the refresh feature is not automatic and the data becomes obsolete.

3 Change Display Characteristics – Optional

The display characteristics of the mobile console are controlled by an XSL file. To modify any aspect of the display using non-Latin characters (for example, displaying the view and button names: **Back** and **Refresh**), contact HP Software Support for help in writing an XSL to support this feature.

Note: The characters used for KPI names depend on the user's locale and not on the browser's locale.

4 Navigate to the View and Display the Data

Enter the appropriate information in the login screen, and select a view. For details, see "Mobile Device Page" on page 320.

Mobile Device User Interface

This section describes:

➤ Mobile Device Page on page 320

Mobile Device Page

The following is an example of the Mobile Device page.

Description	Enables you to display a view on a mobile device.
	To Access: Enter the appropriate information in the login screen, and select a view.
Important Information	➤ When more than a few KPIs are attached to the CI (depending on the device's screen resolution), the display becomes scrollable.
	➤ Long CI names are wrapped.
	Note: Only the first four letters of the KPI names are displayed in the view. You might have to clone or rename some of the KPIs if their first four letters are the same; for example SAP and SAP Alert KPIs. All the feature's visual aspects are controlled by the following XSL file: **\AppServer\webapps\site.war\mobile\dash\ console.xsl**
	You can modify the XSL file so the mobile device can display longer labels. Contact HP Software Support for help in writing an XSL to support that feature.
	This XSL file transforms the XML returned from HP Business Availability Center server to the mobile-like HTML file that is displayed on the mobile device.
Included in Tasks	"View Data on a Mobile Device" on page 318

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
<KPI>	The status of the KPIs attached to the CIs. For details on the displayed status, see "KPI Status" on page 355. **Note:** Only the first four letters of the KPI names are displayed on the mobile device. You may want to rename the KPIs if their first four letters are the same; for example SAP and SAP Alert KPIs. You can rename KPIs in the KPIs Repository (**BAC** > **Admin** > **Dashboard** > **Repositories** > **KPIs**). **Tooltip:** Click an icon to display the relevant tooltip. To hide the tooltip, click anywhere else in the page or wait 5 seconds. The tooltip displays the name of the CI, the status of the KPI, the rule used to calculate the status, and the date when the status changed, and additional information depending on the type of KPI. For example, **Avg. response time** displays the value for the Performance KPI, **Average for** displays over how long the average was calculated, **Minor** and **OK** are the objectives of the Performance KPI (the objective).
Back	Click **Back** to go back to the login page.

GUI Element (A-Z)	Description
Name	The name of the CIs in the view. **Note:** To drill down to a child CI, move the cursor to the CI, and click.
Refresh	Click **Refresh** to refresh the view.
View	The name of the view you selected in the login page.

14

HP BAC Dashboard Widget

This chapter includes the main concepts, tasks, and reference information for using the HP BAC Dashboard Widget to display Dashboard view data.

This chapter includes:

Concepts

➤ Dashboard Widget Overview on page 323

Tasks

➤ View Data in Dashboard Widget on page 325
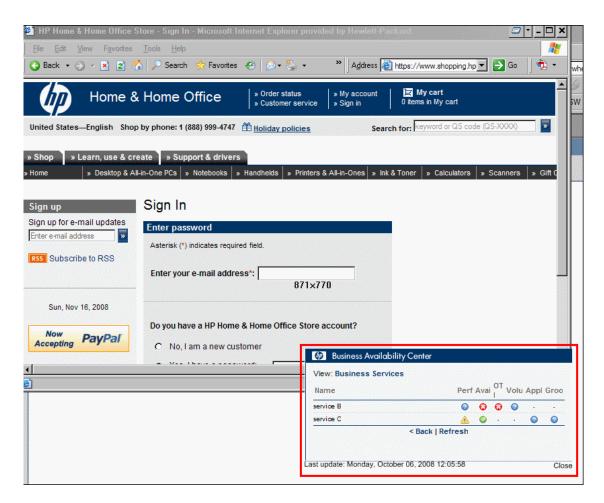
Reference

➤ Dashboard Widget User Interface on page 329

Dashboard Widget Overview

HP BAC Dashboard Widget enables you to continuously monitor the operational status of your business, without having Business Availability Center Dashboard open on your screen. The Dashboard Widget runs on the Yahoo! Widgets application, and displays CI status for a selected Dashboard view.

The Dashboard Widget is a small window that can be positioned anywhere on your screen, enabling you to display it in a non-intrusive manner while working in other applications. You do not need to have Business Availability Center open to display view information in the Dashboard Widget.

The Dashboard Widget presents a flat list of the CIs in a selected view, together with KPI status for the CIs. This is the same status information that you see in the **Applications** > **Dashboard** > **Console** > **Hierarchy** tab. You can drill down from a parent CI to see its child CIs.

To install and display the Dashboard Widget, see "View Data in Dashboard Widget" on page 325.

For details on working with the Dashboard Widget, see "Dashboard Widget User Interface" on page 329.

🔧 View Data in Dashboard Widget

This task describes how to install and configure the Dashboard Widget to display Dashboard views.

This task includes the following steps:

➤ "Prerequisite" on page 325

➤ "Install Dashboard Widget" on page 325

➤ "Configure Dashboard Widget" on page 326

➤ "Log in to Dashboard Widget" on page 328

➤ "Select a Dashboard View" on page 328

1 Prerequisite

The Dashboard Widget runs on the Yahoo! Widgets application. If you do not have it installed, download the Yahoo! Widgets application from the Yahoo! Widget page: http://widgets.yahoo.com/download.

After installing, you can click the Yahoo! Widgets icon in your toolbar to view the Widgets Dock at the right edge of the screen.

2 Install Dashboard Widget

In Business Availability Center, open **Admin** > **Platform** > **Setup and Maintenance** > **Downloads**. Click the **HPDashWidget_v1.0_win.zip** link and extract the contained file (**HPDashWidget_v1.0_win.widget**) to your local machine.

To start the Dashboard Widget, double-click the **HPDashWidget_v1.0_win.widget** file. The file is automatically moved to the **My Documents\My Widgets** folder, created by Yahoo! Widgets on your primary local drive.

➕

Note: The HPDashWidget_v1.0_win.widget file must be located in the **My Documents\My Widgets** folder, so that it is displayed by the **Show All Widgets** button on the Widgets Dock (top right corner). This button opens all widgets in the **My Widgets** folder.

3 **Configure Dashboard Widget**

After installing the Dashboard Widget, it is automatically added to the list of widgets available from the Widgets Dock on your machine, and Yahoo! Widgets displays the Dashboard Widget introductory window.

Note: If the Dashboard Widget introductory window is not displayed, either double-click the installed **HPDashWidget_v1.0_win.widget** file, or perform the following steps:
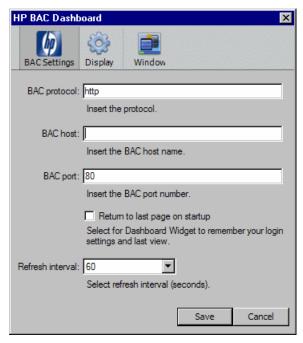
➤ Open Yahoo! Widgets from the **Start** > **Programs** menu.

➤ In the Widgets Dock, click the **Options Menu** icon.

➤ In the **Options** menu, select **Open Widget**.

➤ In the Open dialog box, open the **HPDashWidget_v1.0_win.widget** file.

Configure the Dashboard Widget to access data from the relevant Business
Availability Center application as follows:

a In the introductory window, click **Use Widget**. A message is displayed
warning you that a host must be defined. Click **OK** to open the HP BAC
Dashboard preferences window for the Dashboard Widget.

b In the **BAC Settings** tab, modify the parameters as required.

➤ **BAC protocol.** Enter the protocol that your Business Availability Center
application is using. For example, http.

➤ **BAC host.** Enter the host name for the Business Availability Gateway
server, including the DNS domain.

➤ **BAC port.** Enter the port number used by the Business Availability
Gateway server. Default is 80.

➤ **Return to last page on startup.** Select the check box to have the
Dashboard Widget remember your user name and password after
login, and the last view you selected. When you next access the
widget, it opens directly to the last view.
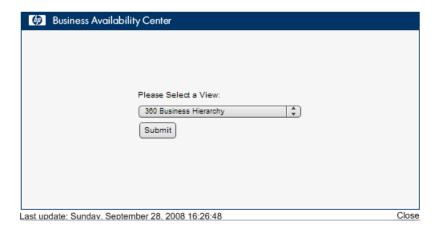
➤ **Refresh interval.** Select the refresh interval from the dropdown list. Default is 60 seconds.

Note: You can modify the settings at any time by right-clicking in the Dashboard Widget window, and selecting **Widget Preferences** > **BAC Settings** tab.

---

4 Log in to Dashboard Widget

After configuring parameters for the Dashboard Widget, the login window is automatically displayed. (If the login window is not displayed, open the HP BAC Dashboard Widget from the Widgets Dock.)

Enter your Business Availability Center login information and click **Submit**. The Select View window is displayed.

5 Select a Dashboard View

In the Select View window, click the arrows to the right of the displayed view name to open an alphabetical list of the available Dashboard views in Business Availability Center.

Select the required view and click **Submit**. The selected view is displayed in the Dashboard Widget.

Dashboard Widget User Interface

This section describes:

➤ Dashboard Widget Window on page 330

🔍 Dashboard Widget Window

Description	Displays Dashboard view data within a Yahoo! Widget.
	To access: Open from the Widgets Dock, or right-click the **Yahoo! Widgets** 🎰 icon on your toolbar and select **Open Widget**. Navigate to the **HPDashWidget_v1.0_win.widget** file and open it.
Important Information	➤ To move the Dashboard Widget on your screen, hold down **CTRL** while dragging the window.
	➤ You can modify some display aspects of the Dashboard Widget, for example, you can set the size and opacity of the window, or set the Dashboard Widget to stay on top of other windows. Right-click in the Dashboard Widget window and select **Widget Preferences**, then select either the **Display** or **Window** tab.
Included in Tasks	"View Data in Dashboard Widget" on page 325

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
<KPI>	Each KPI column displays the KPI status of each CI. For details on the displayed status, see "KPI Status" on page 355.
	Note: Only the first four letters of the KPI names are displayed in the Dashboard Widget. You may want to rename the KPIs if their first four letters are the same; for example SAP and SAP Alert KPIs.
	You can rename KPIs in the KPIs Repository (**BAC** > **Admin** > **Dashboard** > **Repositories** > **KPIs**).
	Tooltip: Click a status icon to display the relevant tooltip.
	The tooltip displays the name of the CI, the status of the KPI, the business rule used to calculate the status, and the date when the status changed. It may also display additional information, depending on the type of KPI.
Back	(Located at the bottom of the Dashboard Widget window. Scroll down to display the **Back** link.)
	Click to return to the previous page.
Close	(Located at the bottom right of the Dashboard Widget window)
	Click to close the Dashboard Widget.

GUI Element (A–Z)	Description
Last update	(Displayed at the bottom left of the Dashboard Widget window) Displays the date and time that the data was last updated. **Note:** While a page is loading, **Retrieving data** is displayed instead.
Name	Alphabetically lists the CIs at the currently displayed level of the selected Dashboard view. **Note:** Click a CI to drill down to its child CIs.
Refresh	(Located at the bottom of the Dashboard Widget window. Scroll down to display the **Refresh** link.) Click to refresh the view data displayed in the Dashboard Widget. **Default value:** 60 seconds. To change the refresh interval, see "Configure Dashboard Widget" on page 326. **Note:** Displayed information is not automatically refreshed. The time of the last update is displayed at the bottom of the Dashboard Widget.
Retrieving data	(Displayed at the bottom left of the Dashboard Widget window) Displayed while a page is loading. **Note:** After load completion, **Last update** is displayed instead.
View	Name of the active Dashboard view. Click the view name to select another view.

Part V

KPIs

15

Working With KPIs

This chapter describes how to configure KPIs.

This chapter includes:

Concepts

Tasks

➤ Change the KPI Status Icons on page 394

Reference

➤ KPIs User Interface on page 396

🍥 KPI Configuration Overview

The Dashboard KPIs (Key Performance Indicators) provide quantifiable measurements that help you monitor in real-time how well your business is achieving its objectives. The KPIs provide real-time status for the CIs representing your business and processes, enabling you to assess the business impact of problems in the system.

Each KPI works with a predefined set of values, against which the incoming metrics are measured. The resulting measurement for the KPI is translated into a color-coded status indicator, displayed in the Dashboard Console, where the color represents a more desirable or less desirable condition for the KPI. You can learn more about KPI functionality in "How Dashboard KPIs Work" on page 338.

CIs can have multiple KPIs attached. KPIs can be attached to a CI as follows:

➤ KPIs may be attached to the CI as part of the CI creation.

　➤ For CIs created in the Universal CMDB using the source adapters in Source Manager all CIs are automatically assigned default KPIs, according to the nature of the CI. For example, a CI for a Business Process Monitor profile has default KPIs for availability and performance. You can edit a source adapter to define additional KPIs that you want added to the created CIs.

　For more information on the source adapters and how they define the default KPIs, see "Source Manager Overview" in *Model Management*.

　➤ For CIs created in the Universal CMDB directly from the monitors, all CIs are automatically assigned default KPIs, according to the nature of the CI using the KPI Assignment mechanism or the KPI Propagation mechanism. You can edit a KPI assignment to define additional KPIs that you want added to the CIs.

　For more information on the KPI assignments and how they define the default KPIs, see "Assignments" on page 421.

　➤ CIs that are added manually or by Discovery and Dependency Mapping do not have automatically assigned KPIs. For information on how Discovery and Dependency Mapping creates CIs, see "Discovery and Dependency Mapping – Overview" in *Discovery and Dependency Mapping Guide*.

➤ KPIs may be attached to a CI as a result of propagation from child CIs. Most KPIs propagate up through the hierarchy, so that parent CIs have the same KPIs as all their child CIs.

➤ KPIs may be manually attached to a CI in the Dashboard Administration KPIs tab. You may want to attach new KPIs to a CI, in addition to the default/propagated KPIs, to broaden the information derived from the monitoring measurements. For example, you can add an OT Impact KPI to assess the ongoing cost of an application that is not available.

In the KPIs tab, as well as attaching new KPIs to a CI, you can edit existing KPIs and delete attached KPIs. For details, see "KPIs Page" on page 408.

🔆 How Dashboard KPIs Work

HP Business Availability Center provides a selection of predefined KPIs to work with Dashboard. The definitions for the KPIs are contained in an XML file, which contains the default parameters for creating each KPI instance.

Note: You can edit the KPI definitions, or create customized KPIs, in the KPI Repository, as described in "List of Dashboard KPIs" on page 510.

Each CI has its own attached KPIs (that define what is being monitored for that specific CI). Each attached KPI generally defines:

➤ The business rule (for example, Performance rule) to be used with the collected metrics, to calculate a measurement for the KPI.

➤ The source for the metrics to be used for the KPI: either from data samples (for monitoring CIs), or from other KPIs. In the latter case, the KPI metrics may be taken from the child CIs (when using, for example, the Summary of Values rule), or from another KPI attached to the same CI (when using, for example, the Impact Over Time rule).

➤ The thresholds (objective values) that the KPI measurement is compared against; and the status (color) allocated to the KPI, based on the defined thresholds.

➤ Where and how to display the status indicator for the KPI in Dashboard, and where to store the KPI measurement.

For most KPI types, the KPIs propagate up to all parent CIs (there are exceptions to this, for example, the PNR (Service Level Management) KPI). This means that if you attach a KPI, for example, Volume, to a child CI, then a Volume KPI is also added to each parent CI for that child, up to the top of the subtree.

Each KPI added by propagation has its own KPI instance definition, with its own business rule and properties. For example, the Volume KPI for a child CI may use the RUM Page Monitor Volume Rule, while the Volume KPI for the parent CI (added by propagation from the child CI) may use the Worst Child Rule.

The calculations required by the KPI business rule are made by the Business Logic Engine. When a data sample arrives on the bus and is identified (by means of the KPI selector) as relevant for a specific monitoring CI, the required metrics are passed to the relevant KPI instance for that CI, for example, an Availability KPI. At regular intervals (default 15 seconds) the Business Logic Engine recalculates the measurement for the KPI using the metrics received for the KPI since the last calculation.

If the new measurement causes a change in the status of the KPI, the new status is passed to the parent CIs. The Business Logic Engine then recalculates the measurement for the corresponding KPI of each parent CI, using the new received status information. If the new measurement causes a change in the status for that KPI, the new status is again passed up the hierarchy to the corresponding KPI instances for the parent CIs, and so on.

You can change the default Business Logic Engine calculation time interval in the Infrastructure Settings page. For details, see "Change the Default Business Logic Engine Calculation Time Interval – Optional" on page 368.

Notes and Limitations for KPIs and CIs

➤ Any change you make to the KPIs for a CI—adding new KPIs, deleting KPIs, or editing KPI properties—changes the CI in the HP Universal CMDB, meaning that the changes are seen in any view that includes the CI.

➤ You must create at least one HP Business Availability Center profile database for Dashboard to receive data samples. For details, see "Profile Database Properties - MS SQL Server Page" in *Platform Administration*.

➤ There are no restrictions on the type of KPI that can be attached to a CI, or on the type of business rule that you can select from the allowed rules list for a KPI. You must ensure that you select KPIs and business rules that are appropriate for the CI type.

➤ The Application KPI is only applicable for CIs corresponding to HP Diagnostics (and is attached automatically to HP Diagnostics CIs when HP Diagnostics is supported in HP Business Availability Center). For more information, see the *HP Diagnostics User's Guide*.

➤ KPIs added to a CI as part of a SLA definition in Service Level Management Administration have no relevance to the Dashboard KPIs and do not appear in the KPIs tab. Conversely, KPIs added to a CI in the KPIs tab have no relevance for the CI when it is included in an SLA, and do not appear for the CI in Service Level Management.

➤ Deleting a KPI may impact on other KPIs that are dependent on the first KPI. For example, OT Impact is calculated based on the status of another KPI, such as Availability; in this case, deleting the Availability KPI would prevent calculation of OT Impact.

➤ KPIs created for CIs by the source adapter templates frequently have objective values that differ from the default ones used by the business rule. However, when editing one of these KPIs, if you select a different rule and then revert to the original rule, then the original objective values are replaced with the rule default values.

➤ The **Edit KPI for child transactions** button is enabled for all KPIs, but:

   ➤ It is relevant **Transaction** and **Availability** KPIs (an error message is displayed for other KPIs).

   ➤ It is valid only when there are Business Process Monitor transaction CIs contained in the subtree.

Changes made in the Edit KPIs for Child Transaction window have no effect on KPIs other than **Transaction** and **Availability**, or on CIs for which the option does not apply.

➤ After applying the **Edit KPI for child transactions** option, a **KPI was saved successfully** message is displayed in the top-right corner of the page, even if no changes were made to any CIs.

➤ If a transaction CI in the subtree is using a business rule other than the default monitor rule for the KPI (**Transaction Availability** rule or **Transaction Performance** rule), then when you apply the Edit KPI for child transactions option, the existing rule is replaced with the default rule.

➤ The **Objectives** area in the Edit KPIs for Child Transaction window displays the default **Operator** for the rule. When you apply your changes, the displayed default operator is updated to all transaction CIs (regardless of which operator they were using previously).

🎲 About Business Rules

A KPI must always have an associated business rule that defines the logic to be performed (by the Business Logic Engine) to calculate the measurement for the KPI. The properties and objectives that are assigned to the KPI depend on the selected rule.

HP Business Availability Center provides predefined rules for use with the KPIs. The rules are defined in the Business Rule Repository, where you can edit the rules, or create customized rules. For information on the business rules available in Dashboard, the roles they play, and how to edit them, see "List of Dashboard Business Rules" on page 578.

Some business rules are specific to a particular KPI, while others can be used for a variety of KPIs. In the KPI Repository, each KPI has a defined default rule, and a list of rules that can be used with that KPI. (If required, the default rule and the allowed rule list can be modified.) In addition, if the KPI's CI is a monitor CI, the rule assigned to the KPI is a monitor rule and if the KPI's CI is a group CI, the rule assigned to the KPI is a group rule. For details on the types of rules, see "Monitor Rules and Group Rules" on page 557.

When a KPI is added manually to a CI in the KPIs tab, it is assigned the default business rule defined for the KPI (the default rule is usually a rule for groups). For example, for the **RT Impact** KPI, there are two applicable rules: **Real Time Impact Rule** and **Sum of Values Rule**. When you add a new RT Impact KPI to a CI, the default rule for the KPI, **Sum of Values Rule**, is automatically assigned. You can change the assigned rule when adding or editing the KPI in the KPIs tab, by selecting a new rule from the list of allowed rules for the KPI.

♣ No Data Timeout for Transaction CIs

When a KPI is using a monitor rule (for example, the Transaction Availability Rule), the **Business Rule Parameters** area includes the **No data timeout** property. This property defines the number of seconds from the time the last sample was received for the KPI, until the KPI is timed out—at which point the KPI changes to decay status (gray).

The default value for the **No data timeout** property is generally taken from the monitor rule definitions (as defined in the Business Rule Repository). However, for Business Process Monitor transaction CIs, Dashboard calculates a new **No data timeout** value, based on the schedule for running the transaction. The calculation takes the schedule interval (defined in End User Management Administration) for the business process profile that contains the transaction (default value = 15 minutes) and adds an additional 90 seconds. For example, for a transaction with a schedule interval of 15 minutes, the **No data timeout** value is 990 seconds. (For details on defining the profile schedule, see "Data Collectors Page" in *Using End User Management.*)

This calculation method means that the timeout value is automatically adjusted to align with changes made to the profile schedule interval in End User Management Administration, so that the KPI is not incorrectly timed out. If there is more than one scheduling scheme in effect, the following rules are used for the calculation:

➤ If multiple schedules are defined for a profile running on a Business Process Monitor instance, the largest schedule interval is used (all schedules are treated equally, whether they apply to the whole week or part of the week).

➤ If the profile is assigned to several locations, each with a different schedule, then smallest interval from amongst the locations is used (after first applying the rule above).

🔷 KPI Objectives

The KPI objectives define the standards for allocating business status to the KPI.

The following sections describe objectives and how to define them for a KPI.

About Status and Objectives

The status displayed for a KPI in Dashboard provides an indication of how well a business process or system is meeting your business objectives. Based on traffic light colors (with additions), the Dashboard shows you if the KPI measurement is meeting the objective requirements (green), or is critically failing (red), or is at some business risk level between the two.

Five statuses are available in Dashboard (for active status), each representing a different level of business performance:

➤ **OK** (green)

➤ **Warning** (teal)

➤ **Minor** (yellow)

➤ **Major** (orange)

➤ **Critical** (red)

Depending on the CI and KPI types, active status may be represented in Dashboard using from two to all five of these status levels. In most cases (not for SiteScope measurements), the KPI is assigned a status as follows:

➤ The business rule calculates a measurement for the KPI.

➤ The calculated measurement is compared with defined objective values.

343

➤ The KPI is assigned a status according to where the measurement falls within the objectives. For example, a KPI measurement of 50% may fall within the definition for the **Minor** objective, so the KPI is assigned Minor status (yellow).

The objective values used for each KPI can originate from various sources:

➤ The business rule definitions in the Business Rule Repository provide default objective values for every rule that uses objectives. The business rules generally define different objective values for each of the five statuses used in Dashboard. You can define new default objective values for a business rule, as described in "Rule Details Dialog Box" on page 654.

➤ The source adapter may specify specific objective values to be used with the business rule for a KPI. These values override the values from the Business Rule Repository. You can modify the template for a source adapter to define custom objective values, as described in "Modify an Adapter Template" in *Model Management*.

➤ The source adapter may specify reference values for the objective parameters, so that the objective values are taken from the threshold values defined in End User Management Administration. These values override the values from the Business Rule Repository.

➤ You can modify the objective values for an individual KPI in the Dashboard Administration KPIs tab, while adding or editing a KPI. The new values override values from the source adapter or from the business rule. For details, see "No Data Timeout for Transaction CIs" on page 342.

SiteScope Monitoring CIs

For SiteScope monitoring CIs, KPI status is based on the status received from SiteScope (calculated according to the thresholds defined in SiteScope). Three status levels are used in Dashboard:

➤ **OK** (green) in Dashboard corresponds to **Good** or **OK** status in SiteScope

➤ **Minor** (yellow) in Dashboard corresponds to **Warning** status in SiteScope

➤ **Critical** (red) in Dashboard corresponds to **Error** status in SiteScope

The SiteScope status definitions cannot be changed in Dashboard, so the business rules for SiteScope KPIs do not include objective values.

End User Monitoring CIs

For end user monitoring CIs (from Business Process Monitor, Real User Monitor), KPI status is calculated by comparing the KPI measurement with objective values.

➤ For **Business Process Monitor** transaction CIs, the KPI objective values are either taken from End User Management Administration or the rule definition:

➤ For CIs using the **Transaction Performance Rule** (ID# 13), the Business Process Monitoring source adapter references the transaction thresholds defined for the corresponding monitoring object in End User Management Administration. The threshold values map to KPI objective values for three status levels in Dashboard: **OK**, **Minor**, and **Critical**.

➤ For CIs using the **Transaction Availability Rule** (ID# 5), KPI objectives are taken from the default values for the rule in the Business Rule Repository. The rule defines objective values for all five status levels in Dashboard.

➤ For **Real User Monitor** monitoring CIs, depending on the rule used, the KPI objective values are taken from the Real User Monitor source adapter, End User Management Administration, or the rule definition. For example:

➤ For RUM Application Error Monitor CIs using the **RUM Event Monitor Volume Rule** (ID# 73), the objective values are defined directly in the source adapter. The objective values defined for this rule use four of the Dashboard status levels: **OK**, **Warning**, **Minor**, and **Critical**.

➤ For RUM Page Monitor CIs using the **RUM Page Monitor Availability Rule** (ID# 49), the source adapter references the **Availability** threshold defined in End User Management Administration for the page. This is a single value, so two status levels are used in Dashboard: **OK** and **Critical**.

➤ For RUM Sessions Monitor CIs using the **RUM Session Monitor Availability Rule** (ID# 52), the source adapter does not define objective values, so KPI objectives are taken from the default values for the rule in the Business Rule Repository. The rule defines objective values for three Dashboard status levels: **OK**, **Minor**, and **Critical**.

For all end user monitoring CIs, you can edit the objective values in the KPIs tab to use as many of the status levels as you require, as described in "Defining Logical Objectives" on page 346.

Warning: KPIs created for CIs by the source adapter templates, frequently have objective values that differ from the default ones used by the business rule. However, when editing one of these KPIs in the KPIs tab, if you select a different rule and then revert to the original rule, the original objective values are replaced with the rule default values.

Defining Logical Objectives

The objectives values for a KPI should cover the whole spectrum of possible active measurements for that KPI, which correspond to the **OK**, **Critical**, **Major**, **Minor**, and **Warning** statuses. The objectives do not include the KPI values corresponding to the **No Data**, **Downtime**, and **Info** statuses.

The KPI measurement is evaluated against each objective level, starting from **OK** (green), and continuing (in order) to **Critical** (red). This process stops at the first objective level into which the KPI measurement fits.

To define where the boundaries of each objective level falls, each objective from **OK** to **Major** is associated with an **Operator**. (The **Critical** objective definition is always **Otherwise**, meaning that this status is applied to all measurements that fall beyond the **Major** objective limit.) You can select the operator that matches your requirements; the same operator is applied to all objective levels.

The available operators are:

>
>=
<
<=

You must ensure that the objectives contain logical values (according to the data type) and are correctly ordered, and that the operator is logical for the order. For example:

➤ If you enter descending objective values, such as 70, 55, 40, 20, you must use operator > or >=, so that the **OK** objective covers all measurements greater than 70.
For a KPI measurement of 88: **88** >= **70** is true, so assigned status is **OK**.
For a KPI measurement of 18: evaluation of the KPI measurement against every objective is false, so status falls into the **Otherwise** category and be assigned status **Critical**.

➤ If you enter ascending objective values, such as 10, 25, 35, 40, you must use operator < or <=, so that the **OK** objective covers all measurements less than 10.
For a KPI measurement of 7: **7** <= **10** is true, so assigned status is **OK**.
For a KPI measurement of 50: evaluation of the KPI measurement against every objective is false, so status falls into the **Otherwise** category and be assigned status **Critical**.
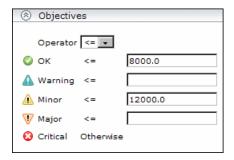
Excluding Statuses

Not all the statuses need be used for a KPI; for example, the OT Impact KPI by default uses only **OK** (green) and **Critical** (red) status. There are two methods used in Dashboard to exclude statuses, as described in the following sections.

Blank Objective Value

When the objective value for a status is left blank, Dashboard ignores that status during KPI status calculation. For example, the Performance KPI for a transaction may have the following objectives defined (taken from the threshold settings for the transaction in End User Management Administration):
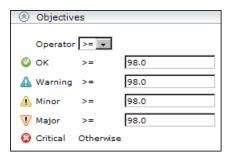
In this case, if the measurement for the KPI does not fall into the **OK** objective level, then **Warning** is skipped and the measurement is evaluated against the **Minor** objective level. If it does not fall into that level, **Major** is also skipped, and the KPI is assigned **Critical** status.

If you want to exclude statuses when editing the objective values for a KPI, it is recommended that you use this method.

Repeated Objective Value

Dashboard allocates status by starting at **OK** status, and evaluating the KPI measurement against each objective level until the right level is found. When an objective value is repeated for two or more statuses, the repeat occurrences are passed over and those statuses are not used.

For example, the Availability KPI for a RUM page monitor may have the following objectives defined (by using the Availability threshold setting in End User Management Administration for all four defined objective values):

In this case, if the measurement for the KPI is greater or equal to 98%, then it is given **OK** status. If it is less than 98%, then evaluation against the **Warning**, **Minor**, and **Major** statuses also does not give any result and these statuses are not used; the KPI is then assigned **Critical** status.

Example of Defining Objectives

A specific transaction monitor CI is using the Transaction Performance Rule. For this transaction, the required objectives are as follows:

➤ The objective for acceptable performance time is under 6000 milliseconds. An average performance time that reaches 6000 milliseconds is already of concern.

➤ Performance time of 8000 milliseconds is considered seriously problematic.

➤ Performance time of 10000 milliseconds is considered critical.

In addition, **Warning** status is not required for this KPI.

In the Edit KPI window for the transaction's **Performance** KPI, the objective levels and operator are modified as follows:

When a measurement is calculated for the KPI from the incoming performance data, the measurement is compared with the objectives assigned to the KPI as follows:

➤ For a measurement under 6000 milliseconds, status = **OK**

➤ For a measurement of 6000 milliseconds or more, but under 8000 milliseconds, status = **Minor**

➤ For a measurement of 8000 milliseconds or more, but under 10000 milliseconds, status = **Major**

➤ For a measurement of 10000 milliseconds or more, status = **Critical**

Units of Measurement for Objectives

The objectives use a unit of measurement, shown after the objective value box in the KPI **Objectives** area:

The unit is part of the business rule definition, and indicates the format of the calculated measurement. This format may reflect the units used by the incoming data (for example, **milliseconds** for performance time data), or it may be a new format applied as a result of the business rule calculations (for example, **dollars** for a financial loss calculation). If required, the default unit for a rule can be changed in the rule definition (as described in "Rule Details Dialog Box" on page 654).

For details about the available default units, see "Units of Measurement for Objectives" on page 542.

Example of Defining Objectives

A specific transaction monitor CI is using the Transaction Performance Rule. For this transaction, the required objectives are as follows:

➤ The objective for acceptable performance time is under 6000 milliseconds. An average performance time that reaches 6000 milliseconds is already of concern.

➤ Performance time of 8000 milliseconds is considered seriously problematic.

➤ Performance time of 10000 milliseconds is considered critical.

In addition, **Warning** status is not required for this KPI.

In the Edit KPI window for the transaction's **Performance** KPI, the objective levels and operator are modified as follows:

When a measurement is calculated for the KPI from the incoming performance data, the measurement is compared with the objectives assigned to the KPI as follows:

➤ For a measurement under 6000 milliseconds, status = **OK**

➤ For a measurement of 6000 milliseconds or more, but under 8000 milliseconds, status = **Minor**

➤ For a measurement of 8000 milliseconds or more, but under 10000 milliseconds, status = **Major**

➤ For a measurement of 10000 milliseconds or more, status = **Critical**

Selectors for KPIs

Monitoring CIs are CIs that are intended to receive real-time data from the data samples sent by the external system (purely logical CIs do not receive data samples). The data samples, containing information collected by a monitoring system (either HP or third-party), are supplied to HP Business Availability Center over the bus.

When a monitoring (leaf) CI has a KPI and associated business rule that are intended to be applied to actual data samples, the KPI properties include a **selector**. A selector is a filter definition that defines which samples are relevant for the KPI.

The Business Logic Engine filters the data samples arriving on the bus using selectors, which are set using Dashboard Administration. A selector is defined as part of the monitor rule for a KPI attached to a monitoring CI. The selector identifies and catches the data that is relevant for the CI and the KPI.

A different selector can be used by each KPI with an associated monitor rule, enabling (when required) the use of different samples for each KPI.

You can define selectors as explained in the following sections:

➤ "Monitoring CI in HP Universal CMDB" on page 353

➤ "Dynamic Node Factory CIs" on page 353

Monitoring CI in HP Universal CMDB

When a monitoring CI is added to the HP Universal CMDB by a monitoring adapter, a selector is automatically defined for each of the default KPIs for the CI. For details, see "Predefined Monitoring Views" in *Model Management*.

Dynamic Node Factory CIs

The selector is defined directly as part of the CI definition, not in a KPI. The selector used by a Dynamic Node Factory can be defined and/or edited in the IT Universe Manager tab of CMDB Administration, as described in "Working with Dynamic Node Factory Overview" in *Model Management*. The functionality and definitions for a Dynamic Node Factory selector are the same as for a KPI selector, as described in this section.

KPI Assignments

You can create or customize a KPI assignment rule for each CI type. An assignment rule includes a condition and a task. The condition describes specific characteristics of a CI. The task describes the context menus, KPIs, rules, rule parameters, and selectors that are to be assigned automatically to the CI when the condition occurs, if the assignment is running. For details, see "Define Assignment Configuration Dialog Box" on page 451.

EMS

The mechanism used to integrate EMS (Enterprise Management Systems) software into HP Business Availability Center, includes an assignment rule mechanism. The assignment rule mechanism is triggered when a specific monitor CI attribute is updated. An assignment rule includes a condition and a task. The condition describes specific characteristics of a CI. The task describes the context menus, KPIs, rules, rule parameters, and selectors that are to be assigned automatically to the CI when the condition occurs, if the assignment is running. The task description includes a selector. For details, see "Define Assignment Configuration Dialog Box" in *Solutions and Integrations*.

Source Adapters

For information on editing selector definitions in the source adapters, see "Define Selectors" in *Model Management*.

KPI Definition in Dashboard

If required, you can edit the default KPI selectors in the KPIs tab. You can also attach new KPIs to a monitoring CI, assign a monitor rule and manually define the selector. For more information about defining selectors, see "Define Selectors" on page 379, "Set Up User Mode Functionality" on page 386, or "Set Up User Mode Functionality" on page 386.

KPIs for User Modes
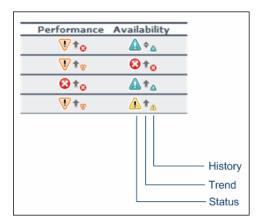
HP Business Availability Center provides the option to define Dashboard KPIs for two different user types (modes): **operations** and **business**. This option enables the creation of two versions of a single KPI, where each KPI version is geared towards the particular viewing requirements of one of the user types. Each user type sees the appropriate version of the KPI in the Dashboard views.

For example: You might want to create two versions of the Availability KPI, so that the Availability KPI for an operations user shows Critical status (red) when transaction availability is below 30%, and the Availability KPI for a business user shows Critical status when transaction availability is below 20%.

KPI Status

For each CI, Dashboard displays real-time status in one or more KPI columns in the view.

Each KPI can include three icons: Status, Trend, and History.

A color-coded icon is displayed for each KPI in a view, representing the status assigned to that component for its current performance level. In addition to the main status icon for a KPI, the KPI column can contain additional icons showing trend and history for the CI under that KPI.

The status of a KPI in Dashboard provides an indication of how well a business process or system is meeting your business objectives. Based on traffic light colors (with additions), the Dashboard shows you whether the KPI measurement is meeting the objective requirements (green), is critically failing (red), or is at some business risk level between the two (teal, yellow, orange). For more details on objectives, see "KPI Objectives" on page 343.

The status of each KPI is calculated using a business rule. A different business rule may be used for a parent CI and a child CI with the same KPI attached. The business rules are defined for the KPI in Dashboard Administration. For details on the rules, see "List of Dashboard Business Rules" on page 578.

This section includes the following topics:

➤ "Types of CIs" on page 356
➤ "Colors of KPI Statuses Used in Dashboard" on page 357
➤ "Status Scores" on page 360
➤ "Statuses and Group Rules" on page 360
➤ "Influence of Must and Weight on Status" on page 361

Types of CIs

There are two types of CIs whose status is calculated differently:

➤ **Monitor CI**

Monitor CIs receive real data from data samples. These data samples are used to calculate the status of the KPIs attached to the monitor CIs.

The foundation of status definition for all monitor CIs is a comparison of performance metrics with objective values.

➤ **Group CI**

For group CIs (all CIs except monitor CIs), Dashboard displays a status icon that represents a "summary" of the status for the child components (that is, the CIs that belong to the lower level in the hierarchical structure).

The Details tooltip for each status icon provides additional information regarding the calculation method in use for the KPI: the KPI name, the CI name and the KPI status, the time and date when the status was changed to its current value, and a warning that states that no update was received.

Details - Performance	
CI name:	grayray
Status:	Not up to date
Held status since:	7/10/08 04:38:05 PM
Warning:	No updates received since 7/16/08 07:04:26 PM

Note: The color displayed for a CI icon in Dashboard represents a summary of interim status values for a predefined duration (the default duration value is generally 300 seconds). The calculation of status values is an ongoing process, using samples collected every 60 seconds (default granularity value), thus the interim status may actually change several times over the duration without causing any change in the color of the icon. For example, if the icon for a transaction is red at the beginning of a duration, and during the duration the interim status changes from red to green and back to red, at the end of the duration the icon is still red.

Colors of KPI Statuses Used in Dashboard

The following shows the main status levels that are used to show status for KPIs in Dashboard (note that some of the Dashboard KPIs use text in place of icons, but use the same color coding to indicate status as shown here):

Icon	Description	Status Name	Numerical Code	Definition
	Red circle with "X"	Critical	0	The measurement calculated for the KPI fell within the value range for the **Critical** objective.
	Orange triangle with exclamation mark	Major	5	The measurement calculated for the KPI fell within the value range for the **Major** objective.

Icon	Description	Status Name	Numerical Code	Definition
	Yellow triangle with exclamation mark	Minor	10	The measurement calculated for the KPI fell within the value range for the **Minor** objective.
	Teal circle with exclamation mark	Warning	15	The measurement calculated for the KPI fell within the value range for the **Warning** objective.
	Green circle with check mark	OK	20	The measurement calculated for the KPI fell within the value range for the **OK** objective.
	Dark blue circle with lowercase **i**	Info	-1	The KPI has a value and no status. The reason is that the KPI's objectives have not yet been specified. For details on setting the objectives, see "Objectives Area" on page 402.
	Light blue circle with question mark	Not up to date (Decay)	-2	The following cases might be the cause of the KPI's status: ➤ The KPI has passed a timeout period during which no new information has been received. The default timeout period is 15 minutes, and the default decay status color is light blue. ➤ No performance measurement data has yet been received for this KPI. This may be the case if no measurements have been taken for the CI in the period since starting Dashboard or Business Process Monitor.

Icon	Description	Status Name	Numerical Code	Definition
	Gray with white slash	Stopped	-3 (Stopped)	The corresponding profile/group/monitor for the CI is currently disabled. When the stopped period finishes, the status icon changes to Not up to Date until data is received for the CI.
	White circle with gray outline and grey back slash	Downtime	-4 (Downtime)	The corresponding profile/group/monitor for the CI is currently disabled. When the downtime period finishes, the status icon changes to Not up to Date until data is received for the CI.
-	Gray with white center	Not applicable for this CI	N/A	This KPI is not applicable for the CI.

Note:

➤ The numerical code is used in HP Business Availability Center files to perform calculation instead of the corresponding status.

➤ To change the color of the icons used at each status level, you can customize some of the icons, or complete sets of icons. For details, see "Change the KPI Status Icons" on page 394.

➤ Change icons indicate when a change was made to a specific static attribute of a specific CI in the HP Universal CMDB. For details, see "Monitoring Changes in Dashboard Overview" on page 111.

For Trend and History status, see "Trend and History" on page 362.

Status Scores

This section describes how statuses are assigned to KPIs when only three main statuses (0, 10, and 20) are used instead of five statuses.

The five real-time statuses and their values are listed in the **Value** and **Real-time status** columns of the table.

In most rules, only the main three statuses (0, 10 and 20) are used to calculate the status. The calculations are assigned statuses according to the values listed in the **When using only three values** column. The colors assigned to the values and statuses are listed in the **Colors** column.

Value	Real-time status	When using only three values	Colors
0	**worst**	0	red
5	**bad**	0 < score < 7.5	orange
10	**middle**	7.5 to 12.5 (inclusive)	yellow
15	**good**	12.5 < score < 20	teal
20	**best**	20	green

Note: Only relevant statuses (0-20) are taking into consideration ("gray " statuses are ignored).

Statuses and Group Rules

Some group rules select the worst or best status for child CIs according to the following groups:

Groups	Statuses
first group	**OK, Warning, Minor, Major, Critical**

Groups	Statuses
second group	**Info**
third group	**No Data, Downtime, Stopped**

There is a priority between the groups. The first group of statuses has the highest priority, the second group the second priority and the third one the last priority.

The child CIs of a specific CI may have statuses in different status groups. The status of the parent CI is taken from the group with the highest priority. The statuses of the child CIs in the other groups are not taken into consideration.

For example:

➤ The child CIs of a specific CI have the **Critical**, **Info** statuses; the status for the parent CI, when calculated using the Worst Child rule is: **Critical**.

➤ The child CIs of a specific CI have the **Critical**, **Warning**, and **No Data** statuses; the status for the parent CI, calculated using the Worst Child rule is: **Critical**.

Influence of Must and Weight on Status

When **Must** and **Weight** properties have been defined for the relationship between a parent CI and a child CI, these properties have an impact on the status calculations for the KPIs of the parent CI.

Must and **Weight** can be used to qualify a relationship. **Weight** is used for weighted percentage status calculations. **Must** is used for dominant child status calculations.

The dominant and/or weight information affects only the status of the group to which this CI belongs, and does not affect the status of the CI itself. The status of a group CI is based on its child CIs, and the status of a monitor CI is based on the information received from the monitoring source.

For more details on **Weight** and **Must**, see "Understanding the Percentage Rule" on page 560.

🔩 Trend and History

The following status levels are used to show historical and trend status for monitor CIs in Dashboard:

➤ **Trend Status**

The trend status has three positions: up, down, and no change. It shows the trend of the real-time status.

Icon	Description	Status	Status Definition
↓	Small gray downward arrow	Downward trend	Real-time status shows a downward trend.
↕	Small gray double-sided arrow	Stable trend	Real-time status shows a stable trend.
↑	Small gray upward arrow	Upward trend	Real-time status shows an upward trend.

➤ **History Status**

The history status can display the worst status or the average status over a time period.

Icon	Description	Status	Status Definition
🟢	Small green circle with checkmark	Historical OK	All performance measurements fell within the **OK** objective level over a time period up to the present.
🔺	Small yellow triangle with exclamation mark	Historical Minor	At least one performance measurement fell within the **Minor** objective level, but no measurements fell within the **Major** objective level, over a time period up to the present.

Icon	Description	Status	Status Definition
	Small orange triangle with exclamation mark	Historical Major	At least one performance measurement fell within the **Major** objective level, but no measurements fell within the **Warning** objective level, over a time period up to the present.
	Small teal triangle with exclamation mark	Historical Warning	At least one performance measurement fell within the **Warning** objective level, but no measurements fell within the **Critical** objective level, over a time period up to the present.
	Small red with "X"	Historical Critical	At least one performance measurement fell within the **Critical** objective level, over a time period up to the present.

Note:

➤ When a CI has no history or trend data (for example, the CI status is uninitialized or stopped) or when history or trend data is not relevant for the CI's KPI, the history or trend icons are not displayed

➤ If a transaction in an HP Virtual User Generator script is renamed, Business Availability Center considers it as a new transaction. A new BPM Transaction from Location CI is created in the CMDB using the new name, and the CI with the old transaction name is removed after it stops receiving samples. In Dashboard, the new CI does not display trend and history status data from before the transaction name change.

The way the trend and history status is determined is described in the following sections:

➤ "History Calculation" on page 364

➤ "Trend Calculation" on page 365

➤ "Modifying the Trend and History Status Calculations" on page 365

History Calculation

The history status icon displays either the worst status or the average status for the CI's KPI during a specified time period.

The calculation method for history status is determined by the value set for the **HistoryType** parameter (one of the global parameters in the Business Rule Repository, described in "List of Dashboard Business Rules" on page 578). The possible calculation methods are **Worst** (default value) or **Average**. Whichever calculation method is used, only status scores that have meaning (scores 0 to 20—the non-gray icons) are taken into consideration.

➤ **Worst.** Takes the worst status over the period of time specified in the **HistorySize** parameter (also one of the global parameters).

For example: if HistorySize is 60 minutes (default value) and the KPI's values for the last 60 minutes are: 10, 10, 5, 0, -2, 20, the worst status is 0, so the history icon is red.

➤ **Average.** Takes the average status over the period of time specified in the **HistorySize** parameter (Simple Moving Average). The calculation result is rounded to the nearest of the following values: 0, 5, 10, 15, or 20.

For example: if HistorySize is 60 minutes and the KPI's values for the last 60 minutes are: 10, 10, 5, 0, -2, 20, the Average status is 10 (rounded from (10+10+5+0+20)/5=9), so the history icon is yellow.

Trend Calculation

The trend status icon shows the trend in real-time status for the CI KPI, using three directions: up, down, and no change.

Trend analysis is performed by comparing the Simple Moving Average (SMA) value for a long window with the SMA for a short window. If the short window SMA is higher than the long window SMA, the trend is considered to be up. If the long window SMA is higher, the trend is considered to be down. The SMA is calculated only on status scores that have meaning (scores 0 to 20—the non-gray icons).

➤ **Long window SMA.** Based on the mean status of a KPI over the period of time specified in the **HistorySize** parameter (default = 60 minutes), one of the global parameters in the Business Rule Repository, described in "List of Dashboard Business Rules" on page 578.

➤ **Short window SMA.** Based on the mean status of a KPI over the period of time defined by (**TrendRate * HistorySize**). The **TrendRate** parameter (default = 0.3) represents the time rate between the long and short window, and is defined in the hidden parameters described in "Modifying the Trend and History Status Calculations" on page 365.

Modifying the Trend and History Status Calculations

You can modify the way the trend and history statuses are calculated and displayed, by editing certain rule parameters. A rule parameter can be set in three places:

➤ As part of the global rule parameters that apply to all rules and affect all CIs. For details on editing global parameters, see "Global Attributes Dialog Box" on page 648.

➤ Directly for a rule, so that it affects all CIs that use this rule. For details on editing rule parameters, see "Rule Details Dialog Box" on page 654.

Some parameters for trend and history statuses are predefined and can be viewed and edited in the Business Rule Repository page; others are hidden, but can be manually added on the Repositories tab if you want to override the parameter default value.

🍀 Persistent Data and Historical Data

A KPI whose data is persistent is attached to a CI whose **Save KPI data over time for this CI** option has been selected. For details, see "KPIs Page" on page 408. This option is selected by default for Business Process, Line of Business, and Monitor Application CIs. This option is not available for Monitor type CIs.

For each CI with the **Save historical data for this CI** option, the following information is stored in the database:

➤ Every status change for each KPI

➤ The current calculated value for each KPI, read at regular time intervals (the default time interval is 15 minutes)

When the option is first selected, the current status for all of the CI KPIs is written to the database. As long as the settings remain the same, each time there is a change in status for one of the CI's KPIs (for example, from Critical to OK), the status change is written to the database.

Note: Saving historical data for long periods of time or for many CIs and KPIs can require a lot of database memory, so this option should be used with care. When you no longer require data to be saved for a CI, clear the **Save historical data for this CI** check box for that CI.

This capability is used in the Dashboard reports. For details, see "Dashboard Reports" on page 265.

⚓ Configure a KPI – Workflow

This section describes the processes for the main task flow used to configure KPIs, and gives examples.

Configure a KPI using the steps described in this section.

This task includes the following steps:

➤ "Define or Edit KPIs" on page 367

➤ "Set Up the User Mode for the KPI – Optional" on page 368

➤ "Attach KPIs to CIs" on page 368

➤ "Change the Default Business Logic Engine Calculation Time Interval – Optional" on page 368

➤ "Change the No Data Timeout Value for Transaction CIs – Optional" on page 369

➤ "Modify the Number of CIs Monitored for Change in Real-Time" on page 369

➤ "Monitor CI Property Changes in Real-Time" on page 370

➤ "Customize Trend and History Statuses and Icons – Optional" on page 370

➤ "Modify the Trend and History Status Calculations" on page 371

➤ "View the Result in Dashboard" on page 371

1 Define or Edit KPIs

You can globally define or edit a KPI. For details, see "KPI Repository page" on page 535.

You can edit a specific KPI. For details, see "KPI Details Dialog Box" on page 537.

2 Set Up the User Mode for the KPI – Optional

HP Business Availability Center provides the option to define Dashboard KPIs for two different user types (modes): **operations** and **business**. This option enables the creation of two versions of a single KPI, where each KPI version is geared towards the particular viewing requirements of one of the user types. For details, see "KPIs for User Modes" on page 355.

For details on the User Mode functionality, see "Set Up User Mode Functionality" on page 386.

For a detailed example, see "Example – Scenario of KPI Versions for User Modes" on page 389.

3 Attach KPIs to CIs

You can attach additional KPIs to any CI. You can attach one of the default KPIs provided with HP Business Availability Center, or attach a KPI that you defined in the KPI Repository.

For details on attaching a KPI to a CI, see "Attach KPIs to CIs and Configure the KPIs" on page 374.

If you have set a version for a KPI, manually attach the KPI versions to the CIs to which you want them to apply. For details, see "Attach KPI Versions to CIs" on page 388.

4 Change the Default Business Logic Engine Calculation Time Interval – Optional

You can change the default Business Logic Engine calculation time interval in the Infrastructure Settings page.

Select **Admin** > **Platform** > **Setup and Maintenance** > **Infrastructure Settings**, click **Foundations**, select **Online Business Logic Engine**, and locate the **Model calculation interval** entry in the **Calculation Related Settings** table. Edit the value as required.

5 Change the No Data Timeout Value for Transaction CIs – Optional

When a KPI is using a monitor rule (for example, the Transaction Availability Rule), the **Business Rule Parameters** area includes the **No data timeout** property. This property defines the number of seconds from the time the last sample was received for the KPI, until the KPI is timed out—at which point the KPI changes to decay status (gray). For details, see "No Data Timeout for Transaction CIs" on page 342.

6 Modify the Number of CIs Monitored for Change in Real-Time

For a limited number of CIs, Dashboard can monitor for changes to the CI properties (or changes to the properties of the CI's child CIs) in real-time.

This information is in addition to the Dashboard Change Report, which shows a historical report on changes to properties for CIs over a period of time. (For details on the Change Report, see "Change Report Page" in *Model Management*.)

For details on where to set the **Monitor changes** check box see "KPIs Page" on page 408.

You can set the monitor changes option for up to 20 CIs. Once 20 CIs have been configured, a message is displayed when you try to set the option for another CI, stating that the limit has been reached.

If you then clear the option for one or more of the configured CIs, the option becomes available again for all CIs, until the 20 CIs limit is again reached.

Note: To change the 20 limit, select **Admin** > **Platform** > **Setup and Maintenance** > **Infrastructure Settings**, click **Applications**, select **Dashboard Application**, and locate the **Maximum monitored CIs** entry in the **Change Impact Properties** table. Modify the value as required. However, change this value with caution to avoid too much load on the system.

When the monitor changes option has been set for a CI, Dashboard continuously monitors that CI and all its child CIs, to see if a change occurs in one of the significant properties defined for the CIs.

The significant properties vary for each CIT, according to the CIT definition in **Admin** > **CMDB** > **CI Type Manager**. In CI Type Manager, in the **Attributes** tab for the CIT, the **Change Monitored** column must be selected for a property, in order for that property to be significant and therefore monitored. For more information on CIT definitions, see "CI Type Manager" in *Model Management*.

If a change occurs in one of the significant properties for the CI or the CI children, an icon is displayed in Dashboard beside the CI name. For more information, see "Monitoring Changes in Dashboard Overview" on page 111.

After a change occurs, the change icon is displayed for 24 hours (default value). You can change the default value, as described in "Customize the Change Period" on page 113.

7 Monitor CI Property Changes in Real-Time

For a limited number of CIs, Dashboard can monitor for changes to the CI properties (or changes to the properties of the CI's child CIs) in real-time. For details, see "Attach KPI Versions to CIs" on page 388.

This information is in addition to the Dashboard Change Report, which shows a historical report on changes to properties for CIs over a period of time. For details, see "Change Report Page" in *Model Management*.

8 Customize Trend and History Statuses and Icons – Optional

You can:

➤ **Customize the Trend or History Statuses.** For more information on how to customize your trend and history statuses and explanations about how those statuses are calculated, see "KPI Status" on page 355.

➤ **Customize the set of Trend or History Icons.** You can customize the set of Trend and History icons. For details, see "Change the KPI Status Icons" on page 394.

9 Modify the Trend and History Status Calculations

You can modify the way the trend and history statuses are calculated and displayed, by editing the hidden rule parameters. For details on the parameters, see "Hidden Parameters" on page 650.

A rule parameter can be set in three places:
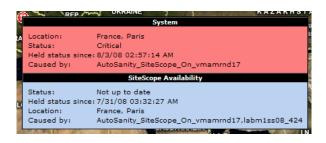
➤ As part of the global rule parameters that apply to all rules and affect all CIs. For details on editing global parameters, see "Global Attributes Dialog Box" on page 648.

➤ Directly for a rule, so that it affects all CIs that use this rule. For details on editing rule parameters, see "Rule Details Dialog Box" on page 654.

10 View the Result in Dashboard

If you have defined user modes for a KPI, each user type sees in Dashboard the appropriate KPI version for their assigned user mode (operations or business user), for all KPIs that are defined as specific to a user mode. Users who are not assigned a user mode (undefined) see KPIs for both modes, as do system administrators:

In the Geographical Map and Custom Map tabs, status at a location is based on whichever KPI versions the user sees in Dashboard:

🖋 Attach a PNR KPI to a CI – Scenario

The PNR (Point of No Return) KPI enables you to view how well agreement objectives are being met. When the PNR KPI is defined for a CI, a bar is displayed in Dashboard indicating how much more time (in percentages) the CI can be unavailable before the agreement is in breach of contract. For an explanation of unavailability, see "Dashboard PNR Rule" on page 598.
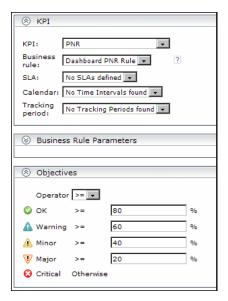
Perform the following procedure to view Service Level Management data in an information bar in Dashboard.

To set up Dashboard to display Service Level Management data:

1 Create an agreement. For details, see "Agreement Wizard" in *Using Service Level Management.*
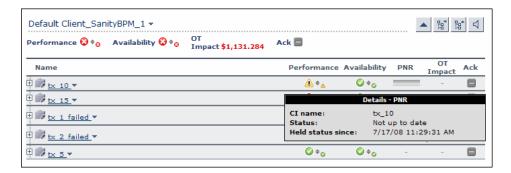
The agreement must include a CI with an attached Availability KPI and/or a System Availability KPI, for the Dashboard PNR KPI to show data in reports. If both KPIs are attached to the CI, the PNR KPI is calculated by using only the Availability KPI. If only the System Availability KPI is attached to the CI, the PNK KPI is calculated using the System Availability KPI.

2 In Dashboard Administration, attach a PNR KPI to the same CI. For details on attaching a KPI, see "No Data Timeout for Transaction CIs" on page 342. During KPI creation:

```
⊗  KPI

KPI:          PNR                    ▼

Business      Dashboard PNR Rule  ▼        ?
rule:

SLA:          No SLAs defined  ▼

Calendar:  No Time Intervals found  ▼

Tracking      No Tracking Periods found  ▼
period:

⊗  Business Rule Parameters


⊗  Objectives

       Operator  >=  ▼

  ✓ OK        >=      80          %

  ⚠ Warning   >=      60          %

  ⚠ Minor     >=      40          %

  ⚠ Major     >=      20          %

  ✗ Critical  Otherwise
```

a Choose the PNR KPI.

b Select the agreement whose data is to be displayed in Dashboard.

c Select the calendar and tracking period. These parameters are defined when creating the agreement. For details, see "Define Agreement Properties Page" in *Using Service Level Management*.

d Add the objective's ranges that Dashboard uses to calculate when unavailability time approaches breach of contract levels.

3 View the results in Dashboard: **Applications** > **Dashboard** > **Console**. Choose the view and select the CI.

For details on the information that Dashboard displays in the Console page, see "Console Overview" on page 143.

Attach KPIs to CIs and Configure the KPIs

You can attach additional KPIs to any CI. You can attach one of the default KPIs provided with HP Business Availability Center, or attach a KPI that you defined in the KPI Repository. For details on the KPI repository, see "KPI Repository Overview" on page 507.

This task includes the following steps:

➤ "Attach a KPI to One or More CIs" on page 374

➤ "Define the KPI Objectives" on page 375

➤ "Define the KPI Selector" on page 375

1 Attach a KPI to One or More CIs

There can be only one instance of each KPI for a CI. Dashboard Administration also gives you the option of attaching a KPI to multiple CIs. The KPI is added to all CIs that do not already have that KPI attached. All instances of the KPI have the same defined business rule and properties.

For information on KPI functionality, see "How Dashboard KPIs Work" on page 338.

For details on attaching a new KPI to a single CI or to multiple CIs, see "How Dashboard KPIs Work" on page 338.

For each new KPI, define the KPI type and business rule. Where relevant, also define additional information required by the rule. Attaching a new KPI to a CI, and defining the KPI properties, must be undertaken with care; these actions can result in KPIs that give an inaccurate performance assessment in Dashboard. Please read the notes and limitations before proceeding. For details, see "Notes and Limitations for KPIs and CIs" on page 339.

2 Define the KPI Objectives

Dashboard uses objectives to calculate the status of a KPI. You can modify the objectives of a specific KPI. For details, see the Objectives area in "Add KPI to Multiple CIs/Edit KPI/Edit KPI for Child Transaction Dialog Box" on page 397.

3 Define the KPI Selector

Use selectors to filter the samples relevant for the KPI. For details, see "Define Selectors" on page 379.

🔧 Edit KPI Properties

You can edit KPI properties for individual KPIs in the Edit KPI window. You can also perform a multiple edit on certain KPI properties for transaction CIs.

Editing KPI properties must be undertaken with care; the changes can result in KPIs that give an inaccurate performance assessment in Dashboard. Read notes and limitations before proceeding. For details, see "Notes and Limitations for KPIs and CIs" on page 339.

This task includes the following steps:

➤ "Edit a KPI Properties" on page 376

➤ "Edit the KPI Properties for Multiple Transaction CIs" on page 376

1 **Edit a KPI Properties**

You can modify all properties for a defined KPI (apart from the KPI type), whether it is a default KPI for the CI, or a KPI attached by a user.

For details, see "Add KPI to Multiple CIs/Edit KPI/Edit KPI for Child Transaction Dialog Box" on page 397.

2 **Edit the KPI Properties for Multiple Transaction CIs**

The KPIs tab has a multiple edit function, enabling you to modify the Availability or Performance KPIs for all BPM Transaction from Location CIs in a group. This function enables you to define new business rule parameter values and/or objective values for all child transactions CIs that appear in a subtree of a view, in one operation.
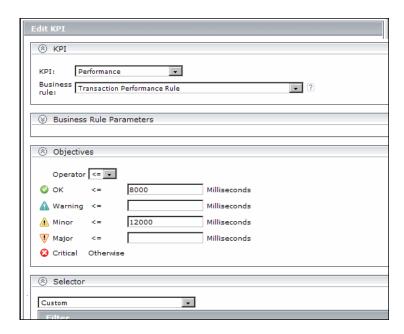
You can define the new values in the Edit KPI for Child Transactions window. Every new value you define replaces the previous value for that property, for each transaction CI in the subtree. Property boxes left blank in the Edit KPI for Child Transactions window do not affect the CIs. For details, see "How Dashboard KPIs Work" on page 338.

Before using the Edit KPIs for Child Transactions function, you should ensure that the planned new values are logical for all transaction CIs in the subtree. You should also review the Notes and Limitations section; for details, see "Notes and Limitations for KPIs and CIs" on page 339.

Example
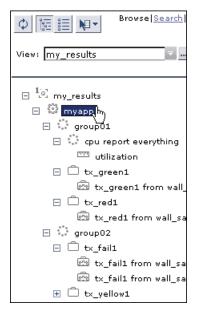
The following example describes editing the objective values for transaction
CIs in a subtree.

a In the **KPIs** tab, the Performance KPI objective values for every
transaction CI in the myapp subtree appear as in the following figure.
They are displayed by clicking the **Edit KPI** button for any of the
transaction CIs.
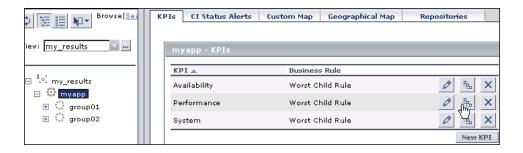
For this example, two additional objective values are added, to include
Warning and **Major** status levels for each transaction CI, and the **Minor**
objective value is modified.
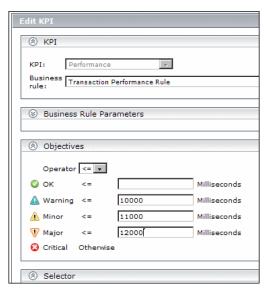
b In View Explorer, select the parent CI for the subtree—in this case, the Application CI myapp:
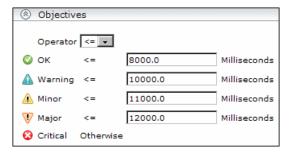
c In the right pane, click the **Edit KPIs for child transactions** button for the required KPI—in this case, the Performance KPI.

d In the Edit KPI for Child Transactions window, enter the required values—in this case, 10000 for **Warning** objective, 11000 for **Minor** objective, and 12000 for **Major** objective.

e After applying the changes, all transaction CIs in the myapp subtree have the following objective values defined:

🔨 Define Selectors

In the selector **Filter** area, you define selector expressions to filter the data samples, to target only those samples that are relevant for the KPI. A selector expression requires a **Field**, an **Operator**, and a **Value**, defined in that order. For more information, see "Selector Area" on page 403.

You can define selectors using predefined sample parameters, or create custom selectors. You can then combine those selectors to create complex filters with several selector expressions.

This task includes the following steps:

➤ "Define a Selector Expression Using Predefined Sample Parameters" on page 380

➤ "Define a Custom Selector" on page 383

➤ "Build Complex Filters" on page 384

1 Define a Selector Expression Using Predefined Sample Parameters

Define the selector expressions by selecting from metadata—predefined sample types and sample parameters in the database.
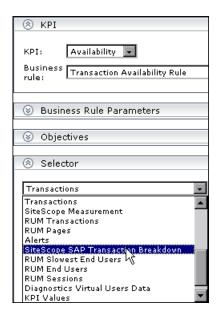
Note: You can also build a custom selector as explained below.

When defining or editing a selector using predefined sample data, you can select **Field** and **Operator** values from predefined lists. This definition method validates the field names and operators, and prevents errors that might occur when manually entering field names. It also simplifies the process of defining a selector.

The predefined fields use metadata, information on sample types collected from data samples arriving from various data sources (including HP data collectors and third-party data sources) and stored in the database. For explanations of the data samples and their fields, see "Data Samples" in *Reference Information*.

Example
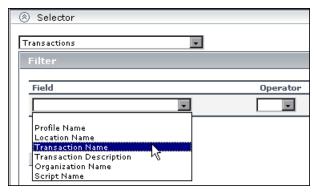
a Define the sample type that applies for this KPI. Select the sample type from the list at the top of the **Selector** area in the New KPI or Edit KPI window. The list is based on the sample types currently in the database.

For example, for a KPI that relates to transaction measurements, select sample type **Transactions** from the list.
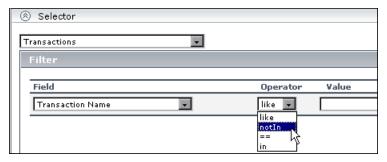
When you select a sample type from the list, all previously defined expressions for the selector are overridden, so the contents of the **Filter** box are automatically deleted.

The **Field** box in the first selector expression converts to a dropdown list, containing all valid options for the selected sample type. The **Field** box defines the required reference property in the data samples.

b Select an option from the **Field** list.

The **Operator** list is automatically updated so that it contains only those operators that are valid for the selected field. For example, if the selected field always contains a text string, then only the operators that are used with text are included in the list, such as **like**, **notIn**, **==**, **in**.

c Enter a value for the selected field in the **Value** box.
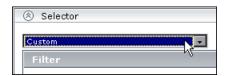
Note: The **Value** property is case sensitive and must be entered precisely as used in the data samples from the data source, or the selector fails. The recommended method is to take the values from the samples published on the bus.

2 **Define a Custom Selector**

Define the selector expressions by manually defining the sample type and sample parameters. You can build a custom selector using any field name, and, if required, can combine fields from two or more data types.

Note: You can have HP Business Availability Center automatically assign the default selector for the monitoring CI, by leaving the selector expressions blank in the New KPI/Edit KPI window. After clicking **OK** to close the window, HP Business Availability Center assigns the KPI the default selector for the CI, as used by the default KPIs attached to the CI.

When defining or editing a selector, you can build a custom selector by manually defining all information for the selector. Ensure that no sample type is defined in the list at the top of the **Selector** area in the New KPI or Edit KPI window (the box should display **Custom**).

If a sample type was previously selected in the list, and you then select **Custom**, all previously defined expressions for the selector are overridden and the contents of the **Filter** box are automatically deleted.

Every selector must include the definition of the sample type required for the KPI, so when manually defining a selector, at least one selector expression must contain this information. For example, for a KPI that relates to transaction measurements, the selector must catch transaction samples, which are defined by the sample type **trans_t** in the selector.

383

Note: The **Field** and **Value** properties are case sensitive and must be entered precisely as used in the data samples from the data source, or the selector fails. The recommended method is to take the values from the samples published on the bus. For details, see "Data Samples" in *Reference Information.*

To define a custom selector expression, enter the required reference property in the **Field** box, select an operator from the **Operator** list. You can select from any of the operators used in Dashboard, and enter the required value for the property directly in the **Value** box.

For details on samples, see "Sample: Transactions (trans_t)" in *Reference Information.*
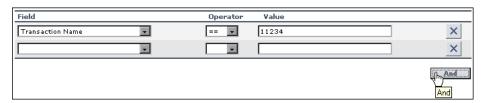
3 **Build Complex Filters**

You can use metadata to build a complex filter, by defining blocks of selector expressions that together form a complex logical expression:

➤ Narrow the filter by using a logical **And** operator to attach additional selector expressions to an expression block.

➤ Widen the filter by using a logical **Or** operator to add alternative expression blocks (each containing one or more selector expressions).
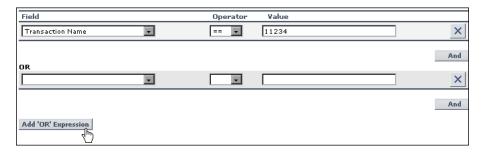
You can define as many selector expressions and blocks of selector expressions as required:

➤ To define an additional selector expression within a block, click the **And** button for that block. An additional empty selector expression row is displayed in the block.

Field	Operator	Value	
Transaction Name ▾	== ▾	11234	✕
▾	▾		✕
			And
			And

For example, you can define a filter that looks for transaction samples that contain both profile name X *and* transaction name Y.

➤ To define an alternative expression block, click the **Add 'OR' Expression** button. A new block is created, with an empty selector expression row.

Example
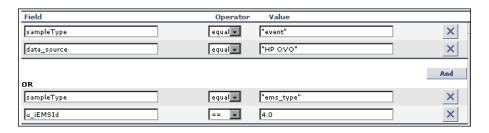
You can define a filter that looks for transaction samples that contain either transaction name X *or* transaction name Y.

You can add additional selector expressions to the new block using the **And** button for the block.

A data sample qualifies for the selector if all the selector expressions in a single expression block are TRUE for the data sample. For example, either selector expressions **a** and **b** and **c** in block 1 are all TRUE, or selector expressions **d** and **e** and **f** in block 2 are all TRUE.

Example of selector with two expression blocks.

🔨 Set Up User Mode Functionality

You can set up user mode functionality in HP Business Availability Center by defining the mode for users, defining the KPI versions for each mode, and attaching the KPI versions to the CIs.

This task includes the following steps:

➤ "Assign a User Mode" on page 386

➤ "Define KPI Versions for the User Modes" on page 386

➤ "Attach KPI Versions to CIs" on page 388

1 Assign a User Mode

There are two ways to assign a user mode to a user:

➤ The system administrator, when defining new users in the **Admin** > **Platform** > **Users and Permissions** > **User Management** page, can set **User Mode** to **Undefined**, **Operations User**, or **Business User**. By default, all new/existing users are set as **Unspecified** (meaning that they see KPIs for both modes in Dashboard).

➤ Users can change their own user mode in the **Admin** > **Personal Settings** > **General Settings** page. In the **User Mode** area, select the required mode from the **Select user mode** list.

After changing the mode in the General Settings page, you must log out of HP Business Availability Center and log in again to see the mode filtering work.

2 Define KPI Versions for the User Modes

The following steps describe how to define different versions of a KPI to use with each user mode. You can assign user modes to a new KPI that you define, or to an existing KPI by cloning or overriding the KPI. For more information, see "KPI Repository page" on page 535.

If you want one of the KPI versions for a user mode to automatically replace an existing KPI, then you must override the existing KPI and edit the new version.

It is recommended that you give a name to each KPI that is assigned a user mode that easily identifies the KPI with the appropriate user version. For example, you can add an appropriate suffix.

Example – Define KPI Versions For User Modes

a Access the **Admin** > **Dashboard** > **Repositories** > **KPIs** page.

b Define the business user version of the KPI:

➤ Add the required KPI to the Custom KPIs area by cloning or overriding a KPI, or creating a new KPI. Open the KPI for editing.

➤ In the displayed KPI Details window, give the new KPI/copied KPI an appropriate name. For example, add the suffix **_biz** (as in Availability_biz).

➤ Select **Business** in the **Applicable for User Mode** list.

c Define the operations user version of the KPI:

➤ Add the required KPI to the Custom KPIs area by cloning or overriding a KPI, or creating a new KPI. Open the KPI for editing.

➤ In the displayed KPI Details window, give the new KPI/copied KPI an appropriate name. For example, add the suffix **_ops** (as in Availability_ops).

➤ Select **Operations** in the **Applicable for User Mode** list.

Note: If you override a KPI, the overridden version of the KPI replaces the original KPI throughout Dashboard, so all CIs that are assigned the original CI (for example, Availability) are automatically updated to the new version (for example, Availability_ops).

---

d Edit the details for each KPI version, according to your requirements. For example, you might want different business rules to apply to each version. For more information, see "KPI Details Dialog Box" on page 537.

e To use a different version of a business rule with each KPI version, you must define the rule versions in the Business Rule Repository. For example, for two versions of the Availability KPI, you may require two versions of the Transaction Availability Rule, each with different default objective values.

For details on defining business rules, see "Customize a Business Rule" on page 566.

3 Attach KPI Versions to CIs

You can manually attach the KPI versions to the CIs to which you want them to apply.

➤ If the original KPI is already attached to CIs (for example, the Availability KPI is automatically attached to transaction CIs), then the KPI version that overrode the original (for example, Availability_ops) is automatically attached to the CIs instead. You can manually attach the second KPI version (for example, Availability_biz).

➤ If there are two new KPI versions, one for business and one for operations then for every applicable CI you manually attach the two versions (and delete the original KPI if it is not required).
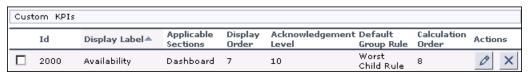
To attach the KPI versions to CIs, select **Admin > Dashboard > KPIs** page, add the KPI versions to each CI where they are required, so that the CIs have both versions of the KPI. You can add the KPI to multiple CIs in one operation. For example, you might want to define different objective values for the KPI. For KPIs that require selectors: Do not define anything in the **Selector** area, leave the selector expressions empty. Click **OK** to save the KPI details. The KPI version is added to each selected CI, and propagates up the hierarchy to the parent CIs. After you click **OK** to add the KPI to the CIs, HP Business Availability Center automatically replaces each blank selector with the default selector defined for the other KPIs attached to each CI. For details, see "How Dashboard KPIs Work" on page 338.

Example – Scenario of KPI Versions for User Modes

In the following example scenario, two versions of the Availability KPI are set up, one for each user mode. The Availability_ops version uses the default objective values; however, when the Availability_biz version is attached to CIs, different objective values are defined.
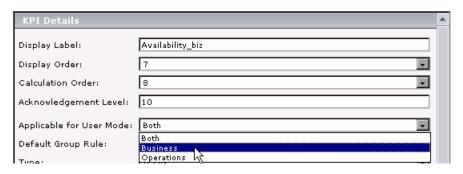
Proceed as follows to set up and use Availability KPI versions for user modes:

a Access the **Admin** > **Dashboard** > **Repositories** > **KPIs** page.

b In the **Factory KPIs** area, select the check box for the **Availability** KPI and click **Clone**. The cloned KPI is displayed in the **Custom KPIs** area.

Custom KPIs							
Id	Display Label ▲	Applicable Sections	Display Order	Acknowledgement Level	Default Group Rule	Calculation Order	Actions
☐ 2000	Availability	Dashboard	7	10	Worst Child Rule	8	✏️ ✕
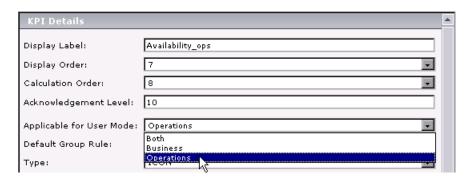
✏️   **c** Click the **Edit** buttonfor the cloned KPI. In the displayed KPI Details window, edit the KPI properties as follows:

➤ In the **Display Label** box, add the suffix **_biz** to the **Availability** label.

➤ Select **Business** in the **Applicable for User Mode** list.

KPI Details	
Display Label:	Availability_biz
Display Order:	7
Calculation Order:	8
Acknowledgement Level:	10
Applicable for User Mode:	Both
	Both
Default Group Rule:	**Business**
Type:	Operations

➤ Click **OK**.

d In the **Factory KPIs** area, select the check box for the **Availability** KPI and click **Override**. The old Availability KPI is shown as overridden, and the new version of the KPI is displayed in the **Custom KPIs** area.
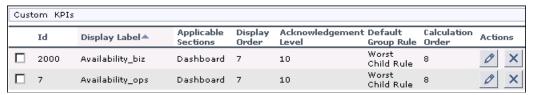
e Click the **Edit** button for the new KPI. In the displayed KPI Details window, edit the KPI properties as follows:

➤ In the **Display Label** box, add the suffix **_ops** to the **Availability** label.

➤ Select **Operations** in the **Applicable for User Mode** list.

➤ Click **OK**.

The KPI names are displayed in the **Custom KPIs** area.

	Id	Display Label▲	Applicable Sections	Display Order	Acknowledgement Level	Default Group Rule	Calculation Order	Actions
☐	2000	Availability_biz	Dashboard	7	10	Worst Child Rule	8	✎ ✕
☐	7	Availability_ops	Dashboard	7	10	Worst Child Rule	8	✎ ✕
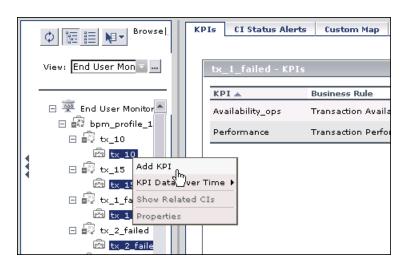
f Access the **Admin** > **Dashboard** > **KPIs** page and open the End User Monitors View. For all BPM Transaction from Location CIs, the Availability KPI has been replaced with the Availability_ops KPI.
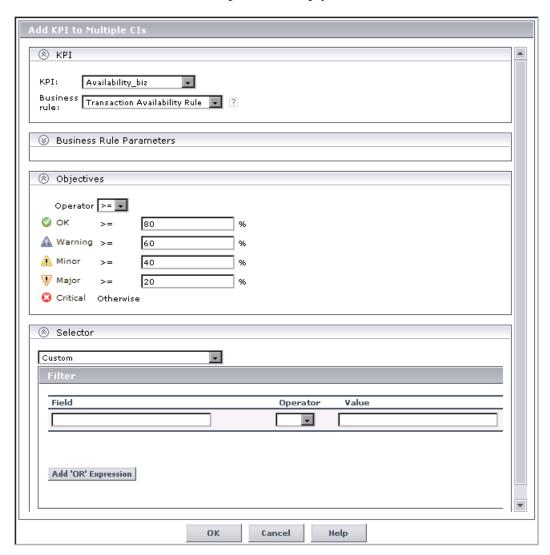
g Add the Availability_biz KPI to all BPM Transaction from Location CIs.
Use the keyboard CTRL key to select all the CIs, then right-click one of the
selected CIs and select **Add KPI**.
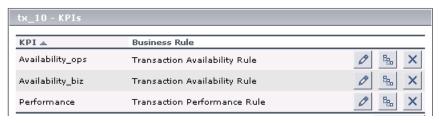
The Add KPI to Multiple CIs window opens.

h Edit the properties in the Add KPI to Multiple CIs Window as follows:

➤ Select **Availability_biz** in the **KPI** list.

➤ Select **Transaction Availability Rule** in the **Business rule** list.

➤ In the **Objectives** area, enter the objective values required for
Availability KPI in business user mode: 80, 60, 40, 20.

➤ Leave the selector expressions empty.

➤ Click **OK**. The **Availability_biz** KPI is added to the KPIs list for each selected CI.

tx_10 - KPIs				
KPI ▲	Business Rule			
Availability_ops	Transaction Availability Rule	✎	▤	✕
Availability_biz	Transaction Availability Rule	✎	▤	✕
Performance	Transaction Performance Rule	✎	▤	✕

The appropriate selector is automatically defined for each new KPI, by copying the selector definitions for the other KPIs attached to the BPM Transaction from Location CI. (You can click the **Edit** buttonfor the **Availability_biz** KPI to view the selector.)

The **Availability_biz** KPI also propagates up to the CI parents, using the default group rule for the KPI.

tx_10 - KPIs				
KPI ▲	Business Rule			
Availability_ops	Transaction Availability Rule	✎	▤	✕
Availability_biz	Transaction Availability Rule	✎	▤	✕
Performance	Transaction Performance Rule	✎	▤	✕

i In the **Applications** > **Dashboard** > **Console** page, you can see the Availability KPI versions as follows:

➤ For users assigned **Operations** mode:

➤ For users assigned **Business** mode:

A CI can display different status for each Availability KPI version (although each KPI has the same Availability score), because of the different objective levels defined for each version.

Change the KPI Status Icons

Different icons are used for the KPI status for each range specified in the **From/To** fields in the Parameter Details dialog box. For details, see "Parameter Details Dialog Box (KPIs)" on page 550.

If you want to customize the KPI status icons, create a new set of icons and, where applicable, add your icons to the appropriate directories and redirect the KPI's status parameters to those icons or replace the default icons with your customized icons using the same names.

Note: The recommended size for an icon should be 16x16 pixels.

For details on the default icons, see "Colors of KPI Statuses Used in Dashboard" on page 357.

To change the Dashboard KPI status icons:

You can do one of the following:

➤ Add your icons to the appropriate directory and specify their names in each one of the status parameters for the KPIs. For details on the user interface, see "KPI Details Dialog Box" on page 537.

➤ Replace the icon or icon set with the customized icons and give them the names of the default icons.

To find the location of the icon you want to replace, right-click the icon in the appropriate tab in Dashboard, select **Properties**, and view the icon's location in the **Address (URL)** field.

Make sure that you replace the icons set in the following directories:

➤ **<Gateway root directory> \AppServer\webapps\site.war\bam\pages\images\gui\indicator**

➤ **<Gateway root directory> \AppServer\webapps\site.war\images\gui\indicator**

To change the Dashboard Trend and History status icons:

You cannot change the names of the trend and history icons that appear in the Top View tab. To customize those icons, you can only replace the default images with your customized images.

The directory where the Trend and History Status icons are located is: **<Gateway root directory>\ AppServer\webapps\site.war\static\dash\images\indicator**

For details on the Trend and History icons, see "Trend and History" on page 362.

To change the Dashboard Top View status icons:

You cannot change the names of the Top View icons. To customize those icons, you can only replace the images with your customized images.

The directory where the icons are located is:
**<Gateway root directory>\AppServer\webapps\site.war\
bam\pages\images\icons\dimensionIcons**

The location of a specific icon uses the following naming scheme:
dimensionIcons/<kpi_id>/<status_id>.gif where **<status_id>** is the value specified in the **From** field of the status parameter defined for the KPI. For example: the value of the **From** field of the **OK** (green) status is 20 therefore the icon for the **Availability** KPI is located at: dimensionIcons/7/20.gif. For details on the user interface, see "Parameter Details Dialog Box (KPIs)" on page 550.

For details on the Top View icons, see "KPI Icons in Top View" on page 140.

🔍 KPIs User Interface

This section describes:

➤ Add KPI to Multiple CIs/Edit KPI/Edit KPI for Child Transaction Dialog Box on page 397

➤ Context Menus List Editor Dialog Box on page 406

➤ Event Details Page on page 407

➤ KPIs Page on page 408

⚛ Add KPI to Multiple CIs/Edit KPI/Edit KPI for Child Transaction Dialog Box

Description	Enables you to attach additional KPIs to any CI or to edit the properties of a CI's KPIs.
	To Access: Click the **KPIs** tab and select:
	➤ (Single CI) the required CI in View Explorer, and either click the **Add KPI/Edit KPI** 🖉 button in the right pane, or right-click the CI in View Explorer and select **Add KPI/Edit KPI**.
	➤ (Multiple CIs) the required CIs in View Explorer using the keyboard Ctrl key, right-click one of the selected CIs in View Explorer, and select **Add KPI/Edit KPI**.
	➤ (multiple transactions) the required group-level CI in View Explorer, and either click the **Edit KPI for child transactions** 🖳 button corresponding to the KPI (Performance or Availability) that you want to edit.

Important Information	There can be only one instance of each KPI for a CI. For each new KPI, you define the KPI type and business rule. Where relevant, you also define additional information required by the rule.
	You can attach one of the default KPIs provided with HP Business Availability Center, or attach a KPI that you defined in the KPI Repository (as described in "Customize a KPI" on page 508). When you attach a KPI to multiple CIs, the KPI is added to all CIs that do not already have that KPI attached. All instances of the KPI have the same defined business rule and properties. Attaching a new KPI to a CI, and defining the KPI properties, must be undertaken with care; these actions can result in KPIs that give an inaccurate performance assessment in Dashboard. Read the "Notes and Limitations for KPIs and CIs" on page 339 before proceeding.
	For information on KPI functionality, see "How Dashboard KPIs Work" on page 338.
	Note: Changes made in the Edit KPIs for Child Transaction window have no effect on KPIs other than **Transaction** and **Availability**, or on CIs for which the option does not apply.
Included in Tasks	"Configure a KPI – Workflow" on page 367

KPI Area

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
?	Hold the pointer over the question mark icon to display additional information for the rule.
Business Rule	After selecting a KPI, the **Business rule** list is automatically updated to display all business rules that are relevant for the selected KPI. Select the required rule from the list. The rule is used to calculate the measurement and status for the KPI. For an explanation of the role of the rules, see "About Business Rules" on page 341. For information on each individual rule, see "List of Dashboard Business Rules" on page 578.
	Important: After selecting a rule, the New KPI dialog box is automatically updated to display the areas (**Business Rule Parameters, API Rule Definitions, Objectives, Selector**, and so on) that are relevant for the selected rule.
	Note: You should only select a monitor rule if the KPI is attached to a monitoring CI. For more information, see "Monitor Rules and Group Rules" on page 557.
KPI	Select a KPI from the KPI list. The list contains the names of all available KPIs (KPIs that are already attached to the CI are not included in the list). For an explanation of each individual KPI, see "List of Dashboard KPIs" on page 510.
	Note: When defining a KPI for multiple CIs, the **KPI** list contains all KPI types.
OK	If you do not define a selector for the KPI, then after clicking **OK** to close the New KPI dialog box, HP Business Availability Center automatically assigns to the KPI the default selector (generally defined for the other KPIs attached to the monitoring CI).

GUI Element (A-Z)	Description
SLA	If you are defining a **PNR** KPI, select the required values from the **SLA** list.
	For information on defining the PNR KPI, see "Event Details Page" on page 406.
Time Interval	If you are defining a **PNR** KPI, select the required values from the **Time interval** lists.
	For information on defining the PNR KPI, see "Event Details Page" on page 406.
Tracking Period	If you are defining a **PNR** KPI, select the required values from the **Tracking period** lists.
	For information on defining the PNR KPI, see "Event Details Page" on page 406.

Business Rule Parameters Area

Description	Enables you to view and modify the parameters relevant for the selected rule. All parameters have default values.
Important Information	If required, modify the parameter values by entering a new value in the appropriate boxes. The information after each box directs you as to the type of value that can be entered, for example, **Any Number**, **Text**, or **Boolean**.
	Multiple KPI selection. In the **Business Rule Parameters** area, the value box is empty. Enter the required value in the boxes. Make sure you enter values that apply logically to all transactions in the group.
	For information on rule parameters and possible values, see the section for the relevant rule, as described in "List of Dashboard Business Rules" on page 578.

API Rule Definitions Area

This area is displayed when you select an API rule in the Business rule list. The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
KPI Calculation Script	Enter the KPI calculation script for the rule you are creating using the Rules API. The contents of the script depends on the rule type, as follows: ➤ API Group and Sibling Rule. See "API Group and Sibling Rule" on page 659. ➤ API Sample Rule. See "API Sample Rule" on page 663. ➤ API Duration-Based Rule. See "API Duration-Based Sample Rule" on page 665.
Sample Fields	Enter the names of the sample fields you want to use in the script. Separate between the sample names with a comma. **Note:** Displayed only when you select the **API Sample** rule or the **API Duration-Based** rule in the **Business rule** list.

Objectives Area

Description	Enables you to define value ranges that are used to determine status for the KPI. The measurement for the KPI (calculated by the business rule) is compared with the objectives, and a color status assigned accordingly.
	The objectives are defined in a unit of measurement appropriate to the type of data dealt with by the rule. The unit is indicated after the objective value box.
Important Information	This area is displayed when necessary.
	If required, you can modify the default values for the objectives.
	Multiple KPI selection. In the **Objectives** area, the value box is empty. Enter the required value, or select a different operator for the objectives. Make sure you enter values that apply logically to all transactions in the group.
	For information on defining objectives, see "KPI Objectives" on page 343.

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
OK, Warning, Minor, Major, Critical	Enter the required objective value for each status in the appropriate box. Ensure that the numbers you enter are logically ordered.
	For more information on objectives functionality and defining objectives, see "KPI Objectives" on page 343.
Operator	Select the required operator. This operator is applied for all objectives.
	Note: The Objectives area in the Edit KPIs for Child Transaction window displays the default **Operator** for the rule. When you apply your changes, the displayed default operator is updated to all transaction CIs (regardless of which operator they were using previously).

Selector Area

Description	Enables you to define the filter criteria for the KPI. The selector catches data samples from the incoming data that meet the filter criteria. A selector is required for all KPIs (attached to monitoring/leaf CIs) that are intended to calculate a measurement based on original sample data; otherwise no data is mapped to the KPI and it remains gray in Dashboard.
Important Information	The Selector area is displayed when necessary.
	If relevant for the rule, the **Selector** area is displayed in the window. This area is displayed only for certain monitor rules and for Dynamic Node Factory CIs.
	For a detailed explanation of selector functionality and defining selectors, see "Selectors for KPIs" on page 352.
	In the **Filter** area, define selector expressions to create a filter for the selector. Each selector expression defines a required criteria for the new KPI.
	Note: If you do not define a selector for the KPI, then after clicking OK to close the dialog box, HP Business Availability Center automatically assigns to the KPI the default selector (generally defined for the other KPIs attached to the monitoring CI). For details, see "Define Selectors" on page 379.

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
<box>	Selector filters can be manually defined to create a custom filter, or defined using metadata (predefined sample types). To use metadata for the filter, select a sample type from the list at the top of the **Selector** area.
	When the list displays **Custom**, the filter is defined manually.
	For more information, see "Set Up User Mode Functionality" on page 386.
Add 'OR' Expression	Click the **Add OR Expression** button to widen the filter by adding additional expression blocks (each containing one or more selector expressions).
	For more details, see "Build Complex Filters" on page 384.
And	Click the **Add** button to define additional selector expressions to build a more complex filter. You can attach additional selector expressions to the first selector expression using the **And** button, to create an expression block that narrows the filter.
	For more details, see "Build Complex Filters" on page 384.
Field	Enter the name of a reference property that the selector expression searches for in the incoming data samples sent from the data source. For details on the samples, see "Data Samples" in *Reference Information*.

GUI Element (A-Z)	Description
Operator	The relational operator that the selector expression uses when comparing the actual value for the property against the value defined in the selector. The expression gives a result of TRUE or FALSE for each data sample. Select an option from the list. The option can be: ➤ **= =** or **!= =.** Filters the samples where the value of the sample field specified in the **Field** box equals or is not equal to the value specified in the **Value** box. ➤ **>** or **<.** Filters the samples where the value of the sample field specified in the **Field** box is less or more than the value specified in the **Value** box. ➤ **in** or **notIn.** Use the **|!|** separator **Value** box. The value specified in the **Value** box can only be 100 characters long. ➤ **>=** or **<=.** Filters the samples where the value of the sample field specified in the **Field** box is more or equal to or less or equal to the value specified in the **Value** box. ➤ **prefix** or **notPrefix.** Filters in the samples where the sample field value starts with the string entered in the **Value** box. ➤ **suffix** or **notSuffix.** Filters in the samples where the sample field value ends with the string entered in the **Value** box. ➤ **like** or **notLike**. The expression you enter in the **Value** box should follow the Java standard for regular expression. **Note:** It is recommended to use the **suffix** or **notSuffix** operators instead of the **like** and **notLike** operators that are performance intensive.

GUI Element (A-Z)	Description
Value	Enter the required value for the property.
	This is the property value that the expression compares with the value in the data sample. The value must be in numeric format if a numeric operator is selected, or it must be entered between quotation marks if a text string operator is selected.
	For more information, see "Define Selectors" on page 447.

🔍 Context Menus List Editor Dialog Box

Description	Enables you to select the context menus you want to assign to the CI.
	To Access: Click **Edit** in the KPIs page.
Important Information	Move the context menus from the Available Context Menus box to the Active Context Menus box, and the other way around, using the arrows.

🔍 Event Details Page

Description	Enables you to display data from the last sample that arrived for a monitor CI; this includes all of the parameters for the CI, and the parameter values at the last update.
	To Access: From the Console or Filters tabs in Dashboard, click the status icon for a monitor CI. (If there is an associated Event Details dialog box for a CI, then the cursor changes to a hand when you hold the cursor over the status icon for the CI.)
Important Information	To view the Event Details dialog box for CIs, you must configure Dashboard to save the last sample for the CI. You can configure this per KPI rule (so that you only see sample details for a monitor CI under that KPI), or for all rules. For details on how to do this, see "View Sample Details" in *Using Dashboard*.
	Note: Storing last sample details may require use of a large amount of memory, slowing down Dashboard performance.
	Note: You can open as many Event Details dialog boxes as required; if you move to another application or administration page in HP Business Availability Center, any open Event Details dialog boxes are closed.
Included in Tasks	"View Sample Details" on page 70

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
Event Message area	Displays the details for the CI (according to the KPI) at the last update.
	Note: The Event Details dialog box is not automatically refreshed when there is a new update for the CI. You can refresh by right-clicking in the dialog box (outside of the **Event Message** panel) and selecting **Refresh**, or by closing and reopening the dialog box.
Event Source area	Contains parameters providing information on the KPI (in the **Dimension name** field) for which the event details are relevant, the date and time of the last update to the CI, and the CI status at that update.

🔍 KPIs Page

Description	Displays, depending on the selected CI, information about the CI's assigned KPIs, the view's KPIs, the associated business rules, context menu, the KPI's user mode, and/or additional information.
	To Access: Select **Admin > Dashboard**, click the **KPIs** tab, select the required view and the required CI in the View Explorer in the left pane. (For information on using View Explorer, see "Working with View Explorer" in *Model Management*.)
Included in Tasks	"Configure a KPI – Workflow" on page 367

KPI Selection Area

Description	Displays the view's KPIs, the KPI's user mode (Business or Operation), and whether the KPI is included in the CI status, in the view, or both.
Important Information	The KPI Selection area is displayed when you select the root CI in the view.
	You can sort the information displayed in the KPIs table by clicking on the column header.

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
Business	Appears only when you select the root CI in View Explorer.
	An asterisk indicates that the KPI is defined for the Business user mode. For details on user mode, see "KPIs for User Modes" on page 355.
Include in CI Status	Clear the option to ensure that:
	➤ The KPI is displayed in the Dashboard views and in the tooltips.
	➤ The KPI is not included in the CIs generic status when the CI status is calculated by including all the CI's KPIs (like in Top View, Custom Map, Geographical Map, and Topology Map).
	Default value: The option is selected.
	Note:
	➤ The selection has a similar impact on the relevant My BSM portlets. For details, see "Edit Preferences <portlet_name> Dialog Box" in *Using My BSM*.
	➤ The **Include in CI Status** option is automatically cleared when the **Include in View** option is cleared.

GUI Element (A-Z)	Description
Include in View	Clear the option to ensure that: ➤ The KPI is not displayed in the Dashboard views and in the tooltips. ➤ The KPI is not included in the CIs generic status when the CI status is calculated by including all the CI's KPIs (like in Top View, Custom Map, Geographical Map, and Topology Map). **Default value:** The option is selected. **Note:** The selection has a similar impact on the relevant My BSM portlets. For details, see "Edit Preferences \<portlet_name\> Dialog Box" in *Using My BSM*. **Note:** The **Include in CI Status** option is automatically cleared when the **Include in View** option is cleared.
KPI	The name of the KPI.
Operations	Appears only when you select the root CI in View Explorer. An asterisk indicates that the KPI is defined for the Operations user mode. For details on user mode, see "KPIs for User Modes" on page 355.

KPIs area

Description	Displays, depending on the selected CI, the CI's assigned KPIs, associated business rules, and context menu, or the view's KPIs, whether the KPI is defined in Business or Operation user mode, and whether to include the KPI in the CI status or the view's calculations
	If you select a CI in View Explorer (not the root CI), the KPIs page displays the KPIs and associated business rules defined for the selected CI.
	If you select the root CI in View Explorer, the KPIs page display all the view's KPIs when you expand the KPI Selection area.
	To Access: Select **Admin** > **Dashboard**, click the **KPIs** tab, and select the required view and then the required CI in the View Explorer in the left pane. (For information on using View Explorer, see "Working with View Explorer" in *Model Management*.)
Important Information	You can sort the information displayed in the KPIs table by clicking on the column header. You can switch the column between ascending and descending order by clicking the header again.

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
	Click to edit an existing KPI for a CI (or for multiple transaction CIs), as described in "How Dashboard KPIs Work" on page 338.

411

GUI Element (A-Z)	Description
	Click to edit the KPIs for the child transactions. For details, see "How Dashboard KPIs Work" on page 338. The **Edit KPI for child transactions** button is enabled for all KPIs, however: ➤ The option is only relevant for **Performance** and **Availability** KPIs (an error message is displayed for other KPIs). ➤ The option has validity only when there are Business Process Monitor transaction CIs contained in the subtree. **Note:** ➤ Changes made in the Edit KPIs for Child Transaction window have no effect on KPIs other than **Performance** and **Availability**, or on CIs for which the option does not apply. ➤ After applying the Edit KPI for child transactions option, a **KPI was saved successfully** message is displayed in the top-right corner of the page, even if no changes were made to any CIs. ➤ If a transaction CI in the subtree is using a business rule other than the default monitor rule for the KPI (**Transaction Availability Rule** or **Transaction Performance Rule**), then when you apply the Edit KPI for child transactions option, the existing rule is replaced with the default rule.
	Click to delete a KPI attached to a CI.
Business Rule	The name of the business rule attached to the KPI.
KPI	The name of the KPI.

GUI Element (A-Z)	Description
Monitor changes	Set Dashboard to monitor (in real-time) changes made to the properties for a selected CI, or to the child CIs for the selected CI, as described in "Change the No Data Timeout Value for Transaction CIs – Optional" on page 369. The icons that mark the changed CIs appear in the Console and Filter pages. For a limited number of CIs (20 by default), Dashboard can monitor for changes to the CI properties (or changes to the properties of the CI's child CIs) in real-time. To change the default, see "Analyze Real-Time Change Information" on page 112 This information is in addition to the Dashboard Change Report, which shows a historical report on changes to properties for CIs over a period of time. (For details on the Change Report, see "Change Report Page" in *Model Management*.) **Note:** The **Monitor changes** option is only enabled if: ➤ You are working in a shared CMDB environment. ➤ You enable change impact monitoring by selecting **Admin** > **Platform** > **Setup and Maintenance** > **Infrastructure Settings**, click **Applications**, select **Dashboard Application**, and locate the **Host name for MAM GUI Web server** entry in the **Change Impact Properties** table. Define the Web server name and restart HP Business Availability Center.
Add KPI	Click the **Add KPI** button to attach a new KPI to the CI. For details, see "How Dashboard KPIs Work" on page 338.

GUI Element (A-Z)	Description
Save KPI data over time for a CI	Select the option to set HP Business Availability Center to save KPI data for CIs, as described in "KPIs Over Time Report" on page 277.
	You can enable/disable this option for multiple CIs by selecting the required CIs in View Explorer (using the keyboard CTRL key) and right-clicking one of the selected CIs.
	The option is selected by default for CIs of the following types: **Business Process, Business Process Group, Line of Business, Application** (logical application), and **End User Management Application Related Group.** The option is not available (disabled) for monitoring CIs.
	(If you also want to save data on the actual measurements for the KPIs, you must change the default settings for Dashboard in the Repositories, as described in "Change the No Data Timeout Value for Transaction CIs – Optional" on page 369.)
	Saving status (and measurements) data for long periods or for many CIs can occupy a lot of database memory, so this option should be used with care. When you no longer require data to be saved for a CI, clear the check box.

Context Menu area

Description	Displays, depending on the selected CI, the CI's assigned KPIs, associated business rules, and context menu, or the view's KPIs, whether the KPI is defined in Business or Operation user mode, and whether to include the KPI in the CI status or the view's calculations
	If you select a CI in View Explorer (not the root CI), the KPIs page displays the KPIs and associated business rules defined for the selected CI.
	If you select the root CI in View Explorer, the KPIs page display all the view's KPIs when you expand the KPI Selection area.
	To Access: Select **Admin** > **Dashboard**, click the **KPIs** tab, and select the required view and then the required CI in the View Explorer in the left pane. (For information on using View Explorer, see "Working with View Explorer" in *Model Management*.)
Important Information	You can sort the information displayed in the KPIs table by clicking on the column header. You can switch the column between ascending and descending order by clicking the header again.

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
<Context menu>	The name of the context menus that you assigned to the CI.
Default Menu	The default menu is, by default, assigned to the CI.
Edit	Click the **Edit** button to open the Context Menus List Editor dialog box where you select the context menus you want to assign to the CI.

Part VI

KPI Assignments

16

Working With KPI Assignments and Propagations in Dashboard

This chapter describes how to manage KPI Assignments and KPI Propagations.

This chapter includes:

Concepts

➤ KPI Assignment Management Overview on page 420

➤ Assignments on page 421

➤ Propagations on page 423

➤ Validation on page 435

➤ SiteScope KPI Assignment Group Overview on page 436

Tasks

➤ Manage KPI Assignment Groups on page 441

➤ Manage KPI Assignment Groups – Scenario on page 443

➤ Work with the SiteScope Assignment Group on page 445

Reference

➤ Factory KPI Assignment Groups on page 447

➤ KPI Assignments User Interface on page 449

🎱 KPI Assignment Management Overview

When a new CI is added to the CMDB, the assignment mechanism assigns the appropriate KPIs to the CI. When you assign a KPI to a CI or when you attach a CI to another CI, the propagation mechanism propagates the appropriate KPIs to the parent CIs.

The assignment mechanism assigns KPIs and context menus to CIs at the monitor CI level. Then the propagation mechanism starts running, propagating by default the KPIs assigned at the monitor level to the higher levels in the hierarchy of the view or attaching other KPIs to the CIs in the higher levels of the hierarchy. The propagation is performed for each KPI separately.

An assignment assigns KPIs according to the cmdb_class attribute of the CI type. A propagation assigns KPIs to the parent CI, according to the triplet defined by the parent CI Type (using the parentCIClassName attribute), child CI Type (using the childCIClassName attribute), and KPI of the child CI.

KPIs and business rules are assigned to CIs using the assignment mechanism at the monitor CI level. For details about the assignment mechanism, see "Assignments" on page 421.

KPIs and business rules are assigned to CIs using the propagation mechanism at non-monitor CI level. For details about the propagation mechanism, see "Propagations" on page 423.

For a scenario which includes assignment and propagation, see "Define Repository Elements and KPI Assignments to Monitor Mobile Terminals – Scenario" on page 482.

Note: If you are using HP Operations Manager *i* with HP Business Availability Center, then the KPI Assignment tab contains OMi-related assignment groups. For more information, see *Using HP Operations Manager i*.

🔩 Assignments

KPI assignment are mechanisms that are activated under certain conditions to incorporate specific data into Dashboard, at the monitoring level.

An assignment includes a condition and a task. The condition describes a CI or sets conditions on the attributes of a CI. The task describes the context menus, KPIs, and business rules that are automatically assigned to the CI, in the CMDB, when the condition occurs, and the assignment is running. An assignment is a rule that is saved using the Dashboard Repositories mechanism. You can view the assignments only in the KPI Assignment user interface. For details, see "Assignment Groups Page" on page 450.

Factory KPI assignment groups are pre-defined sets of assignments. They work together to cover all the sets of conditions for monitoring level CIs needed to incorporate data from the corresponding monitored system into Dashboard. For details on groups, see "Groups" on page 422.

Assignment Mechanism

The assignment mechanism receives notification from the Universal CMDB about the creation of monitor CIs. The KPI assignment mechanism is activated when a specific attribute of the monitor CI is updated and the KPI assignment conditions for that CI are based on the updated attribute. The KPI assignment mechanism performs the following actions in the Universal CMDB:

➤ Creates the KPIs attached to the monitor CI.

➤ Assigns the business rule to the KPI with parameters that can be based on attributes of the monitor CI.

➤ Assigns thresholds that can be based on attributes of the monitor CI.

➤ Assigns selectors that can be based on attributes of the monitor CI.

➤ Adds the context menus.

The KPI assignment mechanism is a HP Business Availability Center service that can be managed by HP Service Manager. For details, see "System Health Setup Wizard" in *Platform Administration*.

A service completes the missed KPI assignments as soon as HP Business Availability Center is restarted, after it has been stopped.

The KPI assignment mechanism is deployed on the Data Processing server.

For details on creating assignments, see "Define Assignment Configuration Dialog Box" on page 450.

For general information on KPI functionality, see "KPI Configuration Overview" on page 336. For details on Dashboard KPIs, see "List of Dashboard KPIs" on page 510.

Groups

A group is a logical feature that enables you to group KPI assignments (assignments and propagations).

Some assignments are grouped together to cover all the conditions that can be applied to a specific CI. The conditions are set on the sample's field values.

For example, a group can assign different KPIs to a CI when the value of a CI attribute equals or is different from a certain value.

➤ An assignment that deals with the KPIs and business rules to be applied if the sample's field, corresponding to the CI, has a specific value:

```
<condition cmdb-class="ems_monitor">
   <property-condition name="data_source" operator="EQ" value="ticketing"/>
</condition>
```

➤ An assignment that deals with the KPIs and business rules to be applied if the sample's field does not have that specific value:

```
<condition cmdb-class="ems_monitor">
   <property-condition name="data_source" operator="NOT_EQ" value="ticketing"/>
</condition>
```

Some groups also include assignments that are applied to different CIs.

For details about the assignments user interface, see "Assignment Groups Page" on page 450.

Propagations

Propagations are mechanisms that are activated under certain conditions to incorporate specific data into Dashboard, at all CI levels except for the monitoring level.

A propagation is defined per triplet (parent CI type, child CI type, and KPI attached to the child CI type), and specifies the business rules, KPIs, and thresholds propagated to the parent CI type from the child CI type.

A propagation includes a condition and a task. The condition describes the KPIs to be propagated, the child CIs, the parent CIs, and the type of propagation (**explicit** or **samekpi**). The task describes the KPIs, and business rules that are automatically propagated to the parent CI. The task may include thresholds to be used to set the status of the KPI. For details, see "Thresholds" on page 425.

A propagation definition is a rule that is saved using the Dashboard Repositories mechanism. You can view propagation information only in the Propagation user interface. For details, see "Define Propagation Configuration Dialog Box" on page 463.

If a parent CI is already assigned a specific KPI, and the propagation is defined as propagating the same KPI from the child CI, the KPI is not propagated from the child CI.

Some limitations apply when the same KPIs are propagated to the parent CI from multiple child CIs. For details, see "Propagation Limitations" on page 434.

The parent CI must be a logical group CI and the business rules that are propagated must be non-leaf rules.

Factory propagations are pre-defined sets of propagations. They work together to cover all the possible configurations of child CIs and parent CIs needed to propagate data from the relevant monitoring level CIs to the non-monitoring level CIs. For details about groups, see "Groups" on page 422.

This section includes the following topics:

Default Propagation

The default propagation means that:

➤ Each KPI attached to any child CI of any parent CI is automatically propagated to the parent CI.

➤ The KPI is assigned the KPI's default group business rule as defined in the KPI definition in the KPI repository. For details, see Default Group Rule in "KPI Details Dialog Box" on page 388.

➤ The thresholds are defined in the business rule repository, if they exist.

➤ The default propagation is not visible in the user interface. You cannot modify it.

The default propagation rule is used for a triplet only if no other factory or custom propagation rule matches the triplet.

When is the Propagation Mechanism Activated

The propagation mechanism is triggered when:

➤ A link between two CIs is added or removed, in the CMDB.

➤ You assign a KPI to a CI or you detach a KPI from a CI in Dashboard administration.

Thresholds

Each child CI can have a different KPI propagation definition that includes the KPIs and the business rules to attach to the parent CI as well as the thresholds that determine the KPI status. For details about the KPI propagation, see "Define Propagation Configuration Dialog Box" on page 463.

This section describes the different ways you can use to specify the propagated business rule objectives.

This section includes the following topics:

➤ "Default Thresholds" on page 425

➤ "Non-Default Thresholds" on page 425

Default Thresholds

Default thresholds are defined in the repository business rules. If you do not enter an <objective> section in the task, the thresholds defined in the business rules are used. If thresholds are not defined in the business rules, then empty thresholds are assigned to the KPI.

Non-Default Thresholds

To use non-default thresholds for the business rule, you can specify the thresholds in the task (after specifying the KPI and the rule):

```
<objective>
        <operator type="GREATER_THAN"/>
        <threshold type="OK" value="RefProp:normal_limit"/>
        <threshold type="WARNING" value="RefProp:warning_limit"/>
        <threshold type="MINOR" value="RefProp:minor_limit"/>
        <threshold type="MAJOR" value="RefProp:major_limit"/>
</objective>
```

Types of Propagation

The propagation mechanism supports different types of propagation.
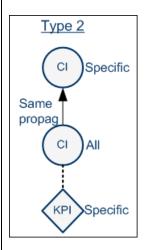
The table lists the different type of propagation and provides typical examples of conditions and tasks for each type of propagation:

Type of propagation	Condition/task details
Type 1: Any KPI of any child CI of the specific parent CI is propagated to the parent CI. 	**Condition:** <condition childCIClassName="it_world" kpiType="all" parentCIClassName="customer" propagate="sameKpi"/> When you have any KPI attached to any child CI of a Customer parent CI, the KPI and rule specified in the task are assigned to the Customer parent CI.
	Task: <task-config> <kpis-config globalRule="default"/> </task-config> The task assigns any KPI assigned to any child CI of the Customer parent CI and the default rule to the Customer parent CI. For additional details, see "Define Propagation Configuration Dialog Box" on page 463.

Type of propagation	Condition/task details
Type 2: A specific KPI of any child CI of the specific parent CI is propagated to the parent CI. 	**Condition:** <condition childCIClassName="it_world" kpiType="612" parentCIClassName="bpi_step" propagate="explicit"/> When you have KPI 612 attached to any child CI of a BPI Step parent CI, the KPI and rule specified in the task are assigned to the BPI Step parent CI.

	Task:
	
	`<task-config>`
	`  <kpis-config>`
	`    <kpi-config type="612">`
	`      <rule type="290"/>`
	`        <objective>`
	`          <operator type="GREATER_THAN"/>`
	`          <threshold type="OK" value="ignore"/>`
	`          <threshold type="WARNING" value="ignore"/>`
	`          <threshold type="MINOR" value="ignore"/>`
	`          <threshold type="MAJOR" value="ignore"/>`
	`        </objective>`
	`    </kpi-config>`
	`  </kpis-config>`
	`</task-config>`
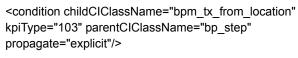	
	The task assigns KPI 612 and the rule 290 to the parent CI. The objectives are not used (value="ignore"). For additional details, see "Define Propagation Configuration Dialog Box" on page 463.

Type of propagation	Condition/task details
Type 3: A specific KPI attached to a specific child CI of the specific parent CI is propagated to the parent CI. 	**Condition:** \<condition childCIClassName="bpm_tx_from_location" kpiType="103" parentCIClassName="bp_step" propagate="explicit"/\> When you have KPI 103 attached to the BPM Transaction From Location child CI of a BP Step parent CI, the KPI and rule specified in the task are assigned to the BP Step parent CI.

	Task:
	
	\<task-config\>
	   \<kpi-config type="101"\>
	     \<rule type="201"/\>
	     \<objective\>
	      \<operator type="GREATER_THAN"/\>
	       \<threshold type="OK" value="ignore"/\>
	       \<threshold type="WARNING" value="ignore"/\>
	       \<threshold type="MINOR" value="ignore"/\>
	       \<threshold type="MAJOR" value="ignore"/\>
	     \</objective\>
	   \</kpi-config\>
	
	The task assigns KPI 101 and rule 201 to the BP Step parent CI. The thresholds are specified in the code. For additional details, see "Define Propagation Configuration Dialog Box" on page 463.

Type of propagation	Condition/task details
Type 4: A specific KPI attached to a specific child CI of a specific parent is **not** propagated to the parent CI. 	**Condition:** <condition childCIClassName="it_world" kpiType="103" parentCIClassName="bp_group" propagate="explicit"/> When you have KPI 103 attached to any child CI of a BP Group parent CI, the KPI and rule specified in the task are assigned to the BP Group parent CI.
	Task: <task-config> <kpis-config/> </task-config> The task does not provide a default rule, a rule or a KPI. This indicates that the KPI is **not** propagated to the parent CI. For additional details, see "Define Propagation Configuration Dialog Box" on page 463. **Note:** All the types of propagations listed in the table can be defined as non-propagations using the features provided in Type 4.

Recommended Procedure

You create a set of propagations for a topology, meaning that for each level of parent CI in the hierarchy, you must create a set of propagations. A lot of the propagations are repetitive so the correct procedure is to:

1 Create a set of general propagations of **Type 1** for a specific parent CI.

2 Create a set of more specific propagations of **Type 2** for a specific KPI and a specific parent CI.

3 Create a set of more specific propagations of **Type 3** for a specific KPI, a specific child CI, and a specific parent CI.

4 Create a set of non-propagations of **Type 4** for a specific KPI, a specific child CI, and a specific parent CI.

The propagations are then sorted and applied to each parent CI. For details, see "Selecting the Appropriate Propagation" on page 430.

Selecting the Appropriate Propagation

The matcher of the propagation mechanism considers all the propagation definitions and sorts them before applying them to the different triplets.

All the customized propagations that you define are added to a list of existing propagations that is already sorted.

The matcher sorts the complete list of propagations according to the algorithm described below.

1 Parent sorting:

➤ A comparison triplet parent CI that is equal to the propagation parent CI (the number of hierarchy levels is 0 in the model hierarchy) is better than a comparison triplet parent CI that is derived – with a larger number of hierarchy levels – from the propagation parent CI.

➤ A comparison triplet parent CI that is derived, in the class model, from the propagation parent CI with a smaller number of hierarchy levels is better than a comparison triplet parent CI that is derived from the propagation parent CI, with a larger number of hierarchy levels.

2 Child sorting:

The mechanism performs the same type of sorting as the parent CI sorting on the child CI.

3 KPI sorting:

The sorting is performed on the KPI where the KPI corresponding to the triplet KPI is better than **kpiType=all**.

For each KPI that is propagated from a child CI type to a parent CI type (comparison triplet), the matcher scans the list of sorted propagations to find the propagation that most closely matches the triplet. A propagation is considered a match when:

➤ The parent CI type and the child CI type in the propagation correspond exactly to the comparison triplet parent CI or child CI, **OR** the child CI class in the comparison triplet is derived (in the class model hierarchy) from the child CI type in the propagation and the same for the parent CI type.

   AND

➤ The propagation KPI has the same ID number as the comparison triplet KPI **OR** the propagation condition specifies kpiType=all.

The first propagation in the sorted list is used.

Example
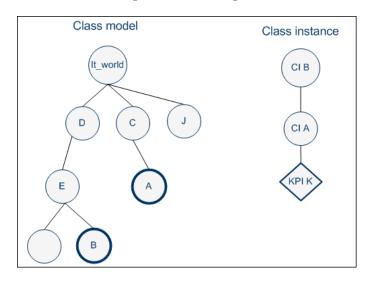
The factory and customized propagations defined are as follows:

No	Propagation Condition			How does the propagation match the triplet (parent CI=B, child CI=A, and KPI=K)?
	Parent CI	Child CI	KPI	
1	it_world	it_world	All	The propagation includes the triplet.
2	J	it_world	All	The propagation does not include the triplet.
3	D	C	All	CI B is derived from CI E, CI D and CI A is derived from CI C in the class model, and the propagation is for all KPIs, so the propagation includes the triplet.
4	E	it_world	K	CI B is derived from CI E and CI A is included in it_world in the class model, and the propagation is for the K KPI, so the propagation includes the triplet.

| No | Propagation Condition | | | How does the propagation match the triplet (parent CI=B, child CI=A, and KPI=K)? |
	Parent CI	Child CI	KPI	
5	E	C	All	CI B is derived from CI E and CI A is derived from CI C in the class model, and the propagation is for all KPIs, so the propagation includes the triplet.
6	E	C	K	CI B is derived from CI E and CI A is derived from CI C in the class model, and the propagation is for the K KPI, so the propagation includes the triplet.

The class model is provided in the picture below.

The result of the sorting procedure is as follows:

1 Propagation 6 is at the top of the list as its parent CI type is E (most specific), child CI type C (most specific) and KPI type is K (explicit type).

2 Propagation 5 comes after propagation 6 as its only difference with 6 is its generic KPI type.

3 Propagation 4 comes after as its child CI type (it_world) is more generic than propagation 5's child CI type (C).

4 Propagations 3, 2, and 1 are listed afterwards (in this order), as their parent type is less specific (higher in the hierarchy) than type E.

5 Propagation 1 goes to the bottom of the list as it is the most generic propagation.

When the propagation mechanism tries to find the closest matching propagation definition to the triplet (parent=CI B, child=CI A and KPI=KPI K) propagation 6 is at the top of the list and is therefore selected.

De-propagation

The de-propagation mechanism is activated:

1 When a CI is deleted from the impact model.

2 When a link between two CIs is deleted from the impact model.

3 When a KPI is deleted from a CI of the impact model.

For details on the impact model, see "Impact Modeling Overview" in *Model Management*.

There are two cases of depropagation:

➤ Case A: KPI is deleted.

➤ Case B: CI is deleted OR the link between two CIs is deleted.

In case A, the de-propagation mechanism performs the following steps:

1 Finds the matching propagation for the deleted KPI according to its triplet (child CI, parent CI, and KPI type). For details, see "Selecting the Appropriate Propagation" on page 430.

The selected propagation includes the set of KPIs that might have been previously propagated by the deleted KPI.

2 Retains from the potential KPIs only the KPIs that are currently attached to the parent CI.

3 Finds the propagations that match the KPIs attached to the child CI and its siblings.

4 Builds a set of the KPIs that might have been previously propagated by the matching propagations from step 3.
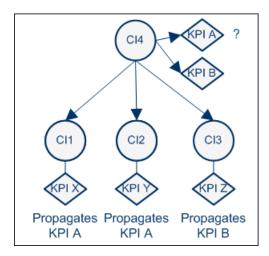
5 Removes the KPIs of step 4 from the set of KPIs of step 2.

6 The remaining KPIs are deleted from the parent CI.

7 The de-propagation mechanism is then applied to the next level of the impact model topology for each one of the KPIs deleted in step 6.

In case B, the de-propagation mechanism performs the following steps:
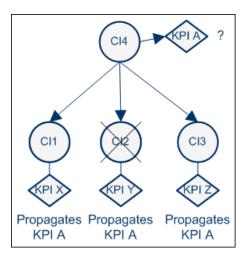
1 Finds all the matching propagations for all of the KPIs attached to all of the siblings of the deleted (or detached) CI.

2 Builds a set of KPIs attached to the parent CI that were not propagated by any of the propagations from step 1.

3 Deletes from the parent CI all of the KPIs from step 2.

4 Activates the de-propagation mechanism described in case A starting with the parent CI and the set of KPIs deleted from it in step 3.

Propagation Limitations

➤ If you propagate the same KPI A from different child CIs (CI1 and CI2) with a different propagation, the propagation that affects the parent CI (CI4) regarding KPI A can be either one of the propagations (from CI1 or CI2). Because of this uncertainty, it is recommended to avoid specifying different propagations that propagate the same KPI with different rules and/or thresholds.

➤ According to the previous limitation, if you propagate the same KPI A from different child CIs (CI1, CI2, or CI3), the propagation that affects the parent CI (CI4) regarding KPI A can be either one of the propagations. If you delete one of the CIs (CI2) or one of its KPIs, the configuration of KPI A (rule and thresholds) is updated and propagated from either CI1 or CI3. The update is not performed if the KPI was customized by the user.

🍀 Validation

The validation mechanism for assignments and propagations checks that for:

➤ **KPI assignments:**

  ➤ The CMDB class used in the condition of a Dashboard KPI assignment should be of monitor type.

  ➤ The task of a Dashboard KPI assignment should contain at least one KPI that specifies a selector.

  ➤ The task of a Dashboard KPI assignment should contain at least one KPI configuration.

➤ **KPI propagations:**

➤ The business rule assigned to a KPI is applicable to the KPI and is a non-leaf rule

➤ When you use the **same-kpi** propagation in a Dashboard KPI propagation, you must specify a global rule (it can be the default rule); and you should not specify KPI configuration elements.

SiteScope KPI Assignment Group Overview

Note: The feature described in this section is available to users working with SiteScope 9.50 and later. If you are working with SiteScope 9.0 and earlier, see "SiteScope Source Adapter Details" in *Model Management*.

The SiteScope Assignment group is a logical group of KPI assignments. The KPI assignments assign specific KPIs, business rules, and context menus to the appropriate CIs in the Universal CMDB, under specified conditions usually related to the samples sent by SiteScope to HP Business Availability Center.

SiteScope sends the topology information and builds the hierarchy, including the hosts, SiteScope groups, monitors, and additional topologies corresponding to specific SiteScope monitors, needed to incorporate data (collected by SiteScope data collectors, or supplied by other external resources) directly to HP Business Availability Center. The KPI assignments mechanism, analyzes the samples, and adds the KPIs, business rules, and context menus at the monitoring level of the topology.

Siebel, SAP, and SOA topology and their measurements also use the KPI assignments mechanism to add the KPIs, business rules, and context menus needed to incorporate data (collected by the appropriate SiteScope data collectors) into HP Business Availability Center, at the monitoring level.

The information is then used to build views for the HP Business Availability Center applications. Those views present the real-time monitoring data received from the data sources in Dashboard.

The SiteScope Assignment group is preconfigured to work immediately with the data collected by the SiteScope data collectors.

Note: All topologies created by SiteScope and stored in the Universal CMDB are subjected to the aging process. To prevent aging, see "Aging of CIs in CMDB" in *Using System Availability Management*.

This section includes the following topics:

➤ "Predefined Monitoring Views" on page 437
➤ "Hierarchies" on page 438
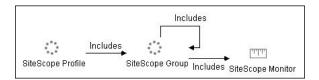
Predefined Monitoring Views

Predefined views display the created CI hierarchies for the SiteScope monitors. When data is received over the bus for a defined source, you can open the relevant view in Dashboard and view status information for the CIs. You can use the CI hierarchies created in the predefined monitoring views as the building blocks for defining your own customized views.

Hierarchies
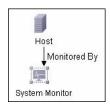
The default topology corresponding to the SiteScope monitors is included in the following views:

➤ **System Monitors** view:

The curved arrow indicates that the hierarchy element is recursive; the CI type is the child of the level above in the hierarchy, but it can also be a child of the CI type itself. For example, a SiteScope Group CI type is the child of a SiteScope Profile CI type, but can also be the child of a SiteScope group CI type. The view also supports the legacy hierarchies (**Depends on** and **Monitored by** relationships and **Include Measurements** and **Include Machines** options). The legacy hierarchy is not shown in the picture of the view displayed above.

➤ **Monitored Hosts** view:

Additional topologies are related to the HP Business Availability Center for SAP Applications, HP Business Availability Center for Siebel Applications, and HP Business Availability Center for SOA solutions within HP Business Availability Center:

➤ **Siebel Application Server topology:**

SiteScope creates the topology for the SiteScope Siebel Application Server monitor. For details, see "Siebel Views" in *Solutions and Integrations*.

Note: The topology is created only if you have the Business Availability Center for Siebel license installed.

➤ **Siebel Web Server topology:**

SiteScope creates the topology for the SiteScope Siebel Web Server monitor. For details, see "Siebel Views" in *Solutions and Integrations*.

Note: The topology is created only if you have the Business Availability Center for Siebel license installed.

➤ **SAP CCMS topology:**

SiteScope creates the topology for the SiteScope SAP CCMS monitor. For details, see "SAP Systems View" in *Solutions and Integrations*.

Note: The topology is created only if you have the Business Availability Center for SAP license installed.

➤ **SAP Work Processes topology:**

SiteScope creates the topology for the SiteScope SAP Work Processes monitor. For details, see "SAP Systems View" in *Solutions and Integrations*.

Note: The topology is created only if you have the Business Availability Center for SAP license installed.

➤ **SOA topology:**

SiteScope creates the topology for the SiteScope Web Service monitor. For details, see "SOA Views and Their Components" in *Solutions and Integrations*.

Note: The topology is created only if you have the Business Availability Center for SOA license installed.

➤ **Additional topologies**

SiteScope creates other topologies. For details, see "Reporting Discovered Topologies to HP Business Availability Center" in *Using System Availability Management*.

⚓ **Manage KPI Assignment Groups**

Note: You can partially edit factory groups:

➤ You can modify only the task of factory group's KPI assignments.

➤ You cannot add new KPI assignments to a factory group.

➤ You cannot delete existing KPI assignments within a factory group.

You can add, edit, or delete custom groups.

To manage KPI assignment groups, use the steps listed in this task.

This task includes the following steps:

➤ "Manage the Groups" on page 441

➤ "View or Configure KPI Assignment Conditions and Tasks" on page 442

➤ "View or Configure KPI Propagation Definition Conditions and Tasks" on page 442

1 **Manage the Groups**

You can create custom KPI Assignment groups, or edit factory or custom KPI Assignment groups. For details, see "Assignment Groups Page" on page 450.

After you create a new KPI Assignment group, you add individual assignments and propagations to the group. For details, see "Edit Group Page" on page 468.

2 View or Configure KPI Assignment Conditions and Tasks

You can view the factory KPI assignments or you can create or edit a KPI assignment for each CI type.

An assignment definition includes a condition and a task. The condition describes specific characteristics of a CI. The task describes the KPIs and business rules that are to be assigned automatically to the CI when the condition occurs. For details, see "Assignments" on page 421.

To create or edit a KPI assignment, you specify the condition, the task, the thresholds, and the operator. For details, see "Define Assignment Configuration Dialog Box" on page 451.

3 View or Configure KPI Propagation Definition Conditions and Tasks

You can view the factory KPI propagations or create or edit a KPI propagation definition for each non-monitor CI type.

A propagation definition includes a condition and a task. The condition describes specific characteristics of a triplet (parent CI type, child CI type, and KPI). The task describes the KPIs and business rules that are to be assigned automatically to the non-monitor CI when the condition occurs. For details, see "Propagations" on page 423.

The parent CI must be a group CI and the business rules that are propagated must be non-leaf rules.

To create or edit a KPI propagation definition, you specify the condition, the task, the objectives, and the operator. For details, see "Define Propagation Configuration Dialog Box" on page 463.

🪓 Manage KPI Assignment Groups – Scenario

In the HP Business Process Insight KPI assignment group, you want to modify the BPI Process Monitor CIs assignment so that the **Backlog** KPI (600) is assigned the **BPI Monitor Backlog Count Rule (604)** instead of the **BPI Monitor Backlog Value Rule (605)**.
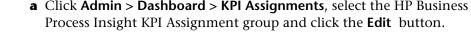
By default, all the KPIs of the BPI Duration Monitor CI (child CI) are propagated with their default group rules to the Business Process CI (parent CI). You want to prevent the propagation of the **Duration** (601) KPI from BPI Duration Monitor CI to the Business Process CI.
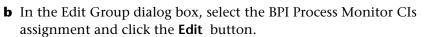
The scenario includes the following steps:

➤ "Modify the HP Business Process Insight KPI Assignment Group" on page 443

➤ "Add the Duration KPI Assignment Group" on page 444

1 Modify the HP Business Process Insight KPI Assignment Group

Open the HP Business Process Insight KPI Assignment group and then open the BPI Process Monitor CIs assignment and modify it.

a Click **Admin** > **Dashboard** > **KPI Assignments**, select the HP Business Process Insight KPI Assignment group and click the **Edit** button.

b In the Edit Group dialog box, select the BPI Process Monitor CIs assignment and click the **Edit** button.

   c In the Define Assignment Configuration dialog box, replace 605 with 604, and modify the threshold definitions if needed:

```
<task-config>
   <contextmenu id="BPIBPMenu"/>
   <kpis-config>
     <kpi-config type="600">
        <rule type="604"/>
        <trinity-selector>
           <CompositeSelector logicalOp="AND">
            <Selector key="sampleType" op="EQ" type="String" value="bpi_process_t"/>
            <Selector key="bp_cmdb_id" op="EQ" type="Binary"
value="RefProp:bp_cmdb_id"/>
           </CompositeSelector>
        </trinity-selector>
     </kpi-config>
```

   d Click **OK**.

   For details, see "Assignment Groups Page" on page 450.

2 Add the Duration KPI Assignment Group

As you cannot add a propagation to an existing factory KPI assignment group, you must create a new KPI assignment group and specify the non-propagation configuration in the new KPI assignment group.

You want to prevent the propagation of the Duration (601) KPI from the BPI Duration Monitor CI to the Business Process CI.

   a Click **Admin** > **Dashboard** > **KPI Assignments**, click the **New** button, and create the Duration KPI Assignment group.

   b In the Edit Group dialog box, click the **New** button in the Propagations area.

   c In the Define Propagation Configuration dialog box, specify the name of the propagation and enter a description.

d Enter the following text in the **Condition** box. This condition specifies the KPI, the child CI and the parent CI and states that the task is explicit. It details the KPIs and rules.

```
<condition childCIClassName="bpi_duration_monitor" kpiType="601"
  parentCIClassName="business_process" propagate="explicit"/>
```

e Enter the following text in the **Task** box. The task specifies that the KPI should not be propagated.

```
<task-config>
    <kpis-config/>
</task-config>
```

f Click **OK**.

⚒ Work with the SiteScope Assignment Group

Note: If you are working with SiteScope 9.0 and earlier, see "Work with the SiteScope Source Adapter – Workflow" in *Model Management*. If you are working with SiteScope 9.50, use the following task.

This task describes how to work with the SiteScope assignment group.

This task includes the following steps:

➤ "Set Up the Permissions" on page 446

➤ "Set the SiteScope Monitors to Report to HP Business Availability Center" on page 446

➤ "Results" on page 447

1 Set Up the Permissions

You must have at least the **Superuser** or **Administrator** role to have access to Dashboard Administration. If you have the **Superuser** role, you have full viewing and editing rights for all of the Dashboard Administration, including the KPI Assignments. If you have the **Administrator** role, you can only view/edit views for which you have permission and you cannot edit, add, or view KPI Assignments. To access the Permissions page, select **Admin > Platform > Users and Permissions**. For details, see "User Management" in *Platform Administration*.

Note to HP Software-as-a-Service customers: You must have at least the **Superuser, Operator, Customer Super User**, or **Customer Administrator** role to have access to the Dashboard Administration. If you have the **Customer Administrator** role, you can only view/edit views for which you have permission, and you cannot edit the KPI Assignments.

---

2 Set the SiteScope Monitors to Report to HP Business Availability Center

To display data from SiteScope monitors in HP Business Availability Center you must set the appropriate SiteScope monitors logging options. For details on these options, see "HP BAC Integration Settings" in *Using System Availability Management*.

Depending on when you set SiteScope to report to HP Business Availability Center, the default logging options are set as follows:

➤ If you defined monitors in SiteScope before SiteScope was set to report to HP Business Availability Center, the logging option of each SiteScope monitor is automatically changed to **Disable reporting to BAC** when you set SiteScope to report to HP Business Availability Center.

You must select another logging option for the monitors whose information you want to display in HP Business Availability Center. Use the Global Search and Replace mechanism to modify the logging option of the selected monitors. For details, see "Global Search and Replace" in *Using System Availability Management*.

Use the **Disable reporting to BAC** option when you do not want the SiteScope monitors and measurements for the subject monitor to be transferred to HP Business Availability Center.

➤ If you define monitors after you have set SiteScope to report to HP Business Availability Center, the monitors have, by default, the **Report everything** option selected.

For additional information about the integration of SiteScope and HP Business Availability Center, see "Integrating SiteScope Data with HP Business Availability Center's Configuration Items" in *Using System Availability Management*.

3 Results

You can view the topology created by SiteScope KPI Assignments in the "Hierarchies" on page 438.

🔍 Factory KPI Assignment Groups

The following factory KPI assignment groups are available:

Factory KPI Assignment Group	Description
General	The General assignment group deals with the propagation of the PNR KPI – it does not include KPI assignments.
HP Business Process Insight	Includes assignments and propagations for Business Process Insight-related CIs.
HP TransactionVision	Includes assignments and propagations for TransactionVision-related CIs.

Factory KPI Assignment Group	Description
SiteScope	Includes assignments and propagations for SiteScope-related CIs. The **SiteScope Siebel Measurements** assignment is activated when the measurement's names do not include the **No. of tasks in error** or **No. of Running Sessions** strings. The **SiteScope Siebel Sessions Measurements** assignment is activated when a measurement's name includes the **No. of Running Sessions** string.
SOA	Includes assignments for SOA-related CIs. Non-monitor SOA-related CIs use the default propagation rules. For details, see "Default Propagation" on page 424.

KPI Assignments User Interface

This section describes:

➤ Add Group Dialog Box on page 449

➤ Assignment Groups Page on page 450

➤ Define Assignment Configuration Dialog Box on page 451

➤ Define Propagation Configuration Dialog Box on page 463

➤ Edit Group Page on page 468

Add Group Dialog Box

Description	Enables you to add a group.
	To access: Click ＊ in the KPI Assignments tab.
Included in Tasks	"Manage KPI Assignment Groups" on page 441

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
Name	The name of the group.
	This field is mandatory.
Description	The description of the group.
	This is the description displayed in the Assignment Groups page.

🔍 Assignment Groups Page

Description	Displays the Factory and Custom assignment groups.
	To access: Select **Admin** > **Dashboard** > **KPI Assignments**
Important Information	You can create, edit, and delete custom groups.
	You can partially edit factory groups, that is:
	➤ You can modify a factory group's assignments.
	➤ You cannot add new assignments to a factory group.
	➤ You cannot delete existing assignments within a factory group.
	Note: To change the way out-of-the-box KPIs are assigned to CIs or the rules that are attached to the KPIs for Real User Monitor or the Business Process Monitor CIs, do not create KPI assignments but modify the XML files for each source adapter. For details, see "Business Process Monitoring Source Adapter Details" or "Real User Monitor Source Adapter Details" in *Model Management*.
Included in Tasks	"Manage KPI Assignment Groups" on page 441

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A–Z)	Description
✳	Click the **New Group** button to open the Add Group dialog box.
✏	Select a group and click the **Edit** button to open the Edit Group page where you can edit the group. For details, see "Edit Group Page" on page 468.
✕	Select a group and click the button to delete the group.
	Note: If you select a Factory group and click the **Delete** button, the following message is displayed: **Deleting a factory group is prohibited**.
📋	Click the **Reset Column Width** button to enable you to modify the width of the table columns or restore the table columns to their original width.

GUI Element (A–Z)	Description
Description	The description of the assignment group.
Name	The name of the assignment group.
	Factory assignment groups are available. For details, see "Factory KPI Assignment Groups" on page 447.
Type	The type of the assignment group: **Custom** or **Factory**.

🔍 Define Assignment Configuration Dialog Box

Description	Enables you to configure a KPI assignment.
	To Access: Click the **New Assignment** button ✳ in the Edit Group page in the Assignments area.
	Note: The button is not available for factory assignment groups.
Important Information	After you have created a KPI assignment you cannot modify the condition. A workaround is to delete the KPI assignment and to recreate it with a new condition.
	Note: To change the way out-of-the-box KPIs are assigned to CIs or the rules that are attached to the KPIs for Real User Monitor or the Business Process Monitor CIs, do not create KPI assignments but modify the XML files for each source adapter. For details, see "Business Process Monitoring Source Adapter Details" or "Real User Monitor Source Adapter Details" in *Model Management*.
Included in Tasks	"Manage KPI Assignment Groups" on page 441

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
Condition	The **condition** is written in XML. It uses parameters to specify the criteria used to trigger the **Task**. For details on the parameters, see "Assignment – Condition" on page 453.
Description	The description of the KPI assignment.
Name	The name of the assignment. This field is mandatory.
Run on existing CIs	Set to retroactively run the KPI assignment on existing CIs. When you select this option, and click **OK**, the KPI assignment is run retroactively on the appropriate CIs with the appropriate **condition**s. **Note:** Selecting this option does not change the status of the KPI assignment itself.
Status	Status can display: ➤ **Assignment Configuration will be stopped after creation** when you are creating a new KPI assignment. After you configure the KPI assignment the status of the KPI assignment is automatically set in **Stopped** status in the Edit Group page if you are using KPI Assignments in Dashboard or in the Add Integration page if you are using EMS Integration. ➤ **Stopped** or **Running** depending on the status of the KPI assignment you are editing.
Task	The task is written in XML. It uses parameters to define the tasks used to assign the KPIs, business rules, and context menus to the selected CI. The task is performed after the KPI assignment is triggered. For details, see "Assignment – Task" on page 456.

GUI Element (A-Z)	Description
Validate	Click the **Validate** button to validate the XML code in both the Condition and Task areas and to perform the indentation of the code. For details, see "Validation" on page 435.

🔍 Assignment – Condition

The assignment condition uses the following format:

```
<condition cmdb_class="class_name">
      <property-condition name="name" operator="operator" value="value"/>
</condition>
```

The parameters used to define assignment conditions are as follows:

Element	Description
condition	A collection used to define the **condition**.
	The element's attribute is **cmdb-class**, which represents the name of the CMDB class (not the display name) that corresponds to the CI for which you are creating the KPI assignment. For details on the CMDB classes, select **Admin > Modeling > CIT Manager**, select the CI type, and click the **Details** tab.
	Note: This element is mandatory. It can contain one or more **property-condition** elements.
	Note: The name you specify in **cmdb_class** must be the name of a monitor CI. If not, the validation issues an error message.

Element	Description
property-condition	An element that creates a restriction on the **condition**. You can use more than one **property-condition**. The element's attributes are:
	➤ **name.** This attribute is mandatory. The name of one of the attributes of the CMDB class. For details on the CMDB classes, select **Admin > Modeling > CIT Manager**, select the CI type, and click the **Details** tab.
	➤ **operator.** This attribute is mandatory. The operator. For details on the possible operators, see "Property_Condition Operator" on page 454.
	➤ **value.** This attribute is mandatory. A string that is compared to the value of the attribute of the CMDB class specified in **class_attribute_name**. This attribute is not mandatory when using IS_NULL and NOT_NULL.

Property_Condition Operator

Use one of the following values:

Value	Description
EQ	Returns **true** when the value of the CMDB class attribute equals the value specified in the **value** attribute of the **property-condition**. See the example below.
IN	Returns **true** when the value of the CMDB class attribute equals one of the elements that is listed in the **value** attribute of the **property-condition**. The elements in the list should be separated with a comma.
IN_LIST	Returns **true** when the **value** attribute of the **property-condition** equals one of the elements listed in the value of the CMDB class attribute, when the CMDB attribute type is **string_list**.
IS_NULL	Checks where the CI attribute was not assigned a value. Returns **true** when the CMDB class attribute is empty.

Value	Description
LIKE	Returns **true** when the value of the CMDB class attribute matches the string in the **value** attribute of the **property-condition**. The string of the **value** attribute can contain % as a wildcard. % may represent 0 or more characters.
NOT_EQ	Returns **true** when the value of the CMDB class attribute does not equal the value specified in the **value** attribute of the **property-condition**. See the example below.
NOT_LIKE	Returns **true** when the value of the CMDB class attribute does not match the string in the **value** attribute of the **property-condition**. The string of the **value** attribute can contain % as a wildcard. % may represent 0 or more characters.
NOT_NULL	Checks where the CI attribute was assigned a value. Returns **true** when the CMDB class attribute is not empty.

🔍 Assignment – Task

The assignment task uses the following format:

```
<task-config>
    <contextmenu id="id, id" />
    <kpis-config>
        <kpi-config type="type">
            <rule>rule_number</rule>
                <rule-parameter key="key" value="value" type="Type"/>
            <rule/>
            <trinity-selector>
                <CompositeSelector logicalOp="logicalOp">
                    <Selector key="key" op="op" type="type" value="value" />
                </CompositeSelector>
            </trinity-selector>
            <objective>
                <operator type="type"/>
                <threshold type="OK" value="value"/>
                <threshold type="WARNING" value="value"/>
                <threshold type="MINOR" value="value"/>
                <threshold type="MAJOR" value="value"/>
            </objective>
        </kpi-config>
    </kpis-config>
</task-config>
```

The parameters used to define assignment tasks are as follows:

Element	Description
task-config	An element used to define the task.
contextmenu	Optional. An element used to specify the context menu you want to add to the CI to which the KPI assignment is attached.
	The element's attribute is **id**, which represents the internal name of the context menu. To add more than one context menu to a CI, separate their internal names with commas (,).
	For details on the context menu internal names, see "Context Menu Repository page" on page 712.
kpis-config	A collection of **kpi-config** elements.
	Note: If you have used the **propagate=sameKPI** attribute in the condition, you must use the **globalRule** attribute in this element as follows:
	➤ **<kpis-config globalRule="default"/>** to assign the default rule to the KPI.
	➤ **<kpis-config globalRule="<rule_id>"/>** to assign the specified rule to the KPI.
	Note: The **globalRule** specification is overridden by the rules specified using the **rule** element.
kpi-config	An element used to define the KPI.
	The element's attribute is **type**, which represents the ID number of the KPI.
	For details on the KPI number, see "KPI Repository page" on page 535.
rule	An element that specifies the number of the business rule you want to attach to the KPI. For details on the business rule numbers, see "Parameter Details Dialog Box (KPIs)" on page 550.
	Note: It can also be a collection of parameters when you want to override existing business rule parameters or when you want to add new parameters to the business rule.

Element	Description
rule-parameter	Optional. An element that defines the business rule parameter. The element's attributes are: ➤ **key.** The display name of the business rule parameter. ➤ **value.** The value of the parameter. Corresponds to the Default Value in the Business Rule Repository. ➤ **type.** The type of parameter. Corresponds to the Type of the parameter. For details, see "Parameter Details Dialog Box (Rules)" on page 653.
trinity-selector	A collection of selector definitions.

Composite Selector	An element that indicates how to group logically the selectors.
	
	 The element's attribute is **logicalOp**, which is the logical operator. The value can be: **AND**, **OR**, **NAND**, or **NOR**.
	
	 Example: To create the **a & b || c & d** sample filter, use the following set of **CompositeSelectors**:
	
	 CompositeSelector logicalOp="OR"
	    CompositeSelector logicalOp="AND"
	        Selector "a"
	        Selector "b"
	    CompositeSelector logicalOp="AND"
	        Selector "c"
	        Selector "d"

Element	Description
Selector	An element that filter the samples relevant for the KPI. It indicates how to filter the sample fields that are used by the business rules to calculate the KPI status. When a monitoring (leaf) CI has a KPI and associated business rule that are intended to be applied to actual data samples, the KPI properties include a selector.

The element's attributes are:

➤ **key.** The name of the sample field.

➤ **op.** The operator can be:

    ➤ **EQ** or **NOT_EQ**

    ➤ **GT** or **LT**

    ➤ **GTEQ** or **LTEQ**

    ➤ **IN** or **NOT_IN.** Use the **|!|** separator in the **value** attribute.

    ➤ **MATCH** or **NOT_MATCH**. The expression you enter in the **value** attribute should follow the Java standard for regular expression.

    ➤ **PREFIX** or **NOT_PREFIX.** Filters in the samples where the sample field value starts with the string entered in the **value** attribute.

    ➤ **SUFFIX** or **NOT_SUFFIX.** Filters in the samples where the sample field value ends with the string entered in the **value** attribute.

➤ **type.** The type of field can be: **String**, **Double**, **Integer**, **Long**, **Boolean**, **Float**, or **Binary**.

➤ **value.** The value of the field in the sample can be:

    ➤ **RefProp:<name of CI property>.** The value can contain the reference to a CI property.

    ➤ **RefPropObject:CMDB_ID.** The only supported value is CMDB_ID. It corresponds to the ID number of the CI in the CMDB database. This value can only be used for composite selectors. Its type is **Binary**.

Element	Description
objective	Optional. A collection of objective definitions.
	Note:
	➤ When the KPI assignment receives a creation notification from the Universal CMDB, it adds the KPI objective configuration to the new CI, according to the KPI assignment definition, in the CMDB.
	➤ If the KPI Objective is not defined in the assignment, the default objectives are taken from the business rule repository, according to the specified rule type.
	➤ The KPI Objective configuration must include the following thresholds: **OK**, **MINOR**, **WARNING**, **MAJOR**
	When the KPI assignment receives a creation notification from the Universal CMDB, it adds the KPI objective configuration to the new CI according to the KPI assignment definition, in the Universal CMDB. Use the following format:
	```\n<objective>\n <operator type="operator"/>\n <threshold type="OK" value="value"/>\n <threshold type="WARNING" value="value"/>\n <threshold type="MINOR" value="value"/>\n <threshold type="MAJOR" value="value"/>\n</objective>\n```
	For more information about thresholds and how to define them, see "Thresholds" on page 425.

Element	Description
operator	Optional. An element used to define the objective operator. The element's attributes is **type.** The type can be: ➤ **default.** To indicate to take the default operator value from the business rule repository, according to the specified business rule type (can be empty). The result is the same if the operator is empty. ➤ **RefProp:<reference_property_name>.** The operator type is taken from the created CI. The value of the CI property must be one of the following: **GREATER_THAN**, **LESS_THAN**, **GREATER_THAN_EQUAL**, **LESS_THAN_EQUAL**, **default**, or the property is empty. If the value of the CI is default or if the property is empty, the default operator is used. ➤ **GREATER_THAN.** The resulting operator is > ➤ **LESS_THAN.** The resulting operator is < ➤ **GREATER_THAN_EQUAL.** The resulting operator is >= ➤ **LESS_THAN_EQUAL.** The resulting operator is <=

Element	Description
threshold	This element is mandatory. An element used to define the thresholds. The element's attribute is **type.** The type can be: ➤ **default.** To indicate to take the default threshold value from the business rule repository, according to the specified business rule type. The resulting threshold value is the default value according to the business rule (can be empty). ➤ **ignore.** To skip the threshold checking. This is similar to leaving an empty threshold in the KPI definition in the Edit KPI dialog box. For details, see "How Dashboard KPIs Work" on page 338. The resulting threshold value is empty. ➤ **RefProp:<reference_property_name>.** The threshold value is taken from the created CI. If the CI property is empty, the result is the same as using **default**. For example: ➤ **OK** corresponds to **RefProp:normal_limit** ➤ **Warning** corresponds to **RefProp:warning_limit** ➤ **Major** corresponds to **RefProp:major_limit** ➤ **Minor** corresponds to **RefProp:minor_limit** ➤ **<number>.** A number that has a float, integer, or long format.

🔍 Define Propagation Configuration Dialog Box

Description	Enables you to configure a KPI propagation definition.
	To Access: Click the **New** button ✳ in the Edit Group page in the Propagation Rules area.
	Note: The button is not available for factory assignment groups.
Important Information	After you have created a propagation definition you cannot modify the condition. A workaround is to delete the propagation definition and to recreate it with a new condition.
	The parent CI must be a logical group CI and the business rules that are propagated must be group rules.
Included in Tasks	"Manage KPI Assignment Groups" on page 441

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
Condition	The **condition** is written in XML. It uses parameters to specify the criteria used to trigger the **Task**. For details on the parameters, see "Propagation Definition – Condition" on page 464.
	Note: when you edit a KPI propagation, the condition is not editable.
Description	The description of the propagation.
Name	The name of the propagation.
	This field is mandatory.
Task	The task is written in XML. It specifies the KPIs and business rules to be propagated to the specified parent CI and the objectives to be used to calculate the status/value of the KPI. The task is performed after the propagation is triggered. For details, see "Propagation Definition – Task" on page 466.

GUI Element (A-Z)	Description
Validate	Click the **Validate** button to validate the XML code in both the Condition and Task areas and to perform the indentation of the code. For details, see "Validation" on page 435.

🔍 Propagation Definition – Condition

The propagation condition uses the following format:

```
<condition childCIClassName="it_world" kpiType="612"
   parentCIClassName="bpi_step" propagate="explicit"/>
```

The parameters used to define propagation conditions are as follows:

Element	Description
condition	An element used to define the **condition**. The element's attributes are: ➤ **childCIClassName.** This is the name of the CMDB class (not the display name) that corresponds to the child CI of the parent CI specified in **parentCIClassName**. For details on the CMDB classes, select **Admin > Modeling > CIT Manager**, select the CI type, and click the **Details** tab. Use **it_world** to represent the highest level of the Class model. ➤ **kpiType**. It can be: ➤ The number of the KPI attached to the child CI specified in **childCIClassName**. The KPI number is listed in the KPI Repository (to access, select **Admin > Dashboard > Repositories > KPIs**). ➤ **all** which represents any KPI attached to the child CI specified in **childCIClassName**. This KPI and the rule specified in the task are propagated to the parent CI. ➤ **parentCIClassName** specifies the name of the CMDB class that corresponds to the parent CI of the child specified in **childCIClassName**. This CI is the target of the propagation. Use **it_world** to represent the highest level of the Class model. ➤ **propagate** can be: ➤ **explicit** which tells the propagation mechanism that the KPI and the rule to be propagated are listed in the task ➤ **sameKPI** which tells the propagation mechanism that it should propagate the specified KPI (as defined in the Repository) attached to the specified CI to the parent CI. If you use **sameKPI** you must specify the **globalRule** attribute in the **kpis_config** element in the task. **Note:** This element is mandatory. It can contain one or more **property-condition** elements.

🔍 Propagation Definition – Task

The propagation task uses the following format:

```
<task-config>
    <kpis-config>
        <kpi-config type="type">
            <rule type="rule_number">
            <objective>
                <objective>
                    <operator type="operator"/>
                    <threshold type="OK" value="value"/>
                    <threshold type="WARNING" value="value"/>
                    <threshold type="MINOR" value="value"/>
                    <threshold type="MAJOR" value="value"/>
                </objective>
        </kpi-config>
    </kpis-config>
</task-config>
```
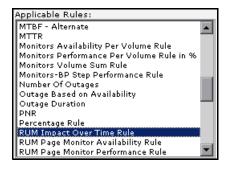
The parameters used to define propagation tasks are as follows:

Element	Description
task-config	An element used to define the task.
kpis-config	A collection of **kpi-config** elements. **Note:** If you have used the **propagate=sameKPI** attribute in the condition, you must use the **globalRule** attribute in this element as follows: ➤ **<kpis-config globalRule="default"/>** to assign the default rule to the KPI. The default rule is the default group rule assigned to a KPI in the KPI Repository (to access, select **Admin** > **Dashboard** > **Repositories** > **KPIs**). ➤ **<kpis-config globalRule="<rule_id>"/>** to assign the specified rule to the KPI. **Note:** The **globalRule** specification is overridden by the rules specified using the **rule** element.
kpi-config	An element used to define the KPI that is to be propagated to the specified parent CI. The element's attribute is **type**, which represents the ID number of the KPI. For details on the KPI number, see "KPI Repository page" on page 535.
rule	An element used to define the business rule that is to be propagated to the specified parent CI. The element's attribute is **type**, which represents the ID number of the rule. To access the rule number, select **Admin** > **Dashboard** > **Repositories** > **Business Rules**, the ID number for each rule is displayed in the ID column. **Note:** The **globalRule** specification is overridden by the rules specified using the **rule** element.

Element	Description

objective	Optional. A collection of objective definitions.
	
	Note:
	
	➤ When the KPI propagation mechanism is activated, it adds the KPI threshold configuration to the parent CI, in the CMDB.
	
	➤ If the **objective** element is not defined in the propagation, the default thresholds are used. For details, see "Default Thresholds" on page 425.
	
	➤ If you use it, the **objective** element must include the following thresholds: **OK**, **WARNING**, **MINOR**, **MAJOR**
	
	Use the following format:
	
	`<objective>`
	`    <operator type="`**`operator`**`"/>`
	`    <threshold type="OK" value="`**`value`**`"/>`
	`    <threshold type="WARNING" value="`**`value`**`"/>`
	`    <threshold type="MINOR" value="`**`value`**`"/>`
	`    <threshold type="MAJOR" value="`**`value`**`"/>`
	`</objective>`

Edit Group Page

Description	Enables you to edit an existing group. **To access:** In the Assignment Groups page, select a group and click the **Edit** button 🖉.
Important Information	Depending on the KPI Assignment group you have selected, the Assignments area lists different assignments. Each factory KPI Assignment group has its own group of KPI assignments.
Included in Tasks	"Manage KPI Assignment Groups" on page 441

General Area

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
Description	The description of the group. The description is displayed in the Assignment Groups dialog box.
Name	The name of the group.
	This field is mandatory.
Type	The type can be:
	➤ **Factory** for factory KPI Assignment groups.
	➤ **Custom** for custom KPI Assignment groups.

Assignments Area

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
▶	Select a KPI assignment and click to start the assignment of the KPI assignment elements to existing CIs when they were stopped and to new CIs. The status of the KPI assignment is **Running**.
■	Select a KPI assignment and click to stop the assignment of the KPI Assignment elements to the appropriate CI. The status of the KPI assignment is then **Stopped**.
＊	Click to create a KPI assignment in the Define Assignment Configuration dialog box.
	Note: This button is disabled for Factory KPI assignments.
✎	Select a KPI assignment and click to edit the KPI Assignment in the Define Assignment Configuration dialog box.

GUI Element (A-Z)	Description
✕	Select a KPI assignment and click to delete. **Note:** This button is disabled for Factory KPI assignments.
⊞	Select a KPI assignment and click to synchronize the selected KPI assignment.
↻	Click to refresh the list of KPI assignments after you have added or deleted KPI assignments, or after you have modifies KPI assignment names.
⊟	Click to enable you to adjust the width of the table's columns by dragging the borders of the column to the right or the left, or to reset the table columns' width to its default setting.
Description	The description of the KPI assignment
Name	The name of the KPI assignment.
Status	The status: ➤ **Running.** The KPI assignment has been started and is running on the appropriate CIs. ➤ **Stopped.** The KPI assignment has been stopped and is not running.

Part VII

Repositories

17

Repositories Overview

This chapter provides general information on the repositories.

This chapter includes:

Concepts

➤ Repositories – Overview on page 474

➤ Customizing Repository Elements on page 475

Tasks

➤ Customize a Repository Element on page 476

➤ Create a KPI, Rule, and Tooltip – Example on page 477

➤ Define Repository Elements and KPI Assignments to Monitor Mobile Terminals – Scenario on page 482

➤ Create a Dynamic URL – Scenario on page 493

➤ Customize Dashboard Repository Entities to Model Your Business World – Scenario on page 502

🍥 Repositories – Overview

HP Business Availability Center repositories provide definitions for objects in the HP Business Availability Center system. Many of these definitions can be customized as required by your organization.

The Repository page provides a convenient user interface for viewing and customizing the definitions contained in the repository XML definition files. These files define the templates that are used throughout HP Business Availability Center to determine how source data is imported and handled, and to determine appearance and functionality for the CIs in the presentation layer.

Repositories

The Repository page enables you to access the following repositories:

➤ **KPIs.** Provides definitions for the Key Performance Indicators (KPIs) used in Dashboard. For details, see "KPI Repository Overview" on page 507.

➤ **Rules.** Provides definitions for the business rules used with the KPIs in Dashboard. For details, see "Business Rule Repository Overview" on page 554.

The Rules API can be used to create new rules; for details see "Rules API" on page 657.

➤ **Context menus.** Provides definitions for the Configuration Items (CIs) menus used in Dashboard. For details, see "Context Menu Repository Overview" on page 693.

➤ **Context menu items.** Provides definitions for the CI menu items that are used in the context menus. For details, see "Context Menu Item Repository Overview" on page 718.

➤ **Tooltips.** Provides definitions for the tooltips used to display CI information in Dashboard. For details, see "Tooltip Repository Overview" on page 812.

Permissions

To view the repositories you must have the **Add permission for Sources** permission. To set up the permissions, select **Admin** > **Platform** > **Users and Permissions** > **Permissions Management**.

Advanced Users

Advanced users can modify existing repository objects and create new ones. This may be necessary when you want to customize the way information is presented in Dashboard to fit the needs of your organization; or when you need to create new objects when integrating data from a new external system into Dashboard.

Dashboard and Service Level Management Repositories

Dashboard and Service Level Management use two separate, independent sets of repositories. Dashboard has repositories for KPIs, rules, context menus, context menu items, and tooltips. Service Level Management has repositories for KPIs and rules. These repositories contain different KPIs and rules; changing KPIs or rules in Dashboard has no effect on Service Level Management (and vice versa).

For details on the Service Level Management repositories, see "KPI Repository" and "Business Rule Repository" in *Using Service Level Management*.

Customizing Repository Elements

Within the Repository page, preconfigured repository elements are labeled **Factory** elements (for example Factory KPIs), and modified elements are labeled **Custom** elements.

There are three ways to customize elements in the Repository page:

➤ **New Item.** Creates a new repository element that is not based on an existing element. You customize the new element to fit your needs.

Note that tooltips can only be modified; you cannot create a new tooltip.

➤ **Clone**. Creates a new repository element by cloning an existing factory or custom element. The original element is still available, and the new cloned element can be modified. The cloned element is automatically assigned a new ID number.

➤ **Override**. Overrides an existing factory element. The original element is labeled overridden (disabled) in the Factory area, and an editable copy appears in the Custom area. Both the custom element and the original element have the same ID number. If you delete the custom element, the original factory element is automatically restored.

Note: HP Professional Services offers best practice consulting; it is recommended that you use this service before making any changes to the repositories. For information on how to obtain this service, contact your HP Software Support representative.

🪁 Customize a Repository Element

This task provides general instructions for creating and editing a repository element. For scenarios illustrating how to customize specific types of elements, see:

➤ **KPIs, Business Rules, and Tooltips.** "Create a KPI, Rule, and Tooltip – Example" on page 477.

➤ **Context Menu Items and Context Menus.** "Create a Dynamic URL – Scenario" on page 493.

Important: Changes made to the repositories may adversely affect functionality. Only administrators with advanced knowledge of Dashboard should perform changes.

To customize a repository element:

1 Open the **Admin** > **Dashboard** > **Repository page** and select a repository (for example KPIs).

2 Select an element from the Factory area and click **Clone**. (You can also create or override elements, as described in "Customizing Repository Elements" on page 475.)

3 Click the **Edit** button corresponding to the cloned element in the Custom area, and change its values as required.

4 Click **OK** to save the changes.

🪛 Create a KPI, Rule, and Tooltip – Example

This example shows how to create a KPI with corresponding rule and tooltip.

This task includes the following steps:

➤ "Create a KPI" on page 477

➤ "Create a Rule" on page 478

➤ "Attach the New Rule to the New KPI" on page 480

➤ "Edit the Tooltip" on page 481

1 Create a KPI

Create a clone of the OT Impact KPI.

a Select **Admin** > **Dashboard** > **Repositories** > **KPIs** to open the KPIs page.

b In the **Factory KPIs** area, select the **OT Impact** KPI you want to clone.
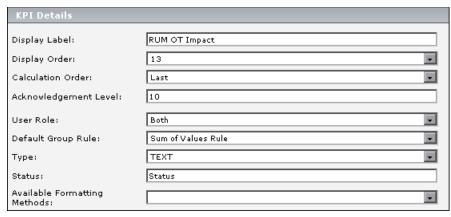
☐	303	Locations	Dashboard
☑	13	OT Impact	Dashboard
☐	6	Performance	Dashboard

c Click the **Clone** button. The cloned KPI appears in the Custom KPIs area.

Custom KPIs		
Id	Display Label ⬆	Applicable Sections
☐ 2000	OT Impact	Dashboard

d Click the **Edit Entity** button to open the **KPI Details** dialog box. For details, see "KPI Details Dialog Box" on page 537.

e Change the name of the KPI to **RUM OT Impact,** and click **OK**.

KPI Details	
Display Label:	RUM OT Impact
Display Order:	13
Calculation Order:	Last
Acknowledgement Level:	10
User Role:	Both
Default Group Rule:	Sum of Values Rule
Type:	TEXT
Status:	Status
Available Formatting Methods:	

The result is as follows:

Custom KPIs		
Id	Display Label ⬆	Applicable Sections
☑ 2000	RUM OT Impact	Dashboard

2 Create a Rule

Create a new rule: RUM Impact Over Time. This is a clone of the Impact Over Time rule, and uses different criteria to calculate the financial loss of downtime.

a Select **Admin** > **Dashboard** > **Repositories** > **Business Rules** tab menu option to open the Business Rules page.

 b In the **Factory Business Rules** area, select the **Impact Over Time Rule** that you want to clone.

☐	23	com.mercury.am.rules.dashboard.b lDashboardRules.WorstChildRule	HP Worst Child Rule
☑	24	com.mercury.am.rules.dashboard.b lKpiRules.BisImpactOTRule	Impact Over Time Rule
☐	30	com.mercury.am.rules.dashboard.b lDashboardRules.SumRule	Summary of values
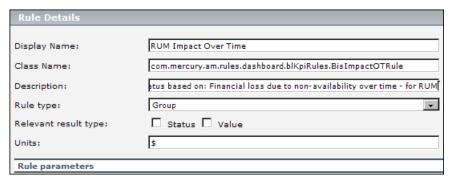
 c Click the **Clone** button.

 d The cloned rule appears in the **Custom Business Rules** area.

Custom Business Rules		
Id	**Class Name ▲**	**Display Name**
☐ 2000	com.mercury.am.rules.dashboard.b lKpiRules.BisImpactOTRule	Impact Over Time Rule
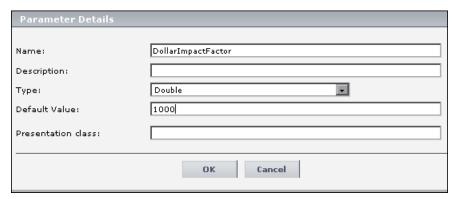
 e Click the appropriate **Edit Entity** button to open the Rule Details dialog box.

 f In the **Display Name** box, change the name of the rule to **RUM Impact Over Time**.

 g In the **Description** box, add **- for RUM** at the end of the description to indicate that the rule is for Real User Monitor.

Rule Details

Display Name:	RUM Impact Over Time
Class Name:	com.mercury.am.rules.dashboard.blKpiRules.BisImpactOTRule
Description:	atus based on: Financial loss due to non-availability over time - for RUM
Rule type:	Group
Relevant result type:	☐ Status ☐ Value
Units:	$

Rule parameters
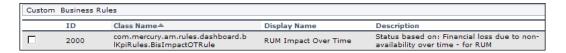
 h In the **Rule Parameters** area, click the **Edit** button of the **DollarImpactFactor** parameter to open the Parameter Details dialog box.

i Change 600 to 1000 in **Default Value** box.

Parameter Details	
Name:	DollarImpactFactor
Description:	
Type:	Double
Default Value:	1000
Presentation class:	

OK   Cancel

j Click **OK** to save the changes to the parameter.

k Click **OK** to save the changes to the rule.

The result is as follows:

Custom Business Rules				
	ID	Class Name▲	Display Name	Description
☐	2000	com.mercury.am.rules.dashboard.b lKpiRules.BisImpactOTRule	RUM Impact Over Time	Status based on: Financial loss due to non-availability over time - for RUM

3 Attach the New Rule to the New KPI

You must attach the new rule to the new KPI.

a Select **Admin** > **Dashboard** > **Repositories** > **KPIs** to open the KPIs page.

b In the **Custom KPIs** area, select the RUM OT Impact KPI.

Custom KPIs			
	Id	Display Label▲	Applicable Sections
☑	2000	RUM OT Impact	Dashboard

c Click the appropriate **Edit Entity** button to open the **KPI Details** dialog box. For details, see "KPI Details Dialog Box" on page 537.

d In the **Applicable Rules** list, scroll down to the RUM Impact Over Time Rule and select the rule. Make sure that you press the CTRL button when you select the rules. If you do not press the CTRL button, all of the preselected rules are disabled when you click the rule you want to add to the applicable rules.

Applicable Rules:

MTBF - Alternate
MTTR
Monitors Availability Per Volume Rule
Monitors Performance Per Volume Rule in %
Monitors Volume Sum Rule
Monitors-BP Step Performance Rule
Number Of Outages
Outage Based on Availability
Outage Duration
PNR
Percentage Rule
RUM Impact Over Time Rule
RUM Page Monitor Availability Rule
RUM Page Monitor Performance Rule
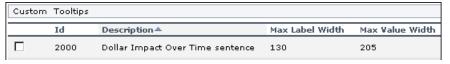
e Click **OK** to save the change.

4 Edit the Tooltip
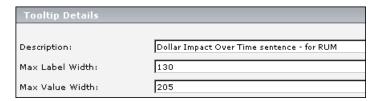
A new tooltip was created when you created the RUM Impact Over Time rule. Change the tooltip description to match the rule's description.

a Select **Admin** > **Dashboard** > **Repositories** > **Tooltips** to open the Tooltips page. The Custom Tooltips area displays the tooltip that corresponds to the new rule you created:

Custom Tooltips				
	Id	Description ▲	Max Label Width	Max Value Width
☐	2000	Dollar Impact Over Time sentence	130	205

b Click the **Edit Entity** button corresponding to tooltip 2000 to open the Tooltip Details dialog box.

c In the **Description** box, add - **for RUM** at the end of the tooltip name.

Tooltip Details	
Description:	Dollar Impact Over Time sentence - for RUM
Max Label Width:	130
Max Value Width:	205
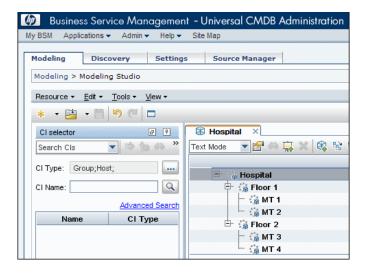
The result is as follows:

Custom Tooltips				
	Id	Description ▲	Max Label Width	Max Value Width
☐	2000	Dollar Impact Over Time sentence - for RUM	130	205

🔧 Define Repository Elements and KPI Assignments to Monitor Mobile Terminals – Scenario

A hospital uses Mobile Terminals (MTs) to view and update patient records. Each MT includes a terminal and a battery mounted on a cart, which is moved between rooms. When the batteries run out of power, the MTs are often pushed into a corner rather than recharged, and the hospital is unable to track which MTs are offline.

To track offline MTs, SiteScope Service monitors are configured to monitor the Windows Server Service; if it is not available (if u_iQuality = 3) the MT is offline. A View is created in Modeling Studio to represent the hospital, the floors, the MTs on each floor, and the SiteScope Service monitors which indicate if an MT is offline.

This scenario describes how Jane, the Dashboard administrator, works with the Dashboard repositories and the KPI Assignment mechanism to display the following information in Dashboard: which MTs are offline, how many are offline on each floor and in the entire hospital, and what percentage are offline on each floor and in the entire hospital.
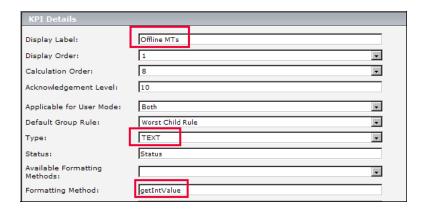
This scenario includes the following steps:

➤ "Clone and Edit the System KPI" on page 483

➤ "Clone and Edit the Generic Formula Rule to Identify Offline MTs" on page 484

➤ "Clone and Edit the Sum of Values Rule to Count the Offline MTs" on page 485

➤ "Modify the Tooltip to Correspond to the New Rule" on page 485

➤ "Attach the Two New Rules to the New KPI" on page 487

➤ "Assign KPI and Rule to the SiteScope Monitor CIs" on page 488

➤ "Propagate KPIs and Rules to the MT, Floor, and Hospital CIs" on page 490

1 Clone and Edit the System KPI

By default, the System KPI uses the Percentage business rule. This KPI will be used for the floor level CIs, to indicate what percentage of MTs are offline. Using the Dashboard KPI Repository, Jane creates another KPI to count the number of offline MTs per floor.

Jane clones the System KPI, and opens the Custom KPI for editing. She renames the KPI to **Offline MTs**, changes its Type to **TEXT**, and its Formatting Method to **getIntValue**, to display a number rather than status icon.
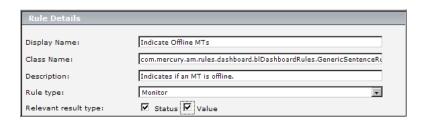
2 Clone and Edit the Generic Formula Rule to Identify Offline MTs
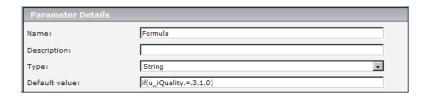
Within the sample fields collected from the MTs, if the value of the u_iQuality field is 1, the MT is online; if u_iQuality = 3 the MT is offline.

Jane uses the Generic Formula rule to change the value of this field to 1 or 0 depending on the MT's online or offline status. This enable the floor level CIs to sum the 1s and 0s, and count how many MTs are offline.

Within the Dashboard Business Rule Repository, Jane clones the Generic Formula rule, and opens the Custom rule for editing. She changes the name of the rule to **Indicate Offline MTs** and adds a rule description. She defines the Rule Type as **Monitor**, and selects **Status** and **Value** for the rule's Relevant result type.

Within the Rule Parameters area, Jane edits the **Formula** parameter. She sets the formula Type as **String**, and defines the formula's Default Value as **if(u_iQuality,=,3,1,0)**. This means that if the value of u_iQuality is equal to 3 (offline), its value is set to 1; otherwise it is set to 0.

Parameter Details	
Name:	Formula
Description:	
Type:	String
Default value:	if(u_iQuality,=,3,1,0)

3 Clone and Edit the Sum of Values Rule to Count the Offline MTs

Within the Business Rule Repository, Jane clones and edits the Sum of Values rule to sum the values (1s and 0s) of the MTs on each floor, to count how many are offline. She changes the name of the cloned rule to **Count Offline MTs** and adds a rule description. By default, the Sum of Values rule calculates a sum of child CI values in dollars. Jane removes the dollar sign (**$**) from the **Units** text box.
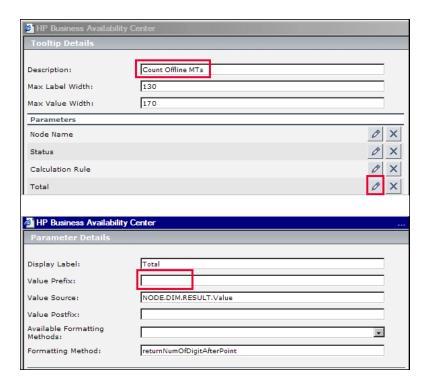
Rule Details	
Display Name:	Count Offline MTs
Class Name:	com.mercury.am.rules.dashboard.blDashboardRules.SumRule
Description:	Count the number of offline MTs.
Rule type:	Group
Relevant result type:	☐ Status ☐ Value
Units:	

4 Modify the Tooltip to Correspond to the New Rule

When Jane cloned the Sum of Values rule a new tooltip was automatically created, but its units are in dollars. Jane edits the new tooltip to correspond to the new rule.

Within the Tooltips Repository, Jane opens the tooltip **Summary of values for kpi** in the Custom Tooltips area. She changes the name of the cloned tooltip to **Count Offline MTs**. In the Parameters section, she edits the **Total** parameter, removing the dollar sign (**$**) in its **Value Prefix** field.

HP Business Availability Center		
Tooltip Details		
Description:	Count Offline MTs	
Max Label Width:	130	
Max Value Width:	170	
Parameters		
Node Name		✎ ✕
Status		✎ ✕
Calculation Rule		✎ ✕
Total		✎ ✕

HP Business Availability Center		...
Parameter Details		
Display Label:	Total	
Value Prefix:		
Value Source:	NODE.DIM.RESULT.Value	
Value Postfix:		
Available Formatting Methods:		
Formatting Method:	returnNumOfDigitAfterPoint	

5 Attach the Two New Rules to the New KPI

Jane now attaches the new rules to the new KPI. Within the KPI Repository, she opens the **Offline MTs** KPI for editing. In the **Applicable Rules** list, she selects both **Count Offline MTs** and **Indicate Offline MTs,** while pressing the CTRL button. (If she does not press the CTRL button, all of the preselected rules are disabled when she selects the new rules.)

6 **Assign KPI and Rule to the SiteScope Monitor CIs**

The SiteScope monitors which monitor MT availability use the naming convention **MT Monitor <number>**. Based on this naming convention, Jane uses the Dashboard KPI Assignments tab to define the assignment of the Offline MTs KPI and the Indicate Offline MTs rule to these SiteScope monitor CIs.

For details about the assignment mechanism, see "Assignments" on page 421.

a Jane is using an assignment from the default SiteScope assignment group as the basis of her new assignment. From the SiteScope assignment group, she opens the SiteScope Monitors assignment for editing. She copies the text from its **Task** box into a text editor.

b Jane creates a new Assignment Group called **Hospital KPI Enrichments Group.**

c She adds an assignment to this group named **Hospital KPI Enrichment**, and types the following in its **Condition** box (filtering according to the naming convention MT Monitor <number>):

```
<condition cmdb_class="sitescope_monitor">
    <property-condition name="data_name" operator="LIKE" value="MT Monitor%"/>
</condition>
```

d She then opens the **Hospital KPI Enrichment** assignment. In its **Task** box, she enters the text that she copied from the SiteScope Monitors assignment.

She replaces the text <kpi-config type="1"> and <rule type="4"/> with **<kpi-config type="2000">** and **<rule type="2000"/>**, using the IDs of the Offline MTs KPI (2000) and the Indicate Offline MTs rule (2000).

7 Propagate KPIs and Rules to the MT, Floor, and Hospital CIs

Jane now uses the Dashboard KPI Assignments tab to define propagation of the Offline MTs KPI and the Count Offline MTs rule to the MT, Floor, and Hospital CIs.

She also defines the propagation of the System KPI with Percentage rule to the Floor and Hospital CIs.

For details about the propagation mechanism, see "Propagations" on page 423.

a Within the **Hospital KPI Enrichments Group,** Jane adds a propagation named **Count Offline MTs Propagation**. This propagation attaches the Offline MTs KPI (2000) and the Count Offline MTs rule (2001) to the MT CIs.

The condition for this propagation is that the parent CI type is logical_group (which includes the MT CIs), and the child CI is a SiteScope monitor assigned the Offline MTs KPI (2000).

She types the following in the propagation's **Condition** box:

```
<condition childCIClassName="sitescope_monitor" kpiType="2000"
    parentCIClassName="logical_group" propagate="sameKpi"/>
```

In the **Task** box, she types the following:

```
<task-config>
    <kpis-config globalRule="2001"/>
</task-config>
```

b She then adds another propagation named **Count Offline MTs and Percentage Propagation**. This propagation attaches the Offline MTs KPI (2000) and the Count Offline MTs rule (2001) to the Floor and Hospital CIs. It also attaches the System KPI and Percentage rule to the Floor and Hospital CIs.

The condition for this propagation is that the parent CI type is logical_group (which includes the Floor and Hospital CIs), and the child CI type is logical_group assigned the Offline MTs KPI (2000).

She types the following in the propagation's **Condition** box:

```
<condition childCIClassName="logical_group" kpiType="2000"
     parentCIClassName="logical_group" propagate="explicit"/>
```

In the **Task** box, she types the following:

```
<task-config>
     <kpis-config>
          <kpi-config type="2000">
               <rule type="2001"/>
          </kpi-config>
          <kpi-config type="1">
               <rule type="17"/>
          </kpi-config>
     </kpis-config>
</task-config>
```
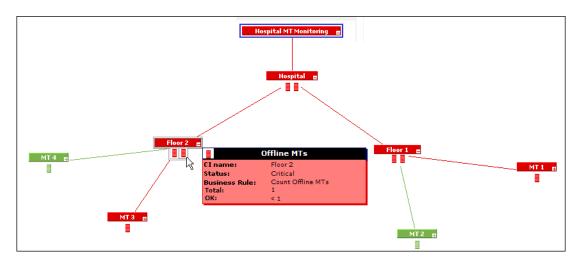
c Jane clicks the Start Assignment and the Synchronize Assignment
   buttons to activate the assignment.

Dashboard now displays the following:

➤ Each of the SiteScope monitors indicating if an MT is offline is assigned
   the **Offline MTs** KPI with **Indicate Offline MTs** rule.

➤ Each of the MT CIs is assigned the **Offline MTs** KPI with **Count Offline
   MTs** rule.

➤ Each of the floor CIs is assigned the **Offline MTs** KPI with **Count Offline
   MTs** rule, and the **System** KPI with **Percentage** rule.

➤ The hospital CIs is assigned the **Offline MTs** KPI with **Count Offline MTs** rule, and the **System** KPI with **Percentage** rule.

🔧 Create a Dynamic URL – Scenario

This scenario describes how to create a dynamic URL context menu item and add it to a context menu.

You want to create new context menu options for CIs in Dashboard. These options launch the NNMi views from Dashboard.

The URLs have the following format:

➤ showForm:
http://unv08nnm:8004/nnm/launch?cmd=showForm&objtype=Node&nodename=unv08nnm&j_username=admin&j_password=admin.

➤ showLayer2:
http://unv08nnm:8004/nnm/launch?cmd=showLayer2Neighbors&objtype=Node&nodename=unv08nnm&j_username=admin&j_password=admin

➤ showLayer3:
http://unv08nnm:8004/nnm/launch?cmd=showLayer3Neighbors&objtype=Node&nodename=unv08nnmj_username=admin&j_password=admin

➤ showView:
http://unv08nnm:8004/nnm/launch?cmd=showView&objtype=Node&j_username=admin&j_password=admin

Unv08nnm is the Network Node Manager 8i (NNM 8i) server in the Business Service Management (BSM) hosted solution.

The first part of the URL – before the question mark – is the static part of the dynamic URL used to create the context menu option and the second part of the URL consists of parameters used by the dynamic URL. Each parameter and its value is separated from the others by &.

To create the context menu item in the Dashboard Repositories, you can either add a completely new menu item, or clone an existing one that is similar to what you need and edit its properties. The new menu option (NNMi) is added to the context menus used for the NNMi CIs.

This task includes the following steps:

➤ "Create the Context Menu Item Group – Optional" on page 494

➤ "Create the Individual Context Menu Items" on page 494

➤ "Add the Definition for Each Parameter of the URL" on page 496

➤ "Create the other URLs" on page 497

➤ "Add the Context Menu Items to the NNMi Context Menu Group" on page 498

➤ "Assign the NNMi Context Menu to the NNMi CIs" on page 499

➤ "Test the Context Menu" on page 499

1 Create the Context Menu Item Group – Optional
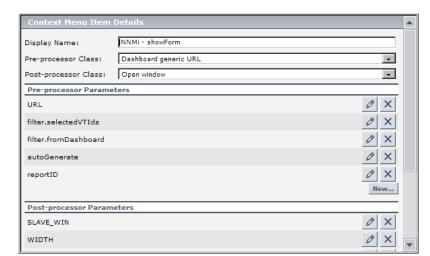
You create a context menu item group (NNMi) which is like a regular context menu item. This step is optional; it is needed only to organize the different dynamic URL context menu items.

a Select **Admin** > **Dashboard** > **Repositories** > **Context Menu Items** to open the Context Menu Items page.

b In the **Custom Context Menu** area, click **New Item** to create a new context menu item. The Context Menu Item Details dialog box is displayed.

c In **Display Name**, enter a name for the context menu you are creating, for example, NNMi.

d Click **OK**.

2 Create the Individual Context Menu Items

For each one of the URLs above, you create an individual context menu item. For example for the showForm URL:

a Select **Admin** > **Dashboard** > **Repositories** > **Context Menu Items** to open the Context Menu Items page.

b In the **Custom Context Menu Items** area, click **New Item** to create a new menu. The Context Menu Item Details dialog box is displayed.

c Enter the following information:

➤ **Display Name.** Enter a name for the context menu you are creating, for example, NNMi - showForm.

➤ **Pre-processor Class.** Select **Dashboard Generic URL** from the list.

➤ **Post-processor Class**. Select **Open Window** from the list.

When you select the **Pre-processor Class** and **Post-processor Class** options, the default parameters for each selection are automatically added in the **Pre-processor Parameters** and **Post-processor Parameters** areas.

d **Delete the Unnecessary Default Parameters**

Delete the following default parameters: **filter.selectedVTIds**, **filter.fromDashboard**, **autoGenerate**, and **reportID**.

e **Edit the URL parameter**

Click the **Edit** button for the URL parameter and in the Pre-processor Parameter Details dialog box, enter the following information:

➤ **Value.** Enter the static part of the URL: **http://unv08nnm:8004/nnm/launch**.

➤ **Convert to.** Leave empty.

➤ Click **OK**.

Note: For static URLs you can enter the complete URL in the Value field.

---

3 Add the Definition for Each Parameter of the URL

For each one of the URLs above, you add the definition for each parameter of the URL. For example, the **showForm** URL has the following parameters:

http://unv08nnm:8004/nnm/launch?cmd=showForm&objtype=Node&nod ename=unv08nnm&j_username=admin&j_password=admin.

You must define separately each parameter.

a In the Context Menu Item Details dialog box click the **New** button.

b In the Pre-processor Parameter Details dialog box, enter the information for each parameter as listed in the table below and click **OK**.

	cmd= showForm	objtype= code	nodename= unv08nnm	j_username= admin	j_password= admin
Key	mycmd	mysubc md	mysubsubcm d	username	password
Value	showForm	Node	NODE.PROPS .display_label	admin	admin
Convert to	cmd	objtype	nodename	j_username	j_password

NODE.PROPS.display_label returns the name of the CI that you right-click to use the NNMi context menu item. It searches for the CI (NODE) where the cursor is located, and then for the CI Property (PROPS) that corresponds to the CI name (data_name). The name of the CI that you right-click is then changed into the nodename parameter that is used by the URL to access the correct information.

You can also use:

➤ NODE.ID to return the CI ID Symbol in the view.

➤ NODE.CMDB.ID to return the CI CMDB ID.

➤ NODE.PROPS.data_name to return the CI name.

Pre-processor Parameter Details	
Key:	mycmd
Value:	showForm
Convert to:	cmd
	OK Cancel Help

c In the Post-processor Parameters area:

➤ Click the **Edit** button for **WIN_NAME** to open the Post-processor Parameter Details dialog box. In the **Value** box, enter a name for the window opened by the menu item, for example, NNMi. Click **OK**.

➤ Click the **Edit** button for **SLAVE_WIN** to open the Post-processor Parameter Details dialog box. Make sure that the value of the **SLAVE_WIN** parameter is 0 to open a new window. Click **OK**.

d Click **OK** to close the Context Menu Item Details dialog box. The new context menu item is displayed in the **Custom Context Menu Items** area of the Repositories Context Menu Items page.

4 Create the other URLs

In the same way as explained in "Create the Individual Context Menu Items" on page 494 and "Add the Definition for Each Parameter of the URL" on page 496, create the context menu items for each URL.
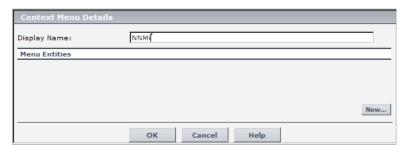
Note: showView menu item does not need a **mysubsubcmd** parameter.

You can create the additional context menu items by cloning the **NNMi - showForm** menu item and editing the Key and Value fields where necessary.

5 Add the Context Menu Items to the NNMi Context Menu Group
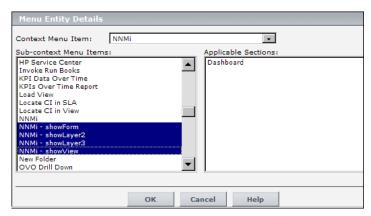
Create a context menu and add the context menu items you created in the previous steps.

a Create the context menu.

➤ Select **Admin** > **Dashboard** > **Repositories** > **Context Menu** to open the Context Menu page.

➤ In the **Custom Context Menu** area, click **New Item** to create a new menu. The Context Menu Details dialog box is displayed.

➤ In **Display Name**, enter a name for the context menu you are creating, for example, NNMi.

➤ Click **New** to attach a context menu item.

b In the Menu Entity Details dialog box:

➤ **Context Menu Item.** Select NNMi.

➤ **Sub-context Menu Item.** Select NNMi - showForm, NNMi - showLayer2, NNMi - showLayer3, and NNMi - showView.

➤ Click **OK**.

6 Assign the NNMi Context Menu to the NNMi CIs

In the relevant view, select the relevant CI and assign the context menu to the CI.

a Select **Admin** > **Dashboard** > **KPIs**

b Select the appropriate view to assign the Context Menu Item to the view's CIs; for example, select the HP OVO view.

c Click the NNMi CI in View Explorer and click **Edit** in the Context Menus area of the KPIs page.

d In the Context Menus List Editor dialog box, move **NNMi** from the **Available Context Menus** area to the **Active Context Menus** area.

e Click **OK**. The NNMi context menu is displayed in the Context Menus area of the KPIs page.
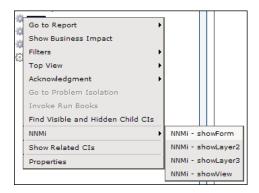
7 Test the Context Menu
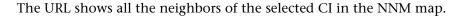
When you right-click the NNMi CI in the HP OVO view, the display name of the CI is passed to the URL you select.
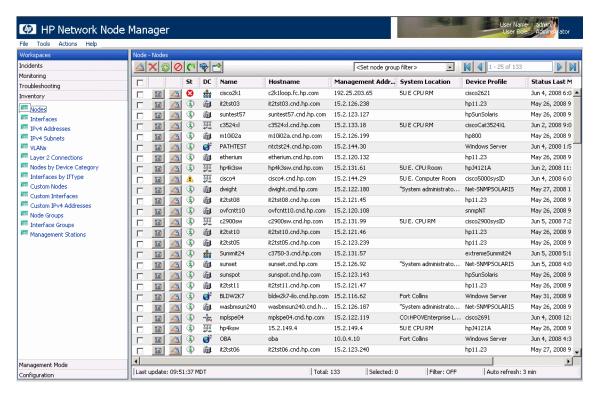
Check that the context menu and context menu items are displayed for the appropriate CI in the relevant view and that they open the correct URL.

a Select **Applications** > **Dashboard**.

b Right-click **NNMi** in the HP OVO view in View Explorer, and click the **Console** tab. The following menu appears:

The URL shows all the neighbors of the selected CI in the NNM map.
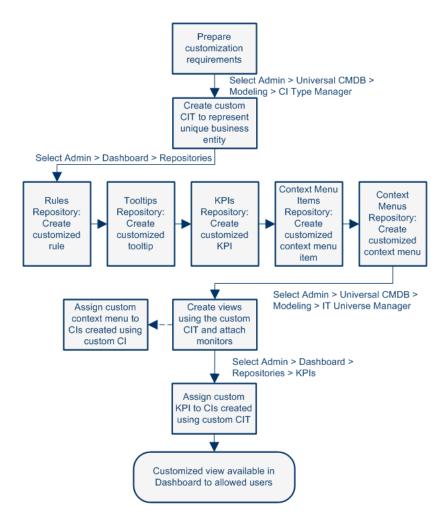
🔖 Customize Dashboard Repository Entities to Model Your Business World – Scenario

The flowchart below describes a sample scenario for a company that wishes to customize repository entities so that unique terminology and elements of the business can be seen in Dashboard. The numbered elements are referenced in task steps.

This task includes the following steps:

➤ "Prepare Customization Requirements" on page 503

➤ "Create Custom CIT to Represent Unique Business Entity" on page 504

➤ "Create a Customized Rule in the Business Rule Repository" on page 504

➤ "Create a Customized Tooltip in the Tooltip Repository" on page 504

➤ "Create a Customized KPI in the KPI Repository" on page 504

➤ "Create a Customized Context Menu Item" on page 504

➤ "Create a Customized Context Menu" on page 505

➤ "Create Views Using Custom CIT and Attach Monitors" on page 505

➤ "Assign the Custom Context Menu to CIs Created Using the Custom CIT" on page 505

➤ "Assign the Custom KPI to CIs Created Using the Custom CIT" on page 505

1 Prepare Customization Requirements

A cruise ship company wishes to define the following unique business elements to see in Dashboard: a logical CI called Cruise Ship to add to views; a custom KPI to monitor the dollar impact of down time of monitored ship systems; a customized context menu for Cruise Ship CIs that includes a URL link to its fleet intranet site.

2 **Create Custom CIT to Represent Unique Business Entity**

In CI Type Manager, the company's HP Business Availability Center administrator adds a new logical CI type called Cruise Ship to the Business folder. In the Attributes page, the administrator adds a new editable attribute, ship_serial_number, and marks the data_name attribute as the key attribute (since it serves as a unique identifier for each ship).

3 **Create a Customized Rule in the Business Rule Repository**

In the Business Rule Repository, the administrator creates a customized rule to handle the dollar impact of ship system non-availability by cloning the Impact Over Time Rule, renaming the cloned rule to Ship Impact Over Time Rule, and editing the DollarImpactFactor parameter to 1000 (to represent a dollar loss of $1,000 per hour).

4 **Create a Customized Tooltip in the Tooltip Repository**

In the Tooltip Repository, the administrator edits the description of the new tooltip associated with newly created Ship Impact Over Time Rule that appears in the Custom Tooltips section to say: Dollar loss due to no availability on ship system.

5 **Create a Customized KPI in the KPI Repository**

In the KPI Repository, the administrator creates a customized KPI to monitor the dollar impact of ship system non-availability by cloning the OT Impact KPI, renaming the cloned KPI to Ship OT Impact, and modifying the selected applicable rules—clearing Impact Over Time Rule and selecting Ship Impact Over Time Rule.

6 **Create a Customized Context Menu Item**

In the Context Menu Item Repository, the administrator clones the Go to Report item, renames the cloned item Go to Ship, selects the Dashboard generic URL pre-processor class, edits the value of the URL parameter to the desired URL address, and selects the Open window post-processor class.

7 Create a Customized Context Menu

In the Context Menu Repository, the administrator clones the Group Menu, renames the cloned item Ship Group Menu, and edits Ship Group Menu to add Go to Ship as a new item in the Go to Report menu item list.

8 Create Views Using Custom CIT and Attach Monitors

In IT Universe Manager, the administrator creates a new perspective view called Cruise Ship Fleet, and adds a Cruise Ship CI for each ship in the fleet. The administrator attaches relevant SiteScope and Business Process Monitors that were previously configured to monitor ship systems.

9 Assign the Custom Context Menu to CIs Created Using the Custom CIT

When adding Cruise Ship CIs to views, the administrator assigns the Ship Group Menu as the context menu for the CIs. The menu is then visible in Dashboard views.

10 Assign the Custom KPI to CIs Created Using the Custom CIT

After creating views that include the Cruise Ship CIs, in the Dashboard Administration KPIs tab the administrator assigns the new KPI Ship OT Impact to the Cruise Ship CIs. This KPI is then visible in Dashboard views to users with appropriate permissions on the views.

18

KPI Repository

This chapter provides information about the Dashboard KPI Repository.

This chapter includes:

Concepts

➤ KPI Repository Overview on page 507

Tasks

➤ Customize a KPI on page 508

Reference

➤ List of Dashboard KPIs on page 510

➤ KPI Repository User Interface on page 534

KPI Repository Overview

The KPI Repository page displays the list of factory (predefined) and customized KPIs. Those KPIs are available throughout HP Business Availability Center to determine how source data is imported.

The Dashboard KPI Repository includes all of the KPIs that can be used in the Dashboard application. For details on the Dashboard KPIs, see "List of Dashboard KPIs" on page 510.

Each KPI is defined by an ID number in the adapter templates, and is assigned a default business rule (a business rule is built on business logic). For more information about KPIs, see "KPIs Page" on page 408.

For details on creating or editing KPIs, see "KPI Repository page" on page 535.

Note: If you are using HP Operations Manager *i* with Business Availability Center, then the KPI Repository page contains OMi-related KPIs. For more information, see *Using HP Operations Manager i.*

Dependent KPIs

A KPI is dependent on another KPI when the rule that calculates the value of the first KPI uses the results of the second KPI's rule. For example, if an Outage KPI and a Number of Outages KPI are attached to a specific CI, the value of the Number of Outages KPI depends on the values of the Outage KPI. The KPIs are calculated in a specific order.

Customize a KPI

You customize a KPI by creating a new KPI, or by editing an existing KPI.

For a detailed scenario that includes creating KPIs, see "Create a KPI, Rule, and Tooltip – Example" and view the appropriate steps.

This task includes the following steps:

➤ "Create a Customized KPI" on page 509

➤ "Edit KPI Details" on page 509

➤ "Specify KPI Parameter Details" on page 509

➤ "Set a KPI and its Parameters Back to Default – Optional" on page 509

1 Create a Customized KPI

There are three ways to customize repository elements:

➤ **New Item.** Creates a new repository element that is not based on an existing element. You customize the new element to fit your needs.

To create a new KPI, click **New Item** in the KPI Repository page.

➤ **Clone**. Creates a new repository element by cloning an existing factory or custom element. The original element is still available, and the new cloned element can be modified.

To clone a KPI, select a factory KPI and click **Clone** in the KPI Repository page.

➤ **Override**. Overrides an existing factory element. The original element is labeled overridden (disabled) in the Factory area, and an editable copy appears in the Custom area.

To override a KPI, select a factory KPI and click **Override** in the KPI Repository page.

For details, see "KPI Repository page" on page 535.

2 Edit KPI Details

Click the **Edit** button corresponding to the custom KPI, and change its values as required. For details on the possible values, see "KPI Details Dialog Box" on page 537.

3 Specify KPI Parameter Details

In the Parameter Details dialog box, modify existing information or enter new information about the predefined KPI parameters. For details on the possible values, see "Parameter Details Dialog Box (KPIs)" on page 550.

4 Set a KPI and its Parameters Back to Default – Optional

If you want to restore KPI and parameter defaults, select **Admin** > **Dashboard** > **Repositories** > **KPIs**. In the **Custom KPIs** area, delete the copy of the KPI you want to return to default and click **OK**. The KPI and its parameters are returned to their defaults.

⚛ List of Dashboard KPIs

This section provides information about the KPIs available in the KPI repository, and their associated rules.

For details on configuring the KPIs, see "KPI Repository User Interface" on page 534.

KPI (KPI #)	Description and Associated Rules
Application (1075)	Displays: ➤ The Diagnostics performance of the Diagnostics Probe and Probe Groups CIs, and of the Business Process Monitor (BPM) transactions that are monitored by Diagnostics. The status reflected by the Application KPI is defined for the Diagnostics Probe and Probe Group CIs by the Probe-related thresholds, including the server request threshold and the Probe metrics threshold, which you set in the HP Diagnostics application. For the BPM transactions that are monitored by Diagnostics, the Application KPI status is defined by the average latency of transaction thresholds. For details, see *HP Diagnostics User's Guide*. ➤ The status of the Operations Manager application. For details, see "Understanding the Host, Host-Software Element, or Application-Host Integration Adapters" in *Solutions and Integrations*. ➤ The status of the application monitored by Netscout. For details, see "NetScout nGenius Integration" in *Solutions and Integrations*.
	"Diagnostics for J2EE/.Net General" on page 599
	"Generic Sample Rule" on page 602
	"Generic Sum of Values Over Time Rule" on page 602
	"SiteScope EMS Multiple Events Rule" on page 621
	"Worst Child Rule" on page 638

KPI (KPI #)	Description and Associated Rules
Availability (7)	Displays information relating to availability measurements for transactions.
	"Average Availability of Weighted Volume" on page 579
	"Average of Values" on page 580
	"Best Child Rule" on page 581
	"EMS Simple Rule" on page 601
	"Generic Sample Rule" on page 602
	"Generic Sum of Values Over Time Rule" on page 602
	"Percentage Rule" on page 608
	"RUM Application Session Statistics Monitor Availability Rule" on page 610
	"RUM End User Monitor Availability Rule" on page 611
	"RUM End User Session Statistics Monitor Availability Rule" on page 614
	"RUM Location Session Statistics Monitor Availability Rule" on page 615
	"RUM Page Monitor Availability Rule" on page 616
	"RUM Session Monitor Availability Rule" on page 618
	"RUM Transaction Monitor Availability Rule" on page 619
	"Transaction Availability Rule" on page 626
	"WS Operation Availability Rule" on page 638
	"Worst Child Rule" on page 638

KPI (KPI #)	Description and Associated Rules
Backlog (600)	**Backlog KPI for Business Process Insight Data** Displays the backlog information of the Business Process from the HP Business Process Insight application. At the monitor level, the KPI displays: ➤ The number of instances of the BPI step that is monitored and is currently active if the rule associated with the KPI is the BPI Monitor Backlog Count rule. ➤ The total cost of all the instances of the BPI step that is monitored and currently active in currency or data units if the rule associated with the KPI is the BPI Monitor Backlog Value rule (default). At the group level, the default value rule is the Worst Child rule. For details, see "Worst Child Rule" on page 638. At the group level, if the KPI is attached to a Business Process CI, the value of the KPI is calculated only for the BPI Business Process Monitor CIs directly under the Business Process CI by the BPI Group Rule for BP CI rule. For details, see "BPI Group Rule for BP CI" on page 585. At the group level, if the KPI is attached to a BPI Business Process Step CI, the value of the KPI is calculated only for the BPI Business Process Step Monitor CIs directly under the BPI Business Process Step CI by the BPI Group Rule for BP Step CI rule. For details, see "BPI Group Rule for BP Step CI" on page 585.
	"BPI Group Rule for BP CI" on page 585 "BPI Group Rule for BP Step CI" on page 585 "BPI Monitor Backlog Count Rule" on page 590 "BPI Monitor Backlog Value Rule" on page 591 "Worst Child Rule" on page 638

KPI (KPI #)	Description and Associated Rules
Backlog **(continued)**	**Backlog KPI for TransactionVision Data** Displays information on the number of backlogged (in-process) transactions on the target machine, as determined by TransactionVision. For details on TransactionVision data in Business Availability Center, see "TransactionVision Data" in *Using TransactionVision*. **Note:** This KPI does not include predefined objectives, and so displays **Info** (blue) status in Dashboard, meaning that there is no status calculated for the KPI, until you define meaningful objectives for it. You define objectives for the Backlog KPI attached to TV Monitor CIs in the **Admin** > **Dashboard** > **KPIs** tab.
	"Business Transaction Group Rule" on page 597 "TransactionVision Backlog Rule (In-Process)" on page 631 "Worst Child Rule" on page 638
Bandwidth (54)	Displays the amount of traffic (in megabytes) between application servers and end users accessing the servers (this includes traffic in both directions). This includes TCP, HTTP, and HTTPS traffic.
	"Best Child Rule" on page 581 "Generic Sample Rule" on page 602 "Generic Sum of Values Over Time Rule" on page 602 "RUM Server Monitor Bandwidth Rule" on page 617 "RUM Servers Summarized Bandwidth Rule" on page 618 "Summary of Values" on page 626 "Worst Child Rule" on page 638
Business Health (620)	Displays the worst status of the following KPIs monitored by HP Business Process Insight, for the process, and its children: **Backlog**, **Duration**, **Business Impact**, **Value**, and **Volume**. (This can be modified in **Admin** > **Platform** > **Setup and Maintenance** > **Infrastructure Settings Manager** > **Applications** > **Business Process Insight** > **List of Business KPIs**.) The **Business Health** KPI provides a high-level indication of how the business process is currently performing; if the KPI indicates a problem, drill down into the process and its monitors to locate the underlying problematic KPI.
	"BPI Business Health Status Rule" on page 584

KPI (KPI #)	Description and Associated Rules
Business Impact (602)	Displays the health of the process monitored by the HP Business Process Insight application. ➤ At the monitor level, the default rule is BPI Health Average Weighted Status Value rule. For details, see "BPI Health Average Weighted Status Value Rule" on page 587. ➤ At the group level, the default rule is Worst Child rule. For details, see "Worst Child Rule" on page 638. At the group level, if the KPI is attached to a Business Process CI, the value of the KPI is calculated only for the BPI Business Process Monitor CIs directly under the Business Process CI.
	"BPI Health Average Weighted Status Count Rule" on page 586 "BPI Health Average Weighted Status Value Rule" on page 587 "BPI Health Group Rule for BP CIs" on page 588 "BPI Health Status Percentage Count Rule" on page 588 "BPI Health Status Percentage Value Rule" on page 589 "BPI Health Worst Process Instances Count Rule" on page 589 "BPI Health Worst Process Instances Value Rule" on page 590 "Worst Child Rule" on page 638
Component Availability (53)	Displays information on pages without server errors, for servers monitored by the Real User Monitor.
	"Best Child Rule" on page 581 "Generic Sample Rule" on page 602 "Generic Sum of Values Over Time Rule" on page 602 "RUM Server Monitor Component Availability Rule" on page 617 "Worst Child Rule" on page 638

KPI (KPI #)	Description and Associated Rules
Customer (2)	Displays information relating to customer service. Used for backward compatibility. This KPI can be associated with all CIs. For example, for each one of your customers you can create a customized KPI that represents the specific transactions that are relevant to that customer.
	"Best Child Rule" on page 581 "Customer Rule" on page 597 "Percentage Rule" on page 608 "Worst Child Rule" on page 638
Delays (1313)	Displays information on the delayed (late) transactions on the target machine, as determined by TransactionVision. A transaction is defined as late when its response time exceeds a defined threshold in TransactionVision. For details on TransactionVision data in Business Availability Center, see "TransactionVision Data" in *Using TransactionVision*. This KPI uses, by default, the TransactionVision Delayed Value Rule (In-Process Transactions) for TV Monitor CIs. To see data on *completed* transactions, or data based on the *rate* of delayed transactions, change the rule in the KPI assignment for the KPI. For details on KPI assignments, see "Working With KPI Assignments and Propagations in Dashboard" on page 419. **Note:** This KPI does not include predefined objectives, and so displays **Info** (blue) status in Dashboard, meaning that there is no status calculated for the KPI, until you define meaningful objectives for it. You define objectives for the Delays KPI attached to TV Monitor CIs in the **Admin > Dashboard > KPIs** tab.
	"Business Transaction Group Rule" on page 597 "TransactionVision Delayed Rate Rule (Completed Transactions)" on page 631 "TransactionVision Delayed Value Rule (Completed Transactions)" on page 632 "TransactionVision Delayed Rate Rule (In-Process Transactions)" on page 631 "TransactionVision Delayed Value Rule (In-Process Transactions)" on page 632 "Worst Child Rule" on page 638

KPI (KPI #)	Description and Associated Rules
Duration (601)	**Duration KPI for Business Process Insight Data** Displays different information depending on the rule associated with the Duration KPI. A tooltip indicates which metric is involved. At the group level, the Worst Child rule is used to calculate the status of the parent CI from the child CIs.
	"BPI Average Weighted Status Rule for Duration KPI" on page 582 "BPI Duration Monitor Rule" on page 584 "BPI Status Percentage Rule for Duration KPI" on page 593 "BPI Worst Violated Instances Rule for Duration KPI" on page 595 "Worst Child Rule" on page 638
	Duration KPI for TransactionVision Data Displays information on the amount of time taken to complete the transactions on the target machine, as determined by TransactionVision. The objective for **OK** status for this KPI is taken from the **SLA** threshold set in TransactionVision. The KPI is calculated only for completed transactions. For details on TransactionVision data in Business Availability Center, see "TransactionVision Data" in *Using TransactionVision*. **Note:** This KPI must be manually assigned to TransactionVision CIs.
	"Business Transaction Group Rule" on page 597 "TransactionVision Duration Rule (Completed Transactions)" on page 633 "Worst Child Rule" on page 638
Efficacy (630)	The Efficacy KPI is a custom KPI for measuring the efficiency and capacity of a business process. This KPI is not associated with a default business rule, but can be used together with an API rule. For more details, see "Rules API" on page 657.

KPI (KPI #)	Description and Associated Rules
Exceptions (1310)	Displays information on transactions that did not follow the expected flow path on the target machine, and are therefore classified as exceptions in TransactionVision. For details on TransactionVision data in Business Availability Center, see "TransactionVision Data" in *Using TransactionVision*.
	This KPI uses, by default, the TransactionVision Exceptions Value Rule (In-Process Transactions) for TV Monitor CIs. To see data on *completed* transactions, or data based on the *rate* of exceptions, change the rule in the KPI assignment for the KPI. For details on KPI assignments, see "Working With KPI Assignments and Propagations in Dashboard" on page 419.
	Note: This KPI does not include predefined objectives, and so displays **Info** (blue) status in Dashboard, meaning that there is no status calculated for the KPI, until you define meaningful objectives for it. You define objectives for the Exceptions KPI attached to TV Monitor CIs in the **Admin** > **Dashboard** > **KPIs** tab.
	"Business Transaction Group Rule" on page 597
	"TransactionVision Exceptions Rate Rule (Completed Transactions)" on page 633
	"TransactionVision Exceptions Value Rule (Completed Transactions)" on page 634
	"TransactionVision Exceptions Rate Rule (In-Process Transactions)" on page 634
	"TransactionVision Exceptions Value Rule (In-Process Transactions)" on page 635
	"Worst Child Rule" on page 638

KPI (KPI #)	Description and Associated Rules
Failures (1312)	Displays information on the failed transactions on the target machine, as determined by TransactionVision. A transaction is classified as "failed" when it does not match the attribute or pattern defined as failure in TransactionVision. For details on TransactionVision data in Business Availability Center, see "TransactionVision Data" in *Using TransactionVision*.
	This KPI uses, by default, the TransactionVision Failures Value Rule (In-Process Transactions) for TV Monitor CIs. To see data on *completed* transactions, or data based on the *rate* of failed transactions, change the rule in the KPI assignment for the KPI. For details on KPI assignments, see "Working With KPI Assignments and Propagations in Dashboard" on page 419.
	Note: This KPI does not include predefined objectives, and so displays **Info** (blue) status in Dashboard, meaning that there is no status calculated for the KPI, until you define meaningful objectives for it. You define objectives for the Failures KPI attached to TV Monitor CIs in the **Admin** > **Dashboard** > **KPIs** tab.
	"Business Transaction Group Rule" on page 597 "TransactionVision Failures Rate Rule (Completed Transactions)" on page 635 "TransactionVision Failures Value Rule (Completed Transactions)" on page 636 "TransactionVision Failures Rate Rule (In-Process Transactions)" on page 636 "TransactionVision Failures Value Rule (In-Process Transactions)" on page 637 "Worst Child Rule" on page 638
Generic (1500)	Displays information calculated by the Generic Formula rule or by the Summary of Values rule.
	"Generic Formula Rule" on page 601 "Summary of Values" on page 626

KPI (KPI #)	Description and Associated Rules
HP System (12)	Displays information relating to service levels for HP OpenView Service Navigator metrics.
	"Best Child Rule" on page 581
	"EMS Simple Rule" on page 601
	"Generic Sample Rule" on page 602
	"Generic Sum of Values Over Time Rule" on page 602
	"HP OpenView Service Navigator Rule" on page 604
	"HP Worst Child Rule" on page 604
	"Percentage Rule" on page 608
	"SiteScope Measurement Rule" on page 621
	"SiteScope Measurement Time-Based Rule" on page 622
	"SiteScope Monitor Rule" on page 623
	"SiteScope Monitor Time-Based Rule" on page 623
	"Worst Child Rule" on page 638
Latency (1077)	Displays the average round-trip time for packets, between the end users and the servers monitored by the Real User Monitor.
	"Average Latency of Weighted Volume" on page 579
	"Best Child Rule" on page 581
	"Generic Sample Rule" on page 602
	"Generic Sum of Values Over Time Rule" on page 602
	"RUM End User Monitor Latency Rule" on page 612
	"Worst Child Rule" on page 638

KPI (KPI #)	Description and Associated Rules
Locations (303)	The Locations KPI is a bar that includes up to six colored sections. Each colored section represents: ➤ At the group level, the relative amount of Business Process Steps with the worst status of all of the children CIs, that corresponds to the color, at that location. The Business Process Monitor is the source of the data. ➤ At the monitor level, the relative amount of Business Process Steps with the end-user experience status (the worst status between **Performance** and **Availability**) that corresponds to the color, at that location. The colors correspond to the Business Process Monitor Performance/Availability colors. This KPI is used by the HP Business Availability Center for SAP and for Siebel solutions. **Example:** If there are ten SAP Business Process Steps under the Locations container, five with **Informational** end-user experience, two with **Minor** status, two with **Critical** status, and one with **No Data** status, the bar displays: 50% green, 20% yellow, 20% red, and 10% gray. The KPI's tooltip displays a list of locations, their status, and the total number of locations. The tooltip's color represents the worst location status.
	"Best Child Rule" on page 581 "EMS Simple Rule" on page 601 "Locations Grouped Parent Rule" on page 606 "Locations Grouped Rule" on page 607 "Percentage Rule" on page 608 "Transaction Availability Rule" on page 626 "Transaction Performance Rule" on page 627 "Worst Child Rule" on page 638

KPI (KPI #)	Description and Associated Rules
Network (308)	Displays: ➤ The status of the network monitored by the Real User Monitor. ➤ The status of the network in the Operations Manager application. This is an optional KPI. It is displayed when you select **Create Network and Security KPIs** in the HP Operations Manager integration definition. For details, see "Understanding the Host, Host-Software Element, or Application-Host Integration Adapters" in *Solutions and Integrations*. ➤ The status of the router or switch monitored by Netscout. For details, see "NetScout nGenius Integration" in *Solutions and Integrations*.
	"Average Network of Weighted Volume" on page 579 "RUM End User Monitor Network Rule" on page 612 "RUM Server Monitor Network Rule" on page 618 "SiteScope EMS Multiple Events Rule" on page 621 "Worst Child Rule" on page 638
Number of Open Incidents (2600)	Displays the number of incidents that exist in HP Service Manager, and that currently have the initial status and final status defined in the rule parameter and are associated with the business service. Tickets can have any status between Initial Status and Final Status as long as they had the initial status after the integration and that they are not currently closed.
	"Number of Open Incidents" on page 608 "Sum of Open Incidents" on page 625
Operational Status (615)	Displays the worst status of all operational (non-business) KPIs monitored by Business Process Insight, for the process, and its children.
	(The business KPIs include **Backlog**, **Duration**, **Business Impact**, **Value**, and **Volume.** This can be modified in **Admin** > **Platform** > **Setup and Maintenance** > **Infrastructure Settings Manager** > **Applications** > **Business Process Insight** > **List of Business KPIs**. Their worst status is displayed in the Business Health KPI.)
	The **Operational Status** KPI provides a high-level indication of how the operational (non-business) KPIs are currently performing; if the KPI indicates a problem, drill down into the process steps and any linked system CIs to locate the underlying problematic KPI.
	"BPI Operational Status Rule" on page 592

KPI (KPI #)	Description and Associated Rules
OT Impact (13)	Displays information relating to the financial loss caused to the organization when an item is unavailable over time. By default, the calculation is based on the Availability KPI. At the monitor/leaf level, you should attach the Impact Over Time rule to the OT Impact KPI and the Availability KPI to the same CI. The Impact Over Time rule measures the total time the Availability KPI attached to the same CI has the red status, and then calculates the financial loss using the rule parameter: **DollarImpactFactor**. This parameter represents the amount of dollars lost in an hour if the system is unavailable.At the group level, you should attach the Sum of Values rule to the OT impact KPI. The Sum of Values rule calculates the sum of all of the values of the OverTime Impact KPI of its children.The OT Impact rule calculates financial loss as you add the OT Impact KPI. The calculation has no time limitation. To restart the calculation you can: ➤ change the rule's objectives ➤ delete the OT Impact KPI and add it again Restarting HP Business Availability Center might restart the financial loss calculation, but because of dashboard calculation persistency, the last known financial value might be recovered instead.
	"Impact Over Time Rule" on page 605 "Sum of Values Rule" on page 626

KPI (KPI #)	Description and Associated Rules
Performance (6)	Displays information related to performance measurements of transactions.
	"Average Performance of Weighted Volume in %" on page 580
	"Average Performance of Weighted Volume in Seconds" on page 580
	"Average of Converted Performance Results in %" on page 580
	"Best Child Rule" on page 581
	"BPM WS Operation Percentile Performance Rule" on page 596
	"BPM WS Operation Performance Rule" on page 597
	"Business Transaction Group Rule" on page 597
	"Diagnostics WS Operation Percentile Performance Rule" on page 599
	"Diagnostics WS Operation Performance Rule" on page 600
	"EMS Simple Rule" on page 601
	"Generic Sample Rule" on page 602
	"Generic Sum of Values Over Time Rule" on page 602
Performance (Continued)	"Percentage Rule" on page 608
	"RUM Application Session Statistics Monitor Performance Rule" on page 610
	"RUM End User Monitor Performance Rule" on page 613
	"RUM End User Session Statistics Monitor Performance Rule" on page 614
	"RUM Location Session Statistics Monitor Performance Rule" on page 616
	"RUM Page Monitor Performance Rule" on page 617
	"RUM Session Monitor Performance Rule" on page 618
	"RUM Transaction Monitor Performance Rule" on page 619
	"SiteScope WS Operation Percentile Performance Rule" on page 624
	"SiteScope WS Operation Performance Rule" on page 625
	"Transaction Performance Rule" on page 627
	"Transaction Performance Status Average Rule" on page 627
	"Transaction Performance Status Percentage Rule" on page 628
	"Transaction Performance Worst Status Rule" on page 628
	"Worst Child Rule" on page 638

KPI (KPI #)	Description and Associated Rules
PNR (215)	Displays status based on the Point of No Return (PNR) for SLA samples (this data is calculated by the corresponding internal PNR rule for the Service Level Management application). The status is displayed in bar form in the Dashboard tab. The PNR samples measure unavailability in the period of time that has elapsed, and how much time remains before the SLA is in breach of contract. Note that there are two PNR rules: one is internal and gathers information from the Service Level Management application and the other one displays the information from the SLM PNR rule on the Dashboard.
	"Dashboard PNR Rule" on page 598
RT Impact (11)	Displays information relating to the financial loss caused to the organization in real time; the calculation is based on the Availability KPI.
	At the monitor/leaf level, you should attach the Real Time Impact rule to the RT impact KPI and the Availability KPI to the same CI. The Real Time Impact rule measures the time the Availability KPI attached to the same CI has the red status, and then calculates the financial loss using the rule parameter: **DollarImpactFactor**. This parameter represents the amount of dollars lost in an hour if the system is unavailable. If the Availability KPI status is not red, then the Real Time Impact value is 0.0\$.At the group level, you should attach the Sum of Values rule to the RT Impact KPI. The Sum of Values rule calculates the sum of all of the values of the Real Time Impact KPI of its children.
	When availability status returns to green, the value for this KPI reverts to 0.
	"Real Time Impact" on page 609 "Sum of Values Rule" on page 626

KPI (KPI #)	Description and Associated Rules
SAP (305)	Indicates problems related to the SAP infrastructure. The data that is reported by this KPI comes from CCMS measurements from SiteScope.
	"Best Child Rule" on page 581 "EMS Simple Rule" on page 601 "Percentage Rule" on page 608 "SiteScope Measurement Rule" on page 621 "SiteScope Measurement Time-Based Rule" on page 622 "SiteScope Monitor Rule" on page 623 "SiteScope Monitor Time-Based Rule" on page 623 "SiteScope Vertical Rule" on page 624 "Worst Child Rule" on page 638
SAP Alert (306)	SAP Alerts are created by the SAP system for various reasons; for example, an incorrect user login, exceeded CCMS thresholds, and so on. SAP alerts are retrieved from the SAP system by the SiteScope CCMS Alerts monitor. They can be displayed in the Dashboard using a SAP Alert KPI whose color is determined by the SAP system. After you have handled the problem that triggered the alert, perform an alert completion procedure. This causes the alert to be acknowledged.
	"Best Child Rule" on page 581 "EMS Simple Rule" on page 601 "SAP Alerts Rule" on page 620 "SiteScope Measurement Rule" on page 621 "SiteScope Monitor Rule" on page 623 "Worst Child Rule" on page 638
Security (307)	Displays the status of the security in the Operations Manager application. This is an optional KPI. It is displayed when you select **Create Network and Security KPIs** in the HP Operations Manager integration definition. For details, see "Understanding the Host, Host-Software Element, or Application-Host Integration Adapters" in *Solutions and Integrations*.
	"SiteScope EMS Multiple Events Rule" on page 621 "Worst Child Rule" on page 638

KPI (KPI #)	Description and Associated Rules
Sessions (304)	Displays the number of sessions that are running in a Siebel application server. A session is a task that is in running mode and interactive. The value of the number of sessions come from a measurement that is provided by the SiteScope Siebel monitor. The resulting display is a number that is colored according to the objectives set for the rule. This KPI does not propagate up in the hierarchy. For a Siebel CI, this KPI displays the sum of running sessions measurement on all underlying hosts (a session is a task that is in running mode and interactive state). The SiteScope Siebel monitor is the source of the data.
	"Best Child Rule" on page 581 "EMS Simple Rule" on page 601 "Generic Sample Rule" on page 602 "Number of Running Sessions Rule" on page 608 "Number of Tasks in Error Rule" on page 608 "Percentage Rule" on page 608 "Sessions Custom Data Rule" on page 620 "SiteScope Measurement Rule" on page 621 "SiteScope Monitor Rule" on page 623 "Worst Child Rule" on page 638

KPI (KPI #)	Description and Associated Rules
Siebel (300)	This KPI's color is provided by Siebel-specific monitoring information. It separates Siebel problems from more general, infrastructure-related problems. It provides Siebel-specific data, such as number of tasks, processes, and so. The SiteScope Siebel monitor is the source of the data. This KPI propagates up to the Siebel Site CI.
	"Best Child Rule" on page 581 "EMS Simple Rule" on page 601 "Generic Sample Rule" on page 602 "Percentage Rule" on page 608 "SiteScope Measurement Rule" on page 621 "SiteScope Monitor Rule" on page 623 "SiteScope Vertical Measurement" on page 624 "SiteScope Vertical Rule" on page 624 "Worst Child Rule" on page 638
SiteScope Availability (1001)	A SiteScope Availability KPI is attached to each SiteScope Profile CI. It displays the availability of the SiteScope. SiteScope periodically (every minute) sends an out bit to HP Business Availability Center. If the out bit is received by HP Business Availability Center, the status of the SiteScope Availability KPI is green. If the out bit is not received, the status of the SiteScope Availability KPI is grey (No data). This indicates that there is no communication between SiteScope and HP Business Availability Center. The statuses of all the SiteScope CIs is also grey.
	"SiteScope Profile Rule" on page 623 "Worst Child Rule" on page 638

KPI (KPI #)	Description and Associated Rules
System (1)	Displays information relating to system performance for measurements or monitors.
	For Siebel CIs, this KPI indicates physical problems with this CI or underlying CIs, provided by SiteScope physical monitors (for example: CPU monitor, disk space monitor, and so forth). SiteScope is the source of the data.
	For SAP CIs, this KPI indicates physical problems with underlying hosts, provided by SiteScope physical monitors (for example: CPU monitor, disk space monitor, and so on). By default, the System KPI does not appear in the view. If you are using a regular SiteScope monitor (which creates the System KPI) and you want to display the System KPI in the view, you have to add the System KPI manually to the CI.
	It can also display the status of the Operations Manager application. For details, see "Understanding the Host, Host-Software Element, or Application-Host Integration Adapters" in *Solutions and Integrations*.
	"Best Child Rule" on page 581
	"EMS Simple Rule" on page 601
	"Generic Sample Rule" on page 602
	"Generic Sum of Values Over Time Rule" on page 602
	"Percentage Rule" on page 608
	"SiteScope EMS Multiple Events Rule" on page 621
	"SiteScope Monitor Rule" on page 623
	"SiteScope Monitor Time-Based Rule" on page 623
	"Worst Child Rule" on page 638

KPI (KPI #)	Description and Associated Rules
Tasks in Error (301)	Displays the number of tasks that are in error, provided by the SiteScope **Number of Tasks in Error** measurement. The source of the data is the Siebel monitor. This is a Siebel-specific KPI. The resulting display is a number that is colored according to the objectives set for the rule.
	"Best Child Rule" on page 581 "EMS Simple Rule" on page 601 "Generic Sample Rule" on page 602 "Number of Tasks in Error Rule" on page 608 "Percentage Rule" on page 608 "SiteScope Measurement Rule" on page 621 "SiteScope Measurement with Custom Data Rule" on page 622 "SiteScope Monitor Rule" on page 623 "SiteScope Vertical Rule" on page 624 "Worst Child Rule" on page 638
Throughput (400)	**For SOA.** Displays the number of calls to the item per minute. **For Business Process Insight.** Displays the number of calls to the item per minute.
	"Best Child Rule" on page 581 "Diagnostics WS Operation Throughput Rule" on page 600 "Generic Sample Rule" on page 602 "Generic Sum of Values Over Time Rule" on page 602 "Percentage Rule" on page 608 "Summary of Values" on page 626 "Worst Child Rule" on page 638

KPI (KPI #)	Description and Associated Rules
Transactions (302)	The Locations KPI is a bar that includes up to six colored sections. ➤ At the group level, each colored section represents the relative amount of Business Process Steps with the worst status of all of the children CIs, that corresponds to the color. The Business Process Monitor is the source of the data. ➤ At the monitor level, each colored section represents the relative amount of Business Process Steps with the end-user experience status (the worst status between **Performance** and **Availability**) that corresponds to the color. The colors correspond to the Business Process Monitor **Performance/Availability** colors. This KPI is used by the HP Business Availability Center for SAP and for Siebel solutions. **Example:** If there are ten SAP Business Process Steps under the Transactions container, five with **Informational** end-user experience, two with **Minor** status, two with **Critical** status, and one with No Data status, the bar displays: 50% green, 20% yellow, 20% red, and 10% gray. The KPI's tooltip displays a list of how many transactions have each status, and the total number of transactions. The tooltip's color is set according to the worst transaction status.

Availability Transactions   Locations   SAP Alert Ack

Details - Transactions

CI name:	mi6
Status:	Critical
Calculation Rule:	Transactions Grouped Parent Rule
Held status since:	2/21/06 04:29:58 AM
	5 Transactions.
Message:	3 with status critical. 0 with status major. 1 with status minor. 0 with status warning. 1 with status ok. 0 with no data reported.

KPI (KPI #)	Description and Associated Rules
Transactions (continued)	"Best Child Rule" on page 581
	"EMS Simple Rule" on page 601
	"Percentage Rule" on page 608
	"Transaction Availability Rule" on page 626
	"Transaction Performance Rule" on page 627
	"Transactions Grouped Parent Rule" on page 629
	"Transactions Grouped Rule" on page 630
	"Worst Child Rule" on page 638
User (0)	Displays information related to the end-user performance.
	"Best Child Rule" on page 581
	"EMS Simple Rule" on page 601
	"Generic Sample Rule" on page 602
	"Generic Sum of Values Over Time Rule" on page 602
	"Percentage Rule" on page 608
	"Transaction Availability Rule" on page 626
	"Transaction Performance Rule" on page 627
	"Worst Child Rule" on page 638
Value (1311)	**Value KPI for Business Process Insight Data**
	Displays different information depending on the rule associated with the Value KPI.
	At the group level, the Worst Child rule is used to calculate the status of the parent CI from the child CIs.
	"BPI Average Weighted Status Rule for Value KPI" on page 583
	"BPI Status Percentage Rule for Value KPI" on page 594
	"BPI Value Monitor Rule" on page 595
	"BPI Worst Violated Instances Rule for Value KPI" on page 595

KPI (KPI #)	Description and Associated Rules
Value (continued)	**Value KPI for TransactionVision Data** Displays information on the monetary value of the transactions on the target machine, as determined by TransactionVision. For details on TransactionVision data in Business Availability Center, see "TransactionVision Data" in *Using TransactionVision*. This KPI uses, by default, the TransactionVision Value Rule (In-Process Transaction) for TV Monitor CIs. To see data on *completed* transactions, change the rule in the KPI assignment for the KPI. For details on KPI assignments, see "Working With KPI Assignments and Propagations in Dashboard" on page 419. **Note:** This KPI does not include predefined objectives, and so displays **Info** (blue) status in Dashboard, meaning that there is no status calculated for the KPI, until you define meaningful objectives for it. You define objectives for the Value KPI attached to TV Monitor CIs in the **Admin > Dashboard > KPIs** tab.
	"Business Transaction Group Rule" on page 597 "TransactionVision Completed Transaction Value Rule" on page 637 "TransactionVision Value Rule (In-Process Transaction)" on page 637 "Worst Child Rule" on page 638

KPI (KPI #)	Description and Associated Rules
Volume (1050)	**Volume KPI for Business Process Insight and Real User Monitor Data** Displays information on the total number of times that defined events or errors (monitored by the Real User Monitor) occurred. Displays, in the Business Process Insight-related views: ➤ The number of instances of the BPI Step that are currently active, per hour if the rule associated with the KPI is BPI Monitor Volume Count rule. ➤ The cost or value, per hour, of the BPI Step that is currently active, if the rule associated with the KPI is BPI Monitor Volume Value rule (default). At the group level, if the KPI is attached to a Business Process CI, the value of the KPI is calculated, by the BPI Group Rule for BP CI rule, only for the BPI Business Process Monitor CIs directly under the Business Process CI. For details on the rule, see "BPI Group Rule for BP CI" on page 585. At the group level, if the KPI is attached to a BPI Business Process Step CI, the value of the KPI is calculated, by the BPI Group Rule for BP Step CI rule, only for the BPI Business Process Step Monitor CIs directly under the BPI Business Process Step CI. For details on the rule, see "BPI Group Rule for BP Step CI" on page 585.
	"Best Child Rule" on page 581 "BPI Group Rule for BP CI" on page 585 "BPI Group Rule for BP Step CI" on page 585 "BPI Monitor Volume Count Rule" on page 591 "BPI Monitor Volume Value Rule" on page 592 "Generic Sample Rule" on page 602 "Generic Sum of Values Over Time Rule" on page 602 "RUM End User Monitor Volume Rule" on page 613 "RUM Event Monitor Volume Rule" on page 615 "RUM Location Session Statistics Monitor Volume Rule" on page 616 "RUM Page Monitor Volume Rule" on page 617 "RUM Application Session Statistics Monitor Volume Rule" on page 611 "RUM Session Monitor Volume Rule" on page 619 "RUM Transaction Monitor Volume Rule" on page 619 "Sum of Volume Rule" on page 626 "Worst Child Rule" on page 638

KPI (KPI #)	Description and Associated Rules
Volume (continued)	**Volume KPI for TransactionVision Data** Displays information on the volume of completed transactions on the target machine, as determined by TransactionVision. For details on TransactionVision data in Business Availability Center, see "TransactionVision Data" in *Using TransactionVision*. **Note:** This KPI does not include predefined objectives, and so displays **Info** (blue) status in Dashboard, meaning that there is no status calculated for the KPI, until you define meaningful objectives for it. You define objectives for the Volume KPI attached to TV Monitor CIs in the **Admin** > **Dashboard** > **KPIs** tab.
	"Business Transaction Group Rule" on page 597 "TransactionVision Transaction Volume Rule" on page 638 "Worst Child Rule" on page 638

🔍 KPI Repository User Interface

This section describes:

➤ KPI Repository page on page 535

➤ KPI Details Dialog Box on page 537

➤ Parameter Details Dialog Box (KPIs) on page 550

🔍 KPI Repository page

Description	Displays the list of factory (predefined) and customized KPIs. Those KPIs are available throughout HP Business Availability Center to determine how source data is imported.
	Enables an advanced user to modify existing repository KPIs and create new ones.
	To Access: Admin > **Dashboard** > **Repositories** > **KPIs**
Important Information	Cloning or overriding an existing KPI, or creating a new KPI, adds the corresponding KPI entry to the Custom KPIs list. You can then customize the KPI to your organization's specifications.
	You can define a new KPI. For details, see "KPI Details Dialog Box" on page 537.
	You can modify existing detailed information or enter new information about the KPI parameters. For details, see "Parameter Details Dialog Box (KPIs)" on page 550.
	A list of the KPIs, their descriptions, and the rules attached to the KPIs is available in "List of Dashboard KPIs" on page 510.
Included in Tasks	"Customize a KPI" on page 508

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
🔲	Click to display help on the KPI.
✏️	Select a KPI in the Custom KPIs area, and click the button to open the **KPI Details** dialog box. For details, see "KPI Details Dialog Box" on page 537.
Acknowledgment Level	The highest KPI status from which you can add an acknowledge note in the Dashboard application. This is the default acknowledgement level.

GUI Element (A-Z)	Description
Applicable section	The sections of the application where the KPI is in use. For example: Dashboard.
Calculation Order	The position of the KPI in the ordered list used by Dashboard when it calculates the topology. Dashboard calculates the higher priority KPIs first, and then the lower priority KPIs. This is the default calculation order.
Clone	In the Factory KPIs or in the Custom KPIs areas, select a KPI, and click the **Clone** button to create a new KPI by cloning. You clone an existing KPI to use it as a template. The original KPI is still available. **Note:** Change the name of the KPI you have cloned to make sure you attach the cloned KPI and not the original KPI to a specific configuration item (CI).
Default Group Rule	This specifies the rule that is defined by default for this KPI.
Display Label	The name used for the KPI in Dashboard.
Display Order	The order in which the KPIs are displayed in Dashboard. This is the default display order.
ID	This specifies the ID number used to identify the KPI in the source adapter templates. This is the default KPI ID.

GUI Element (A-Z)	Description
New Item	Click to create a new KPI. For details, see "Customize a KPI" on page 508.
Override	In the Factory KPIs or in the Custom KPIs areas, select a KPI, and click the **Override** button to edit an existing KPI. You override an existing KPI to replace it with a customized KPI. The original KPI is disabled. The overriding KPI and the original KPI have the same KPI ID. The KPI in the Factory KPIs area displays the following indication:
	Note: If you delete the custom KPI that overrode the factory KPI, the original factory KPI is automatically restored.
	For details, see "Customize a KPI" on page 508.

KPI Details Dialog Box

Description	Enables you to define a new KPI.
	To Access: In the KPI Repository page, click **New Item** or click the Edit button for the appropriate KPI in the Factory or Custom KPIs area.
Important Information	A list of the KPIs, their descriptions, and the rules attached to the KPIs is available in "List of Dashboard KPIs" on page 510.
Included in Tasks	"Customize a KPI" on page 508

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
Acknowledgement Level	For future use.
Applicable for User Role	Select the type of user. You can define two versions of a single Dashboard KPIs for two different user types (modes): **Operations** and **Business**, where each KPI version is geared towards the particular viewing requirements of one of the user types. For details, see "KPIs for User Modes" on page 355. Select **Both** if you want to have one version of the KPI. If you select **Operations** and **Business**, it is recommended to modify the KPI's name to reflect the type of user role. For example, rename OT Impact: OT Impact - Operations.
Applicable Rules	Add rules or remove existing rules from the **Applicable Rules** list. **Applicable Rules** lists the rules (types of calculations) that can be performed on the KPI. One of the rules in the list of applicable rules is the default rule of the KPI. You can change the default rule of the KPI to one of the other rules selected in the **Applicable Rules** list. For example, the applicable rules of the OT Impact KPI are: **Sum of Values** rule and **Impact Over Time** rule. The default rule is **Sum of Values**. **Note:** Ensure that you press the CTRL button when you select the rules. If you do not press the CTRL button, all of the pre-selected rules are disabled when you click the rule you want to add to the applicable rules. For details on the rule applicable for a specific KPI, see "List of Dashboard KPIs" on page 510. The rules included here define the options that are available in the View Builder when selecting the rule to assign to a KPI. **Note:** You must select a rule in the **Applicable Rules** list to make it available to the KPI.

GUI Element (A-Z)	Description
Applicable Sections	Add sections or remove existing sections from the **Applicable Sections** list. **Applicable Sections** lists the sections (applications and sub-applications) in which the KPI can be displayed. For the KPI to be displayed, you must select at least one section. The available applicable sections are: ➤ Dashboard ➤ SLM ➤ General SLM ➤ Outage SLM ➤ PNR
Available Formatting Methods	Select the formatting method you want to use for this KPI in the **Available Formatting Methods** list.
Calculation Order	Select the KPI position. That number represents the position of the KPI in the ordered list used by Dashboard when it calculates the topology. Dashboard calculates the higher priority KPIs first, and then the lower priority KPIs.
Default Group Rule	Select the group rule to be used for the next level up in the hierarchy. This list displays all of the available group rules for the applicable rule you selected in the **Applicable Rules** list. When a KPI is defined for a CI, it is usually added to a parent CI. The parent item uses the group rule to calculate the KPI status. For a list of the group rules, see "List of Dashboard Business Rules" on page 578.
Display Label	Enter the displayed name for the KPI.
Display Order	Select the order in which the KPIs are displayed in Dashboard.

GUI Element (A-Z)	Description
Formatting Method	The formatting method that is invoked on the **valueSource** is displayed in the **Formatting Method** box. This field can remain blank if it is not required. A list of the available formatting methods and their description is available in "List of (KPI) Formatting Methods" on page 547. If you need to create a new method, contact HP Software Support.
Status	Represents the key used to access the appropriate KPI results map. If you create a new rule whose key is not **Status**, you must enter the new key in the **Status** box. To create a new rule with a different key, contact HP Software Support. **Default Value:** Status
The KPI is critical	Select the trend for the KPI – for details on trend, see "Trend and History" on page 362. Select: ➤ **values are smaller.** When the values are small, the KPI is critical. ➤ **no different.** When the values are not different, the KPI is critical. ➤ **values are bigger.** When the values are large, the KPI is critical. **Note:** All of the fields listed above are connected to the calculation performed by the selected Applicable Rules.
Type	Select how you want the KPI to be presented in Dashboard: **ICON**, **TEXT**, **PNR_BAR**, **BAR**, **GROUPBAR**, or **GROUPTEXT**. For details, see "Type" on page 543.
Units	Enter the type of unit applicable to the rule results displayed in the KPI. This parameter is for future use. For more details on the available units, see "Units of Measurement for Objectives" on page 542.

GUI Element (A-Z)	Description
Value	Represents the value of the key used to access the appropriate KPI results map. If you select a specific value in the **Type** list, you may have to change the value of the **Value** box. For details, see "KPI Value" on page 546. **Default Value:** Value
Value Postfix	Enter the row value postfix. This can remain blank if it is not required. For example, to indicate that the value of the KPI is in Euros, enter EUR.
Value Prefix	Enter the row value prefix. This can remain blank if it is not required. For example, to indicate that the value of the KPI is negative, enter a minus sign (-).

Parameters Area

The following elements are included (unlabeled GUI elements are shown in angle brackets):
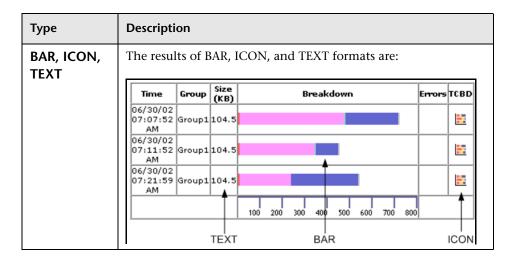
GUI Element (A-Z)	Description
	Click to delete the parameter.
	Click to modify the parameter details. For details, see "KPI Details Dialog Box" on page 537.
<Parameter>	The name of the parameter. For details on the default parameters, see "List of Default KPI Parameters" on page 549.
New	Click to define a new parameter. For details, see "Parameter Details Dialog Box (KPIs)" on page 550.

Units of Measurement for Objectives

The KPI default units are:

Default Unit (A-Z)	Description
<No unit>	is displayed after the objective value box for business rules that handle volume, where the KPI measurement represents a simple numerical count. For example, this is the case for the RUM Transaction Monitor Volume Rule. ⚠ Minor >= `90`
Financial ($)	This unit is used for business rules that determine financial loss for a CI, for example, the Impact Over Time Rule. ⚠ Minor <= `100` $
Milliseconds or **Seconds**	This unit is used for business rules that handle performance time data for a transaction or monitor, for example, the Transaction Performance Rule or RUM Page Monitor Performance Rule. ⚠ Minor <= `10000` Milliseconds
Percentage (%)	This unit is used for business rules that handle availability over time data for a transaction, for example, the Transaction Availability Rule, and for the PNR Rule, where the KPI measurement represents percentage of time remaining for CI unavailability before the SLA is in breach of contract. ⚠ Minor >= `50` %

Type

The type of representation for the KPI can be:

Type	Description
BAR, ICON, TEXT	The results of BAR, ICON, and TEXT formats are:

Type	Description
GROUPBAR	The behavior of the **GROUPBAR** type depends on the KPI: ➤ **Transactions KPIs.** When one or more of the CI's children have the Business Process Step type, then the **Transactions** KPI is displayed as a **GROUPBAR** in the Console tab. ➤ **Locations KPIs.** When one or more of the CI's children has the Locations type, then the **Locations** KPI is displayed as a **GROUPBAR** in the Console tab. For example: ➤ **Business Health KPIs.** ➤ At all CI levels, the groupbar displays the number of instances for each one of the Business Process Insight statuses without consideration of the Weight. At the level above the Business Process CI, an icon represents the status of the worst child KPI. The Weight information is displayed in the tooltip. The tooltip color matches the color of the status (in the example below: Minor). The status is calculated by the rule assigned to the KPI. ➤ Above the Business Process CI level, the KPI displays an icon that shows the worst child status of the child CIs level. **Note:** The default type for the Business Health KPI is **GROUPBAR**.

Type	Description
GROUPTEXT	A KPI with the **GROUPTEXT** type displays: ➤ **For any level CI except the top level of the group CI.** Displays the number of instances for each one of the available statuses without consideration of the Weight. The Weight information is displayed in the tooltip. The tooltip color matches the color of the status (in the example below: Minor). The status is calculated by the rule assigned to the KPI. **Note:** If the numbers are too large, select the **compactNumber** formatting method in the Formatting Method field. This method automatically trims the number, and displays the first digit of the trimmed number followed by the symbol for the number of digits; for example, 1235000 becomes 1M. ➤ At the top level CI level, the KPI displays the spelled-out worst child status of the child CIs level.
PNR_BAR	The PNR_BAR representation is as follows: For more details on the PNR_BAR representation, see "Attach a PNR KPI to a CI – Scenario" on page 372.

KPI Value

If you select a specific value in the **Type** list, you may have to change the value of the **Value** box.

Type	Value
ICON	Do not change the default of the **Value** field.
TEXT	Change the value of the **Value** field to one of the following values: ➤ **NODE.DIM.RESULTS.Value** (for a string) ➤ **NODE.DIM.RESULT.Message** (for an error message)
PNR_BAR, **BAR**, or **GROUPBAR**	Do not change the default of the **Value** field.

KPI Trend

Service Level Management KPIs are assigned a positive trend (the higher the better or the lower the better).

For example:

➤ the Availability KPI is given a positive trend. This means that it becomes critical when its value is small because it means that the page whose availability is being measured is not available most of the time. The Availability KPI performance is best when its value is large.

➤ the Outage Duration KPI is given a negative trend. This means that its performance is best when its value is small.

List of (KPI) Formatting Methods

The formatting methods that are available are used to format the result that is displayed in Dashboard:

Formatting Methods	Description
analyzeSiteScopeMessage	If, in a message, a long word overlaps the end of the line, the word is truncated. The rest of the word and the rest of the message are wrapped.
compactNumber	Select this method, if the numbers displayed with the **GROUPTEXT** type are too large. This method automatically trims the number; for example, 12000 becomes 12K and 123000000 becomes 123M.
encode	Inserts a back slash (\) before special characters.
formatDecimalNumber	Returns as a formatted decimal number. The number of digits after the decimal point is indicated by numAfterDot.
formatDateTime	Returns formatted as date and time: DDMMMYYYY hh:mm:ss
formatPnrValue	Formats the pnr time left in the PNR format.
getIntValue	Returns an int number as string.
getMilliAsSec	Returns a millisecond value as seconds by dividing the value by 1000.
getMustValue	Returns ! if there is a value, otherwise returns nothing.
getRemedyETTR	Deprecated. Use the EMS integration feature. For details, see "Integration Administration Application Overview" in *Solutions and Integrations*.
getRemedyResource	Deprecated. Use the EMS integration feature. For details, see "Integration Administration Application Overview" in *Solutions and Integrations*.
getResourceString	Returns the corresponding resource string to the given string.

Formatting Methods	Description
getStatusString	Returns the corresponding resource string to the given status string.
getWeightValue	Returns the value if there is a value, otherwise returns 1.
ifEndCheck	Changes an empty string into a comment line. Inserts "--->" at the end of the string.
ifStartCheck	Changes an empty string into a comment line. Inserts "<!--" at the end of the string.
numberToTime	Converts a string that can represent a period of time in seconds into a more readable format.
resourceFromKey	Used to get the resource of the ticketing sample field.
returnDateAsString	Returns the given date in milliseconds in the date format as it appears in the **.resources** file.
returnDateAsStringInSec	Returns the given date in seconds in to the date format as it appears in the **.resources** file.
returnNumOfDigitAfter Point	Formats the given string and returns a string that shows only 3 digit after the point.
returnNumOfDigitAfter Point(digits)	Formats the given string and returns a decimal number. The number of digits after the decimal point is specified in **(digits)**.
returnNumOfDigitAfter PointWithDollar	Converts the given string into a decimal number with 3 digits after the decimal point preceded by a dollar sign.
returnNumOfDigitAfter PointWithEuro	Converts the given string into a decimal number with 3 digits after the decimal point preceded by a dollar sign followed by a Euro sign.
returnWithPercentSign	Converts the given string into a decimal number with 3 digits after the decimal point followed by a percentage sign.

Formatting Methods	Description
toLowerCase	Returns the lower case of the given string.
toLowerCase_encode	Works in the same way as toLowerCase but adds add escaping on the return value.

List of Default KPI Parameters

In the Parameter Details dialog box, you can modify existing detailed information or enter new information about the KPI parameters.

The predefined default status parameters are the same for each KPI:

GUI Element (A-Z)	Description
critical	(Red) Corresponds to a status within the Critical objective level.
downtime	(Gray circle and back slash) Stopped or downtime status. The corresponding profile/group/monitor is currently disabled.
OK	(Green) Corresponds to a status within the OK objective level.
major	(Orange) Corresponds to a status within the Major objective level.
minor	(Yellow) Corresponds to a status within the Minor objective level.
stop	Stopped or downtime (gray with white slash) status. The corresponding profile/group/monitor is currently disabled.
none	No Data (gray) status.
warning	Warning (yellow) status.
info	(Blue) Corresponds to a status that indicates that the KPI has a value and no status because the KPI's objectives have not yet been specified.

For details, see "KPI Objectives" on page 343.

🔖 **Parameter Details Dialog Box (KPIs)**

Description	Enables you to modify existing detailed information or enter new information about the KPI parameters.
	To Access: In the KPI Details dialog box, in the Parameters area, click the **New** button to enter new parameters or click the relevant **Edit** button to modify an existing parameter.
Important Information	For a list of KPI parameters and their default values, see each rule description in "List of Dashboard Business Rules" on page 578.
Included in Tasks	"Customize a KPI" on page 508

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
Color	To modify the default color of the tooltip's header and border, open the Parameter Details dialog box, enter different colors in the **Color** box using the following syntax and save the changes: **<border_color>;<header_color>**
	where:
	➤ **<border_color>** is the tooltip border color (in hex triplet format).
	➤ **<header_color>** is the tooltip header color (in hex triplet format).
	The colors are separated by semi-colons.
	Example: A hex triplet is a six-digit, three-byte hexadecimal number used to represent colors. The bytes represent the red, green and blue components of the color in respective order. One byte represents a number in the range 00 to FF. The hex triplet is formed by concatenating three bytes in hexadecimal notation. For example, consider the color where the red/green/blue values are hexadecimal numbers: red=24, green=68, blue=A0 (a greyish-blue color). To obtain the hex triplet, write the three hex bytes together without spaces, thus: 2468A0. If a byte is less than 16 (decimal) or 10 (hex) it must be represented with a leading zero to keep the number of digits in the triplet equal to six.
From/To	Enter the appropriate values.
	When the value of a KPI is in the range indicated by the **From** and **To** fields, the tooltip for the KPI is assigned the color specified in the **Color** field and the KPI is assigned the status icon specified in the **Icon** field.

GUI Element (A-Z)	Description
Icon	Enter the path to a status icon in the **Icon** box – for details, see "Change the KPI Status Icons" on page 394. The icon you specify is assigned to the KPI when the KPI value is within the range specified in the **From**/**To** fields
Key	Enter the name of the KPI parameter.
Type	Enter the type of parameter. Possible values are: **Boolean** (can be 0 or 1), **Integer**, **Long**, **Double** (can be a decimal number), or **String**.

19

Business Rule Repository

This chapter provides information on the Dashboard Business Rule Repository.

This chapter includes:

Concepts

Tasks

Reference

🔵 Business Rule Repository Overview

The Business Rule Repository page displays the list of factory (predefined) rules available throughout Dashboard to determine how source data is handled by Dashboard Administration.

A business rule is used to calculate the value and status of a Key Performance Indicator (KPI). Every KPI can hold three icons: real time status, trend, and history. The way status is determined for these icons is described in "KPI Status" on page 355.

A rule is the basic object that receives events (either samples or application messages), deals with processing the data, and holds the process results. To receive the events, the rule uses input filtering criteria called selectors. For details, see "Attach KPIs to CIs and Configure the KPIs" on page 374.

For details on editing rules, see "Business Rule Repository page" on page 646. If you add a rule, a matching tooltip (with the same ID number) is automatically created. For details, see "Tooltip Repository page" on page 879.

In the adapter templates, the business rule for each KPI is identified by a logic ID (the rule ID). For a list of the rules defined for Dashboard, see "List of Dashboard Business Rules" on page 578.

The Rules API can be used to create new rules; for details see "Rules API" on page 657.

Note: If you are using HP Operations Manager *i* with Business Availability Center, then the Business Rule Repository page contains OMi-related business rules. For more information, see *Using HP Operations Manager i*.

Some rules are for use only by Dashboard, and are not available for use in custom views.

This section includes the following topics:

➤ "Advanced Users" on page 555
➤ "Parameters" on page 555
➤ "Business Rule Repository Global Parameters" on page 556
➤ "Rules in Source Adapters, KPI Assignments, and KPI Enrichments" on page 556

Advanced Users

You can modify existing repository objects and create new ones. You modify existing repository objects when you want to customize the way information is presented in Dashboard, to fit the needs of your organization. You may create new repository objects when integrating data from a new external system into Dashboard.

Parameters

Each rule's parameters are used to define input for the rule. The values used for the parameters can be fixed values (defined within the parameter definition) or referenced values taken from the samples.

The rule parameters are defined in the Business Rule Repository, as part of each rule definition.

Depending on the type of rule, some rule parameters may be defined in an adapter template for a data source (as part of the KPI definition). The values set for these parameters override the definitions in the Business Rule Repository. For a list of rule parameters, see each rule parameter description in "List of Dashboard Business Rule Parameters" on page 639.

Business Rule Repository Global Parameters

You can modify various global parameters for trend and history status in the Business Rule Repository, as follows:

➤ You can specify whether or not you want trend status and/or history status displayed for CIs.

➤ You can change the window of time used for trend and history calculations.

➤ You can specify the calculation type for history status.

For details, see "Global Attributes Dialog Box" on page 648.

Note that the global parameters can be overridden by defining a different value for the relevant parameter within a specific rule.

Rules in Source Adapters, KPI Assignments, and KPI Enrichments

In the adapter templates, which are used to map the entities in the data source to the configuration items (CIs) used by HP Universal CMDB, or in the KPI Assignments and KPI Enrichment Tasks, which are used to assign KPIs, rules, context menus, context menu items, and tooltips to a CI, the business rule for each KPI is identified by an ID number. For a list of the rules ID numbers, see "List of Dashboard Business Rules" on page 578.

To access adapter templates, click **Admin** > **Universal CMDB** > **Source Manager**.

To access KPI assignments, click **Admin** > **Dashboard** > **KPI Assignments**.

To access KPI enrichment, click **Admin** > **Integrations** > **EMS Integrations**.

🔷 Monitor Rules and Group Rules

A KPI must always have an associated business rule that defines the business logic. The business logic determines how the data is handled to obtain a single status rating.

There are two categories of business rules, **monitor rules** and **group rules**, as described in the following sections. Most KPIs work with at least one rule from each category.

This section includes the following topics:

➤ "Monitor Rules" on page 557
➤ "Group Rules" on page 558

Monitor Rules

Monitor rules (also called leaf rules) are business rules that are applied to monitor (leaf) CIs. Monitor rules are used to calculate a measurement for the KPI based on original sample data that is caught by the KPI selector. For example, the **Availability Rule** calculates the Availability KPI for BPM Transaction from Location CIs, based on the sample data received from Business Process Monitor.

A monitoring CI is intended to receive incoming metrics, generally received using one of the data collector, such as SiteScope, Business Process Monitor, or Real User Monitor. Monitoring CIs are automatically added to the HP Universal CMDB by the source adapters in Source Manager, according to the monitoring definitions. These monitoring CIs have default KPIs that use a monitor rule, and predefined selector.

In general, the leaf CIs in a subtree (the CIs that form the lowest level of the hierarchy) should always be one of the monitoring CIs. When creating new subtrees in your views in IT Universe Manager, you attach monitoring CIs created by the source adapters as leaf nodes, and these CIs then pass KPI status up the hierarchy.

Group Rules

Group rules are business rules that determine KPI status based on data received from other KPIs, rather than from original sample data. The received data can come from the KPIs of child CIs, or from another KPI associated with the same CI.

Note: Even though this category are called group rules, some of them are also applicable for monitoring/leaf level CIs. For example, the **Impact Over Time Rule** (used with the **OT Impact KPI**) can be used with a group CI or a monitoring CI. What all rules in this category have in common is that their status calculations are contingent on data received from other KPI instances, rather than from the samples.

The group rules vary in the type of logic they use to arrive at a status result. For example:

➤ The rule may select a KPI status held by one of the child CIs, and apply that status to the parent, as done by the **Worst Child Rule**.

➤ The rule may aggregate the received data to calculate a measurement, and compare the measurement with defined objectives, as done by the **Sum of Values Rule**.

➤ The rule may calculate a measurement based on the status of another KPI for the CI, and compare the measurement with defined objectives, as done by the **Real Time Impact Rule** when receiving status from the **Availability** KPI.
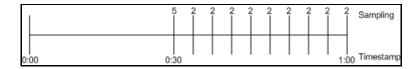
Each KPI has been assigned a default business rule that is used when you attach a new KPI to a CI; the default is generally one of the group rules for that KPI. When editing a KPI or attaching a new KPI, you can select a different rule, from the list of rules that are applicable for that KPI.

If a KPI is associated with a logical CI then the rule that calculates the status and value of this KPI is probably a group rule – it uses the KPIs of other CIs in order to calculate its own status and value (for example: Worst Child rule).

🍥 Sample-Based and Time-Based Sampling

Monitor rules are time-based or sample-based. The time-based sampling is more accurate than the sample-based sampling when samples are not taken regularly; for example, SiteScope sampling accelerates when a problem occurs. When samples are taken regularly, time-based and sample-based sampling provide the same results.

If you have the following sample:

The result of the first part of the sampling period is 5. After that the result of each sampling period is 2.

The sample-based result is calculated as follows:
(5+8x2)/9= 2.33
The samplings are as follows: 1 sampling with the value 5 and 8 samplings with the value 2. The total number of samplings is 9.

The time-based result is calculated as follows:
(30x5+30x2)/60=3.5
During 30 seconds the value was 5. During the next 30 seconds the value was 2. The total sampling time was 60 seconds.

Note: There is also a time and amount-based calculation method that works on the same basis as time-based, but takes into account the amount (value) received in the sample as a proportion of the total amount.

♻ Understanding the Percentage Rule

The Percentage rule is listed in the list of Dashboard rules at "Percentage Rule" on page 608.

When the Percentage rule is defined as the KPI rule for a parent group, the group is assigned a KPI status based on a percentage calculated from the child CIs in the group. If required, significant relationships between CIs (usually between the parent CI and one of the children CIs) can be weighted (**Weight** option), so that they have more impact on the percentage calculation. You can also define dominant status (**Must** option) for a relationship between CIs (usually between the parent CI and one of the children CIs), so that a child CI with low status in the dominant relationship influences the status of the group.

Note: For all percentage calculation methods, the number of gray child CIs (Info, No data, Stopped, or Downtime statuses) is ignored in the final calculation of the parent group score.

The different applications of the Percentage Rule are described in the following sections.

Basic Percentage Rule

When using the Percentage Rule, parent group status is based on a percentage (the **score** for the group), calculated from the number of child CIs with red, orange, olive, green, or yellow status. Gray statuses are not taken into consideration. (Note that if any of the child CIs are weighted, this influences the percentage calculation, as described in Weighted Percentage, below.)

Each status has a value, as follows:

Status	Value
red	0
orange	5

Weighted Percentage

By default relationships are not weighted (**weight = 1**). You can change the default weight for a relationship in the **weight** box, accessed in the Define Configuration Item Relationship window (described in "New CI Dialog Box" in *Model Management*).

When a child CIs in a group, is in a relationship with a weight greater than 1, then the percentage calculations described in Basic Percentage Rule, are adjusted to take the weight into account. Each CI status value is multiplied by the weight assigned to the CI, and the total is divided by the total weight values, to give the average result.

For example, taking the same group that was used for the basic percentage example (four CIs, two with red status and two with yellow status), if one of the red CIs has a weight of 4 and one of the yellow CIs has a weight of 2, then the average result calculation looks like this:

```
1 x 4 x 0 (red with weight=4)
1 x 1 x 0 (red with weight=1 )
1 x 2 x 10 (yellow with weight=2)
1 x 1 x 10 (yellow with weight=1)
Total = 30/(4+1+2+1) (total weight values for red and yellow children) = 3.75
(average result)
```

The percentage score for the group is then calculated in the same way as for the basic Percentage Rule: average result is divided by 20 and multiplied by 100:

```
(3.75/20) x 100 = 18.75% (score)
```

Note that CI weights are relevant only when the parent group status is calculated using the Percentage Rule.

Note: You can display the weight information in the KPI tooltip in Top View. For details, see "Customize Top View Tooltips" on page 130.

Dominant Child

By default, all CIs are in non-dominant relationships (**must** is cleared). You can change the setting for a relationship to dominant in the Define Configuration Item Relationship window (described in "New CI Dialog Box" in *Model Management*).

When a child CIs in a group is in a dominant relationship, then status is calculated for the group by comparing the results from the following two status calculation methods:

➤ Dashboard determines the lowest status held among all dominant CIs.

➤ Dashboard determines group status according to the percentage rule calculation (as described in Basic Percentage Rule above).

The worst status from the two calculations becomes the status for the group.

When the group status has been taken from the lowest status held by a dominant CI, the tooltip for the parent group displays **Score: n/a (Using dominant child)**.

Note:

➤ Dominant CIs are only relevant when the group is using the Percentage Rule to calculate status.

➤ When a CI has both dominant and weighted child CIs only the dominant CI is taken into consideration when calculating the status of the parent CI using the Percentage rule.

🍥 Understanding the Generic Formula Rule

The Generic Formula rule is listed in the list of Dashboard rules at "Generic Formula Rule" on page 601.

This rule can be used to add new business logic behavior to Dashboard. You can use the rule to create a set of calculation methods (sum, count, average, and so on) that can be applied to every type of sample: legacy (SiteScope, Business Process Monitor, and Real User Monitor) and Enterprise Management Systems (EMS) samples.

In Dashboard, the rule is time-based and the formula calculates a single aggregated result of all of the specified data collected during the period specified in the **duration** parameter.

Note:

➤ Using the Generic Formula rule might have an impact on performance as the rule parses and evaluates string expressions. Using this rule should be considered carefully only when no other rule answers the requirements and when the application does not include large amounts of monitor nodes.

➤ There is no automatic validation to check if the formula supports the collected sample structure. There is no automatic validation for the correctness or syntax of the formula. If there is a mistake in the formula, the status of the KPI appears as a gray icon in Dashboard.

For example, use this rule to calculate the average of a sample field over a period of time multiplied by 2, or the sum of the values of a sample field over the specified period of time, divided by the number of values of another field.

Using the Generic Formula Rule

To use the Generic Formula rule, clone it and give the clone a meaningful name. You can then customize the cloned rule, attach the rule to a KPI, and attach the KPI to a view. The KPI automatically propagates the rule selected in the Default Rule list to all of the CI parents.

To edit the formula, click the Edit button for the Formula parameter, and enter the formula that you want the rule to use in the **Default Value** field. For more details, see "Parameter Details Dialog Box (Rules)" on page 653.

The formula is based on operands, operators, functions, constants, and sample field values. The formula must use only fields from the selected samples; you must know the name of the variables in the sample on which you want to run the formula. The samples for the rule depend on the specific KPI's selector, therefore the formula must support the collected sample structure.

The rule takes values from the specified samples during the time period specified in the **duration** parameter, puts those values in the aggregated formula, and compares the result with the specified objectives.

Any valid Dashboard sample is valid for this rule.

The formula language is based on the Generic Data Engine (GDE) parser language to be consistent with the open formula writing. For more information, see "Working with the Generic Reporting Engine API" in *Solutions and Integrations*.

The formula must always be an aggregated formula. It should contain aggregation functions and mathematical operators between them. The operands can either be constant numbers or aggregation functions.

The formula elements are:

➤ supported operators: *****, **+**, **-**, **/**, **( )**

➤ supported aggregation functions: **sum**, **min**, **max**, **avg**, **count**, **stddev**, **sumofsqr**

➤ supported manipulation function: **if**

The rule calculates a single numeric value based on the samples collected during the duration. The value is then evaluated according to the given objectives and the status is set accordingly.

For an example of how to create a customized Generic Formula rule, see "Example – Write a Generic Formula Rule" on page 567.

⚒ Customize a Business Rule

You customize a business rule by creating a new business rule, or by editing an existing business rule.

For a detailed scenario that includes creating rules, see "Create a KPI, Rule, and Tooltip – Example" and view the appropriate steps.

This task includes the following steps:

➤ "Create a Customized Business Rule" on page 566

➤ "Edit Rule Details" on page 567

➤ "Modify Rule Parameters or Global Rule Parameters" on page 568

➤ "Set a Rule and its Parameters Back to Default – Optional" on page 569

➤ "Attach the Rule to a KPI" on page 568

1 Create a Customized Business Rule

There are three ways to customize repository elements:

➤ **New Item.** Creates a new repository element that is not based on an existing element. You customize the new element to fit your needs. To create a new business rule, click **New Item** in the Business Rule Repository page.

➤ **Clone**. Creates a new repository element by cloning an existing factory or custom element. The original element is still available, and the new cloned element can be modified. To clone a business rule, select a factory business rule and click **Clone** in the Business Rule Repository page.

➤ **Override**. Overrides an existing factory element. The original element is labeled overridden (disabled) in the Factory area, and an editable copy appears in the Custom area. To override a business rule, select a factory business rule and click **Override** in the Business Rule Repository page.

For details, see "Business Rule Repository page" on page 646.

2 Edit Rule Details

Click the **Edit** button corresponding to the custom business rule, and change its values as required. For details on the possible values, see "Rule Details Dialog Box" on page 654.

Note: If you are creating a customized Generic Sample rule, a Generic Sum of Values Over Time rule, or a Generic Two Arguments rule, and the name of the time stamp field in the sample is not time_stamp, in the Rule Parameters area of the Rule Details dialog box, click **Edit** for the **Time Stamp Field** parameter. In the **Default Value** box, enter the name of the sample time stamp field. The type of the sample time stamp field must be time. Click **OK** to save the change.

Example – Write a Generic Formula Rule

For details on the Generic Formula rule, see "Generic Formula Rule" on page 601.

➤ The following formula calculates the average of the dResponseTime sample field value over the specified period of time, multiplied by 2:

```
Avg(dResponseTime)*2
```

➤ In the following formula, you want to sum only the response time of the successful transactions, therefore only the response time for samples with u_iStatus=0 is taken into consideration. u_iStatus=1 when the transaction fails, and u_iStatus=0 when the transaction is successful.

The formula calculates the sum of the values of the dResponseTime sample field value over the specified period of time, where the value of dResponseTime is set to 0 every time the value of the u_iStatus sample field equals 1. This sum is divided by the sum of values calculated as follows: the value is equal to 1 when the u_iStatus field value is 0, and the value equals 0 when the u_iStatus field value is different from 0. This formula calculates the performance of a certain transaction by aggregating the response time of all of the successful transaction and dividing it by the number of successful transactions:

```
sum(if(u_iStatus,=,0,dResponseTime,0))/sum(if(u_iStatus,=,0,1,0)
```

3 Modify Rule Parameters or Global Rule Parameters

You can modify existing information or enter new information about the rule parameters and the Objective parameters for a specific rule. For details, see "Parameter Details Dialog Box (Rules)" on page 653.

To globally edit a parameter for all factory rules, access, from the **Rules** page, the Global Attributes Details dialog box and modify the appropriate parameters. For details, see "Global Attributes Details Dialog Box" on page 652.

Note: To override the global parameters values for individual rules, you must add the relevant parameter to the relevant rule and then modify its value.

---

4 Attach the Rule to a KPI

If you have created a new rule, you must add it to the rules already attached to the relevant KPI. For details, see the Applicable Rules GUI parameter in "KPI Details Dialog Box" on page 537.

5 **Set a Rule and its Parameters Back to Default – Optional**

If you have modified a rule or its parameters, you might need to return the rule and its parameters to their defaults.

To set a rule and its parameters back to default, select **Admin > Dashboard > Repositories > Rules**. In the **Custom Rules** area, delete the copy of the rule you want to return to default and click **OK**. The rule and its parameters are returned to their defaults.

Create a Customized Generic Sample Rule – Scenario

For a description of the rule, see "Generic Sample Rule" on page 602.

You want to display the comparison between the value of a selected value field in the event sample and specific objectives, so the status of the KPI to which the customized Generic Sample rule is attached is grey when the value of the sample field is less than 1 and larger than 5. To display the comparison you must clone the Generic Sample Rule, attach the cloned rule to a cloned KPI, and attach the cloned KPI to the appropriate CI.

To create a clone of the Generic Sample rule:

1 Select **Admin> Dashboard > Repositories > Business Rules**.

2 In the Factory Business Rules area, select the **Generic Sample Rule** and click **Clone**.

3 In the Custom Business Rule area, click the **Edit** button corresponding to the Generic Sample Rule to open the Rule Details window.

4 In the **Display Name** box, enter Value Event rule as the name of the cloned rule.

5 In the Rule Parameters area, click the **Edit** button corresponding to the **Field Name** to open the Parameter Details window. In the **Default Value** box, specify the name of the sample field (value) on which to apply the rule. The field must have a numeric value. Click **OK** to save the change.

Note: The units of the objectives and of the field value must be the same. The result is provided with the same unit too.

---

6 If required, in the Objective Parameters area, click the **Edit** button corresponding to the appropriate objective to open the Parameter details window and make the changes to the default objectives (values from 1 to 5 are colored, values less than 1 or more than 5 are colored grey). Click the **Edit** button for each objective parameters and enter the objective value in the Default Value box (**critical, 5**; **major**, 4; **minor**, 3; **warning**, 2; **OK**, 1). For details, see "Parameter Details Dialog Box (Rules)" on page 653.

Note: The units of the objectives and of the field value must be the same. The result is provided with the same unit too.

---

7 Click **OK** to save the changes.

To create the KPI for the rule:

1 Select **Admin> Dashboard** > **Repositories** > **KPIs**.

2 In the Factory KPIs area, select any KPI and click **Clone**.

3 In the Custom KPIs area, click the **Edit** button corresponding to the KPI you just cloned to open the Item Details window.

4 In the **Display Label** box, enter Event as a name for the cloned KPI.

5 In the **Default Rule** list, select **Worst Child**.

6 In the **Applicable Rules** list, select **Worst Child**, click CTRL and click the cloned Generic Sample Rule (Value Event rule) you just created.

7 In the **Applicable Sections** list, select **Dashboard**.

8 Click **OK** to save the changes.

To attach the customized rule to a KPI for a CI:

1 Select **Admin> Dashboard** > **KPIs**.

2 Select a view.

3 Select the appropriate monitor level CI to which you want to attach the KPI.

4 Click **New KPI** to open the New KPI window.

5 In the **KPI** list, select the Event KPI you just created.

6 In the **Business rule** list, select the Value Event rule you just created.

7 In the **Business Rules Parameters** area, if required, specify the rule parameters.

8 in the **Objectives** area, enter the objectives.

9 In the **Selector** area, enter event as the name of the sample in the Value box that corresponds to the **sampleType** Field, and enter the other values corresponding to the other reference properties that the selector expression searches for in the incoming data samples sent from the data source. For details on the event sample, see "Sample: Event (event)" in *Reference Information*.

10 Click **OK** to save the changes.

⚜ Create a Customized Generic Sum of Values Over Time Rule – Scenario

For a description of the Generic Sum of Values rule, see "Generic Sum of Values Over Time Rule" on page 602.

You want to add the value of the u_iSumNetTime field in the trans_t sample for all the trans_t samples that arrive during the time period specified in the **duration** parameter. To display the value you must clone the Generic Sum of Values Over Time rule, attach the cloned rule to a cloned KPI, and attach the cloned KPI to the appropriate CI.

To create a clone of the Generic Sum of Values Over Time rule:

1 Select **Admin> Dashboard > Repositories > Business Rules**.

2 In the Factory Business Rules area, select the **Generic Sum of Values Over Time Rule** and click **Clone**.

✏️ **3** In the Custom Business Rule area, click the **Edit** button corresponding to the Generic Sum of Values Over Time Rule to open the Rule Details window.

4 In the **Display Name** box, enter u_iSumNetTime Sum rule as the new name for the cloned rule.

5 In the Rule Parameters area:

✏️ **a** click the **Edit** button corresponding to the **Field Name** to open the Parameter Details window. In the **Default Value** box, specify the name of the field (u_iSumNetTime) on which to apply the rule. The field must have a numeric value. Click **OK** to save the change.

Note: The units of the objectives and of the field value must be the same. The result is provided with the same unit too.

✏️ **b** If required, in the **Default value** box, click the **Edit** button corresponding to the **duration** parameter and specify the sampling duration, in seconds. The default is 15 minutes (900 seconds).

✏️ **6** If required, in the Objective Parameters area, click the **Edit** button corresponding to the appropriate objective to open the Parameter details window and make the changes. For details, see "Parameter Details Dialog Box (Rules)" on page 653.

7 The units of the objectives and of the field value must be the same. The result is provided with the same unit too.

8 Click **OK** to save the changes.

To define the customized rule for a KPI:

1 Select **Admin> Dashboard > Repositories > KPIs**.

2 In the Factory KPIs area, select any KPI and click **Clone**.

✏️ **3** In the Custom KPIs area, click the **Edit** button corresponding to the KPI you just cloned to open the Item Details window.

4 In the **Display Label** box, enter u_iSumNetTime_sum as the new name for the cloned KPI.

5 In the **Default Rule** list, select **Worst Child**.

6 In the **Applicable Rules** list, select **Worst Child**, click CTRL and click the cloned generic rule (u_iSumNetTime Sum rule) you just created.

7 In the **Applicable Sections** list, select **Dashboard**.

8 Click **OK** to save the changes.

To attach the customized rule to a KPI for a CI:

1 Select **Admin> Dashboard** > **KPIs**.

2 Select a view.

3 Select the appropriate monitor level to which you want to attach the KPI.

4 Click **New KPI** to open the New KPI window.

5 In the **KPI** list, select the KPI (u_iSumNetTime_sum) you just created.

6 In the **Business rule** list, select the generic rule (u_iSumNetTime Sum rule) you just created.

7 Click **OK** to save the changes.

⚒ Use the Generic Two Arguments Rule – Scenario

For a description of the Generic Two Arguments Rule, see "Generic Two Arguments Rule" on page 603.

You want to display the sum of Sum of component connection times in the transaction breakdown and Sum of component DNS times in the transaction breakdown sample field values from the trans_t sample. To display the sum you must clone the Generic Two Arguments Rule rule, attach the cloned rule to a cloned KPI, and attach the cloned KPI to the appropriate CI.

To create a customized Generic Two Arguments Rule:

1 Select **Admin> Dashboard**, and select **Business Rules** in the Repositories tab.

2 In the Factory Business Rules area, select the Generic Two Arguments Rule and click **Clone**.

3 In the Custom Business Rule area, click the **Edit** button corresponding to the Generic Two Arguments Rule to open the Rule Details window.

4 In the **Display Name** box, enter Sum_Connect_DNS_Time rule a new name for the cloned rule.

5 In the Rule Parameters area:

a Click the **Edit** button corresponding to the **First Field Name** to open the Parameter Details window. In the **Default Value** box, specify u_iSumConnectionTime as the name of the first sample field on which to apply the rule. The field must have a numeric value. Click **OK** to save the change.

b Click the **Edit** button corresponding to the **Second Field Name** to open the Parameter Details window. In the **Default Value** box, specify u_iSumDnsTime as the name of the second sample field on which to apply the rule. The field must have a numeric value. Click **OK** to save the change.

Note: The units of the objectives and of the field value must be the same. The result is provided with the same unit too.

c If required, click the **Edit** button corresponding to the **duration** parameter and in the **Default value** box, specify the sampling duration, in seconds. The default is 15 minutes (900 seconds).

d Click the **Edit** button corresponding to the **Operator** parameter and in the **Default value** box, specify the operator (+) you want to use.

e If required, click the **Edit** button corresponding to the **Factor** parameter and in the **Default value** box, specify 1.

6 In the Objective Parameters area, click the **Edit** button corresponding to the appropriate objective to open the Parameter details window and make the changes. For details, see "Parameter Details Dialog Box (Rules)" on page 653.

Note: The units of the objectives and of the field value must be the same. The result is provided with the same unit too.

7 Click **OK** to save the changes.

To define the customized rule for a KPI:

1 Select **Admin> Dashboard > Repositories > KPIs**.

2 In the Factory KPIs area, select any KPI and click **Clone**.

3 In the Custom KPIs area, click the **Edit** button corresponding to the KPI you just cloned to open the Item Details window.

4 In the **Display Label** box, enter Sum_Connect_DNS_Time as the new name for the cloned KPI.

5 In the **Default Rule** list, select **Worst Child**.

6 In the **Applicable Rules** list, select **Worst Child**, click CTRL and click the cloned generic rule (Sum_Connect_DNS_Time rule) you just created to add it to the list of rules assigned to the KPI.

7 In the **Applicable Sections** list, select **Dashboard**.

8 Click **OK** to save the changes.

To attach the customized rule to a KPI for a CI:

1 Select **Admin> Dashboard > KPIs**.

2 Select a view.

3 Select the appropriate monitor level to which you want to attach the KPI.

4 Click **New KPI** to open the New KPI window.

5 In the **KPI** list, select the KPI (Sum_Connect_DNS_Time) you just created.

6 In the **Business rule** list, select the generic rule (Sum_Connect_DNS_Time rule) you just created.

7 Click **OK** to save the changes.

⚒ Set Up Rules to Display the Last Sample Details
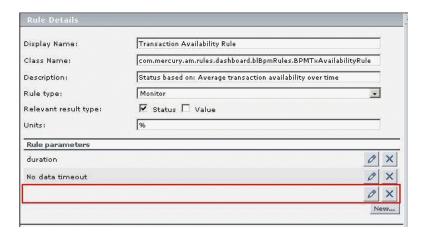
You can set up rules to save details from the last sample received for a CI, so that these details can be viewed in the Event Details window for the CI or in tooltips in Dashboard. For details on how to display the last sample information, see "View Sample Details" on page 57.

Note: Storing last sample details may require use of a large amount of memory, slowing down Dashboard performance.

Last sample details are kept in memory using the **saveLastSample** property. You can use this property to store sample details only for specific CI KPIs, or for all KPIs.

To save the last sample details, you can:

➤ **Set the property for an individual business rule.** Override the rule in the Business Rule Repository. In the Rule Details window for the new custom rule, add the parameter **saveLastSample** with Type=**Boolean** and Default Value=**true**. (Note that this property need only be defined for rules that apply to monitor CIs and that the parameter does not appear in the Rule parameters list.)

➤ **Set the property for all business rules.** Click the **Edit Globals** button in the Business Rule Repository to view the Global Attributes list. Edit the **saveLastSample** attribute to change its value to **true** (default setting is **false**).

For details on editing global attributes, see "Global Attributes Dialog Box" on page 648.

🏷 Save Measurements Data

If required, the **Save KPI data over time for this CI** option in the Global Attributes Details dialog box can also be used to save the calculated measurement for each of the CI KPIs, at 15 minute intervals (default value). This is done by activating the **saveValuesToPersistency** global attribute in the Business Rule Repository. You can also change the default interval by modifying the value of the **saveValuesToPersistencyInterval** option. For details on the user interface, see "Global Attributes Details Dialog Box" on page 652.

Example

To activate Dashboard to save measurements data:

1 Access the **Dashboard Administration** > **Repositories** > **Business Rules** page.

2 Click **Edit Globals** (in the **Factory Rules** area).

3 In the **Global Attributes** list, click the **Edit** button for **saveValuesToPersistency**.

4 In the displayed Global Attributes Details window, change the **Value** parameter from No to **Yes**.

5 Click **OK**.

6 To change the default interval (900 seconds) for collecting measurements data, in the **Global Attributes** list, click the **edit** button for the **saveValuesToPersistencyInterval**, and modify the value.

Note: To avoid overloading the database memory, it is recommended that you do not define a shorter default interval value.

🔍 List of Dashboard Business Rules

This section provides detailed information about the rules available in the Business Rule Repository.

For more details on the rule's parameters, see "List of Dashboard Business Rule Parameters" on page 639.

Rule (Rule #)	Description	Parameters
API Duration-Based Sample Rule (501)	Use this to create a customized rule using the Rules API, to calculate KPIs based on values of samples. The calculation is based on the samples collected during a defined duration. For details on how the rule works, see "API Duration-Based Sample Rule" on page 665.	**"duration" on page 639** **"No data timeout" on page 641** **"Sample Fields" on page 643** **"KPI Calculation Script" on page 641** **"Rule Template Setting Key" on page 643** **"isGroovyRuleType" on page 641**
API Group and Sibling Rule (500)	Use this to create a customized rule using the Rules API, to calculate KPIs based on the values of sibling KPIs or those of child CIs. For details on how the rule works, see "API Group and Sibling Rule" on page 659.	**"KPI Calculation Script" on page 641** **"Rule Template Setting Key" on page 643** **"isGroovyRuleType" on page 641**

Rule (Rule #)	Description	Parameters
API Sample Rule (502)	Use this to create a customized rule using the Rules API, to calculate KPIs based on values of samples. The calculation is based on a maximum number of samples. For details on how the rule works, see "API Sample Rule" on page 663.	**"Maximum number of samples" on page 641** **"Sample Fields" on page 643** **"KPI Calculation Script" on page 641** **"Rule Template Setting Key" on page 643** **"isGroovyRuleType" on page 641**
Average Availability of Weighted Volume (55)	Calculates the weighted average based on the total number of users accessing the page monitored by the monitor, based on the Sum of availability of Monitors Per volume. This is a group rule. For details, see "Group Rules" on page 558.	**"volumeKPI" on page 645**
Average Latency of Weighted Volume (83)	Calculates the weighted average of the latency of the monitored End User groups weighted by the volume of users and the weighted relationships. For details on weighted relationships, see "Working with Relationships" in *Model Management*. This is a group rule. For details, see "Group Rules" on page 558.	**"volumeKPI" on page 645**
Average Network of Weighted Volume (93)	Calculates the weighted average of network availability, weighted by the volume (number of sessions or connections) of each End User (see the Sum of Volume and RUM End User Monitor Volume rules). This is a group rule. For details, see "Group Rules" on page 558.	**"volumeKPI" on page 645**

Rule (Rule #)	Description	Parameters
Average of Converted Performance Results in % (63)	Converts the monitors status into percentages using the Average of Performance Results in % rule, then calculates the average, compares the average to the objectives, and provides the result in percentages. This is a group rule. For details, see "Group Rules" on page 558.	**"volumeKPI" on page 645**
Average of Values **(31)**	Converts the monitors status into percentages using the Average of Performance Results in % rule, then calculates the average, compares the average to the objectives, and provides the result in percentages. This is a group rule. For details, see "Group Rules" on page 558.	No parameters
Average Performance of Weighted Volume in % (64)	Calculates the average performance based on the weighted volume (total number) of users accessing the page monitored by the Monitor, where the performance of the monitor has been converted to percentages by the Average of Performance Results rule. This is a group rule. For details, see "Group Rules" on page 558.	**"volumeKPI" on page 645**
Average Performance of Weighted Volume in Seconds (65)	Calculates, in seconds, the average performance based on the weighted volume (total number) of users accessing the page monitored by the Monitor, where the performance of the monitor has been converted to percentages by the Average of Performance Results rule. This is a group rule. For details, see "Group Rules" on page 558.	**"volumeKPI" on page 645**

Rule (Rule #)	Description	Parameters
Best Child Rule (2)	Calculates the best result value based on all of the CI's KPI children (based on the highest **status** held by any of the child CIs). For example, if at least one child CI in a group has green status, then the parent CI of the group also displays green status. This is a group rule. For details, see "Group Rules" on page 558.	No parameters

Rule (Rule #)	Description	Parameters
BPI Average Weighted Status Rule for Duration KPI (623)	You can specify status weights using the rule parameters in the rule definition. The rule calculates the following value: **sum (instances x x weight x status)/** **sum (instances x weight)** The resulting value is a number between 0 and 20 that is translated to the closest status and represented by a colored icon. This is a monitor rule. For details, see "Monitor Rules" on page 557. **Example:** Information about the number of instances per status is provided by Business Process Insight. The weights are the rule parameters. The value for each status is calculated by the BPI Average Weighted Status rule.	**"OK weight" on page 642** **"Warning Weight" on page 645** **"Minor weight" on page 641** **"Major weight" on page 641** **"Critical weight" on page 639**

Within the Description cell, the following table appears:

	Number of Instances	Weight	Status
critical	20	1	0
major	15	1	5
minor	5	1	10
warning	10	1	15
OK	1	1	20

The result of the rule calculation is:
(20*1*0+15*1*5+5*1*10+10*1*15+1*1*20)/
(20*1+15*1+5*1+10*1+1*1)=5,784 -> 5 is the nearest status which is **Major**.

Rule (Rule #)	Description	Parameters
BPI Average Weighted Status Rule for Value KPI (611)	You can specify status weights using the rule parameters in the rule definition. The rule calculates the following value: **sum (instances x weight x status)/** **sum (instances x weight)** The resulting value is a number between 0 and 20 that is translated to the closest status and represented by a colored icon. This is a monitor rule. For details, see "Monitor Rules" on page 557. **Example:** Information about the value of instances per status is provided by Business Process Insight. The weights are the rule parameters. The value for each status is calculated by the BPI Average Weighted Status rule.	**"OK weight" on page 642** **"Warning Weight" on page 645** **"Minor weight" on page 641** **"Major weight" on page 641** **"Critical weight" on page 639**

	Number of Instances	**Weight**	**Status**
critical	20	1	0
major	15	1	5
minor	5	1	10
warning	10	1	15
OK	1	1	20

The result of the rule calculation is:
(20*1*0+15*1*5+5*1*10+10*1*15+1*1*20)/(20*1+15*1+5*1+10*1+1*1)=5,784 -> 5 is the nearest status which is **Major**.

Rule (Rule #)	Description	Parameters
BPI Business Health Status Rule (626)	Calculates the status of the Business Health KPI, based on the worst status of the business KPIs monitored by HP Business Process Insight for the process, and its children. The monitored business KPIs are the following: **Backlog**, **Duration**, **Business Impact**, **Value**, and **Volume**. This can be modified in **Admin** > **Platform** > **Setup and Maintenance** > **Infrastructure Settings Manager** > **Applications** > **Business Process Insight** > **List of Business KPIs**. This is a group rule. For details, see "Group Rules" on page 558.	No parameters
BPI Duration Monitor Rule (608)	The rule calculates different results depending on the value of the **logic** parameter: ➤ **logic** = **maximum.** The maximum time it took for instances to pass through the monitored BPI Steps during the sampling period in Business Process Insight. ➤ **logic** = **minimum.** The minimum time it took for instances to pass through the monitored BPI Steps during the sampling period in Business Process Insight. ➤ **logic** = **average.** Default. The average time it took for instances to pass through the monitored BPI Steps during the sampling period in Business Process Insight. ➤ **logic** = **weighted_average.** The total duration and the total weight values are sent by Business Process Insight. The weighted_average value displayed by the Duration KPI corresponds to: **total weighted duration/total weight** By default, samples are sent every 15 minutes. This is a monitor rule. For details, see "Monitor Rules" on page 557.	**"logic" on page 641**

Rule (Rule #)	Description	Parameters
BPI Group Rule for BP CI (619)	Propagates the value and status of the Backlog and Volume KPIs attached to the BPI Business Process Monitor CI to the Business Process CI. This is a group rule. For details, see "Group Rules" on page 558.	No parameters
BPI Group Rule for BP Step CI (621)	Propagates the value and status of the Backlog and Volume KPIs attached to the BPI BP Step Monitor CI to the Business Process Step CI. This is a group rule. For details, see "Group Rules" on page 558.	No parameters

Rule (Rule #)	Description	Parameters
BPI Health Average Weighted Status Count Rule (614)	You can specify status weights using the rule parameters in the rule definition. The rule calculates the following value: **sum (instances x weight x status)/** **sum (instances x weight)** The resulting value is a number between 0 and 20 that is translated to the closest status and displayed as the color of the tooltip. A group bar displays the number of instances per instance status up to the Business Process CI level. This is a monitor rule. For details, see "Monitor Rules" on page 557. **Example:** The number of instances per BPI status and the BPI statuses are provided by Business Process Insight. The weight information is taken from the values of the rule parameters. The value for each status is calculated by the rule.	"HealthyWeight" on page 640 "AtRiskWeight" on page 639 "BlockedWeight" on page 639

	Number of Instances	Weight	Status
Healthy	3	1	20
At Risk	5	2	10
Blocked	4	1	0

The result of the rule calculation is:
$(3*1*20 + 5*2*10 + 4*1*0)/(3*1+5*2+4*1) = 160/17 = 9,411$ which is converted into 10 = **Minor** Dashboard status and displayed in the tooltip.

The groupbar displays the following information:

3 instances with Healthy status, 5 instances with At Risk status, and 4 instances with Blocked status

Rule (Rule #)	Description	Parameters
BPI Health Average Weighted Status Value Rule (617)	You can specify status weights using the rule parameters in the rule definition. The rule calculates the following value: **sum (instances x weight x status)/** **sum (instances x weight)** The resulting value is a number between 0 and 20 that is translated to the closest status and displayed as the color of the tooltip. A group bar displays the sum of values of the instances per status up to the Business Process CI level. This is a monitor rule. For details, see "Monitor Rules" on page 557. **Example:** The number of instances per BPI status and the BPI statuses are provided by Business Process Insight. The weight information is taken from the values of the rule parameters. The cost for each status is calculated by the rule.	"HealthyWeight" on page 640 "AtRiskWeight" on page 639 "BlockedWeight" on page 639

	Sum of Value	Weight	Status
Healthy	$1000	1	20
At Risk	$1500	2	10
Blocked	$700	1	0

The result of the rule calculation is:
(1000*1*20 + 1500*2*10 + 700*1*0)/
(1000*1+1500*2+700*1) = 10.63 which is converted into 10 = **Minor** Dashboard status.

The groupbar displays the following information:

The sum of values is:
1000 for instances with Healthy status,
1500 for instances with At Risk status,
and 700 for instances with Blocked status

Rule (Rule #)	Description	Parameters
BPI Health Group Rule for BP CIs (620)	Propagates the value and status of the Business Health KPIs attached to the BPI Monitor CIs to the Business Process CI. This is a group rule. For details, see "Group Rules" on page 558.	No parameters
BPI Health Status Percentage Count Rule (615)	The rule calculates the percentage of instances with a status equal or better than the status specified in the **PassedStatus** parameter of the rule, relative to the total number of instances in the sample; the status is derived from the objectives set for the rule. A group bar displays the sum of values of the instances per status up to the Business Process CI level. This is a monitor rule. For details, see "Monitor Rules" on page 557. **Example:** If **PassedStatus** is defined as 20 (OK/Healthy), all instances with status 20 or more are **PassedStatus** instances. In the example, 10 instances match the criteria. The rule returns: (10)/(10+12+8)=25% which is then compared to the objectives and translated into a status. | BPI Statuses from HP Business Process Insight	Number of Instances
---	---
Healthy (20 OK)	10
At Risk (10 Minor)	12
Blocked (0 Critical)	8		**"PassedStatus" on page 642**

Rule (Rule #)	Description	Parameters
BPI Health Status Percentage Value Rule (618)	The rule calculates the number of instances with a status equal or better than the status specified in the **PassedStatus** parameter of the rule, relative to the total number of instances in the sample; the status is derived from the objectives set for the rule. A group bar displays the sum of values per instance status up to the Business Process CI level. This is a monitor rule. For details, see "Monitor Rules" on page 557. **Example:** If **PassedStatus** is defined as 20 (OK/Healthy), all instances with status 20 or more are **PassedStatus** instances. The rule returns: ($1000)/(1000+5000+500)=15% which is then compared to the objectives and translated into a status. <table><tr><td>**BPI Statuses from HP Business Process Insight**</td><td>**Cost**</td></tr><tr><td>Healthy (20 OK)</td><td>$1000</td></tr><tr><td>At Risk (10 Minor)</td><td>$5000</td></tr><tr><td>Blocked (0 Critical)</td><td>$500</td></tr></table>	**"PassedStatus" on page 642**
BPI Health Worst Process Instances Count Rule (613)	The samples sent by Business Process Insight, includes the number of instances for each status (**Healthy**, **At Risk** and **Blocked**), where the statuses are calculated by Business Process Insight. The rule searches for the worst status in the sample. This is a monitor rule. For details, see "Monitor Rules" on page 557. **Example:** If the sample contains instances with status: ➤ **Blocked** then the rule returns **Critical** status. ➤ **At Risk** then the rule returns **Minor** status. If the sample contains instances with other statuses, the status returned is **OK.**	No parameters

Rule (Rule #)	Description	Parameters
BPI Health Worst Process Instances Value Rule (616)	The samples sent by Business Process Insight, includes the number of instances for each status (**Healthy**, **At Risk** and **Blocked**), where the statuses are calculated by Business Process Insight. The rule searches for the worst status in the sample. This is a monitor rule. For details, see "Monitor Rules" on page 557. **Example:** If the sample contains instances with status: ➤ **Blocked** and a non-zero value then the rule returns **Critical** status. ➤ **At Risk** and a non-zero value then the rule returns **Minor** status. If the sample contains instances with other statuses, the status returned is **OK**.	No parameters
BPI Monitor Backlog Count Rule (604)	Calculates the number of instances that are currently passing through one of the following: ➤ One Business Process Step (when the Backlog KPI is assigned to a BPI Business Process Step Monitor CI). ➤ A group of BP Steps (when the Backlog KPI is assigned to a BPI Value Monitor, a BPI Duration Monitor, or a BPI Custom Monitor). ➤ A Business Process (when the Backlog KPI is assigned to a Business Process Monitor CI). This is a monitor rule. For details, see "Monitor Rules" on page 557.	No parameters

Rule (Rule #)	Description	Parameters
BPI Monitor Backlog Value Rule (605)	Calculates the value/cost of the instances that are currently passing through one of the following: ➤ One Business Process Step (when the Backlog KPI is assigned to a BPI Business Process Step Monitor CI). ➤ A group of BP Steps (when the Backlog KPI is assigned to a BPI Value Monitor, a BPI Duration Monitor, or a BPI Custom Monitor). ➤ A Business Process (when the Backlog KPI is assigned to a Business Process Monitor CI). This is a monitor rule. For details, see "Monitor Rules" on page 557.	No parameters
BPI Monitor Volume Count Rule (606)	The sample contains the number of completed instances in the most recent collection interval. Calculates the number of the instances in the sample, that completed passing through one of the following: ➤ One Business Process Step (when the Backlog KPI is assigned to a BPI Business Process Step Monitor CI). ➤ A group of BP Steps (when the Backlog KPI is assigned to a BPI Value Monitor, a BPI Duration Monitor, or a BPI Custom Monitor). ➤ A Business Process (when the Backlog KPI is assigned to a Business Process Monitor CI). This is a monitor rule. For details, see "Monitor Rules" on page 557.	No parameters

Rule (Rule #)	Description	Parameters
BPI Monitor Volume Value Rule (607)	Calculates the value/cost of the instances in the sample, that completed passing through one of the following: ➤ One Business Process Step (when the Backlog KPI is assigned to a BPI Business Process Step Monitor CI). ➤ A group of BP Steps (when the Backlog KPI is assigned to a BPI Value Monitor, a BPI Duration Monitor, or a BPI Custom Monitor). ➤ A Business Process (when the Backlog KPI is assigned to a Business Process Monitor CI). This is a monitor rule. For details, see "Monitor Rules" on page 557.	No parameters
BPI Operational Status Rule (625)	Calculates the status of the Operational Status KPI, based on the worst status of the operational (non-business) KPIs monitored by HP Business Process Insight for the process, and its children. (The business KPIs are the following: **Backlog**, **Duration**, **Business Impact**, **Value**, and **Volume**. This can be modified in **Admin** > **Platform** > **Setup and Maintenance** > **Infrastructure Settings Manager** > **Applications** > **Business Process Insight** > **List of Business KPIs**.) This is a group rule. For details, see "Group Rules" on page 558.	No parameters

Rule (Rule #)	Description	Parameters
BPI Status Percentage Rule for Duration KPI (624)	The rule calculates the percentage of instances with a status equal or better than the status specified in the **PassedStatus** parameter of the rule, relative to the total number of instances in the sample; the status is derived from the objectives set for the rule. This is a monitor rule. For details, see "Monitor Rules" on page 557. **Example:** If **PassedStatus** is defined as 10 (minor), all instances with status 10 or more are **PassedStatus** instances. In the following example, the instances that correspond to the criteria are: 1 instance with OK status, 10 instances with the warning status, and 5 instances with the minor status. The rule returns: (1+10+5)/(1+10+5+15+10)=40%. <table><tr><th></th><th>Instances</th><th>Weight</th><th>Value</th></tr><tr><td>critical</td><td>10</td><td>1</td><td>0</td></tr><tr><td>major</td><td>15</td><td>1</td><td>5</td></tr><tr><td>minor</td><td>5</td><td>1</td><td>10</td></tr><tr><td>warning</td><td>10</td><td>1</td><td>15</td></tr><tr><td>OK</td><td>1</td><td>1</td><td>20</td></tr></table>	"PassedStatus" on page 642

Rule (Rule #)	Description	Parameters
BPI Status Percentage Rule for Value KPI (612)	The rule calculates the percentage of instances with a status equal or better than the status specified in the **PassedStatus** parameter of the rule, relative to the total number of instances in the sample; the status is derived from the objectives set for the rule. This is a monitor rule. For details, see "Monitor Rules" on page 557. **Example:** If **PassedStatus** is defined as 10 (minor), all instances with status 10 or more are **PassedStatus** instances. In the following example, the instances that correspond to the criteria are: 1 instance with OK status, 10 instances with the warning status, and 5 instances with the minor status. The rule returns: (1+10+5)/(1+10+5+15+10)=40%.	"**PassedStatus**" **on page 642**

	Instances	Weight	Value
critical	10	1	0
major	15	1	5
minor	5	1	10
warning	10	1	15
OK	1	1	20

Rule (Rule #)	Description	Parameters
BPI Value Monitor Rule (609)	The rule calculates different values/costs depending on the value assigned to the logic parameter: ➤ **logic = maximum.** The maximum value/cost of the instances that passed through the monitored BPI Steps during the sampling period in Business Process Insight. ➤ **logic = minimum.** The minimum value/cost of the instances that passed through the monitored BPI Steps during the sampling period in Business Process Insight. ➤ **logic = average.** Default. The average value/cost of the instances that passed through the monitored BPI Steps during the sampling period in Business Process Insight. ➤ **logic = weighted_average.** The total value and the total weight values are sent by Business Process Insight. The weighted_average value displayed by the Value KPI corresponds to: **total weighted value/total weight**. By default, samples are sent every 15 minutes. This is a monitor rule. For details, see "Monitor Rules" on page 557.	**"logic" on page 641**
BPI Worst Violated Instances Rule for Duration KPI (622)	The samples sent by Business Process Insight, includes the number of instances for each status (**Minor**, **Major**, and so on), where the statuses are calculated by Business Process Insight. The rule searches for the worst status in the sample. This is a monitor rule. For details, see "Monitor Rules" on page 557.	No parameters
BPI Worst Violated Instances Rule for Value KPI (610)	The samples sent by Business Process Insight, includes the number of instances for each status (**Minor**, **Major**, and so on), where the statuses are calculated by Business Process Insight. The rule searches for the worst status in the sample. This is a monitor rule. For details, see "Monitor Rules" on page 557.	No parameters

Rule (Rule #)	Description	Parameters
BPM WS Operation Percentile Performance Rule (1307)	Calculates the percentile performance of a Web service operation defined as the percentage of calls that did not pass the Business Process Monitor threshold out of available calls. The rule works as follows: 1 Sums the number of available calls into **sumOfAvailableCalls**. The calculation for each sample is: calls_count - error_count 2 Sums the number of calls that did not pass the SiteScope threshold into **sumOfNotOverThresholdCalls**. The calculation for each sample is: calls_count - error_count - over_threshold_server_time 3 The result is calculated as: (sumOfNotOverThresholdCalls x 100) / sumOfAvailableCalls **calls_count**, **error_count**, and **over_threshold_client_time** are sample fields. This is a monitor rule. For details, see "Monitor Rules" on page 557.	**"duration" on page 639** **"No data timeout" on page 641**

Rule (Rule #)	Description	Parameters
BPM WS Operation Performance Rule (1306)	Calculates the performance of a Web service operation defined as the average client time (ms) of available calls. The average server time data is obtained from Business Process Monitor samples. The rule works as follows: 1 Sums the number of available calls into **sumOfAvailableCalls**. The calculation for each sample is: calls_count - error_count 2 Sums the number of available calls into **sumOfAvailableCallsTime**. 3 The result is calculated as: sumOfAvailableCallsTime/sumOfAvailableCalls **calls_count**, **error_count**, and **avg_server_time** are sample fields. This is a monitor rule. For details, see "Monitor Rules" on page 557.	**"duration" on page 639** **"No data timeout" on page 641**
Business Transaction Group Rule (1417)	Group rule for TransactionVision data. Assigns value and status to a Business Transaction CI by taking the value and status directly from the child TV Monitor CI. This is a group rule. For details, see "Group Rules" on page 558.	No parameters
Customer Rule (12)	Displays the status of the worst KPI of all of the CI's children. This is a group rule. For details, see "Group Rules" on page 558.	No parameters

Rule (Rule #)	Description	Parameters
Dashboard PNR Rule (351)	Produces status to be presented in the Dashboard, based on Point of No Return (PNR) samples (created by the corresponding internal SLM PNR). For details, see "Attach a PNR KPI to a CI – Scenario" on page 372. The status is displayed in bar form in the Dashboard tabs. The PNR samples measure unavailability in the period of time that has elapsed, and how much time remains before the agreement is in breach of contract. This is a group rule. For details, see "Group Rules" on page 558. **How Dashboard calculates unavailability:** Service level agreements regularly include a clause covering unavailability, that is, the period of time that a system may be down. For example, if availability must be 98.5%, then a system may be unavailable 1.5% of the time. The Dashboard PNR Rule (the rule always assigned to the PNR KPI) calculates unavailability according to the target availability for the CI (the time that the component must be available, according to the SLA). This calculation is also based on the measurements for the Service Level Management Availability KPI that is attached to the CI when creating the SLA. The following example shows how Dashboard calculates the time a system may be unavailable: The start of the week is Monday, 8 Aug 05 00:00 AM. Today is Friday 12 Aug 05 10:15 AM. The time range is Week to Date. The time interval is Business Hours, that is, 8:00 AM to 5:00 PM, Monday to Friday. The time that has passed for this time range is: 4 whole days (Monday to Thursday) = 4 x 9 = 36 hours. Part of a day (Friday) = 8:00 AM - 10.15 AM = 2.25 hours. Total time = 38.25 hours. Availability (as defined in SLA) = 98.5% Availability, therefore, must be 98.5% x 38.25 = 37.68 hours. Maximum unavailability = 38.25-37.68 = 0.57 hours. If unavailability reaches above this limit, Dashboard changes the status icon colors in the SLM tab.	**"No data timeout" on page 641**

Rule (Rule #)	Description	Parameters
Diagnostics for J2EE/.Net General (1075)	Calculates the status of the HP Diagnostics Application KPI based on the worst of all statuses from the J2EE rules calculations. For more details on Diagnostics for J2EE/.Net, see the HP Diagnostics documentation. This is both a monitor and group rule. For details, see "Monitor Rules and Group Rules" on page 557.	**"No data timeout" on page 641**
Diagnostics WS Operation Percentile Performance Rule (1302)	Calculates the percentile performance of a Web service operation defined as the percentage of calls that did not pass the diagnostics threshold out of available calls. This is a monitor rule. For details, see "Monitor Rules" on page 557. The rule works as follows: 1 Sums the number of available calls into **sumOfAvailableCalls**. The calculation for each sample is: calls_count - error_count 2 Sums the number of calls that did not pass the diagnostics threshold into **sumOfNotOverThresholdCalls**. The calculation for each sample is: calls_count - error_count - over_threshold_server_time 3 The result is calculated as: (sumOfNotOverThresholdCalls x 100) / sumOfAvailableCalls **calls_count**, **error_count**, and **over_threshold_server_time** are sample fields.	**"duration" on page 639** **"No data timeout" on page 641**

Rule (Rule #)	Description	Parameters
Diagnostics WS Operation Performance Rule (1301)	Calculates the performance of a Web service operation defined as the average server time (ms) of available calls. The average server time data is obtained from diagnostics samples. This is a monitor rule. For details, see "Monitor Rules" on page 557. The rule works as follows: 1 Sums the number of available calls into **sumOfAvailableCalls**. The calculation for each sample is: calls_count - error_count 2 Sums the server time of available calls into **sumOfAvailableCallsTime**. 3 The result is calculated as: sumOfAvailableCallsTime / sumOfAvailableCalls **calls_count**, **error_count**, and **avg_server_time** are sample fields.	**"duration" on page 639** **"No data timeout" on page 641**
Diagnostics WS Operation Throughput Rule (1303)	Calculates the throughput of a Web service operation defined as the total number of calls divided by the time frame. The total number of calls is obtained from the Diagnostics sample. The time frame is defined in minutes, each time the rule is calculated according to the following formula: number of samples in the sample container x sample aggregative time. The aggregative sample time is 5 minutes. This is a monitor rule. For details, see "Monitor Rules" on page 557. The rule works as follows: 1 Sums the **calls_count** filed into **sumOfTotalCalls**. sumOfTotalCalls / (sampleContainerSize x 5) 2 The result is calculated as: **calls_count** is a sample field.	**"duration" on page 639** **"No data timeout" on page 641**

Rule (Rule #)	Description	Parameters
EMS Simple Rule (0)	Takes the KPI status arriving from the EMS system through SiteScope and displays it as is. Use this rule to display SiteScope status as is, if your EMS monitor is measurement-based. If your EMS monitor is event-based, use the EMS Multiple Events Rule. For details, see "SiteScope EMS Multiple Events Rule" on page 621. This is both a monitor and group rule. For details, see "Monitor Rules and Group Rules" on page 557.	**"No data timeout" on page 641** **"Number of Problematic Samples" on page 642** **"Total Number of Samples" on page 645**
Generic Formula Rule (1510)	Use this rule to add new business logic behavior to Dashboard. You can use the rule to create a set of calculation methods (sum, count, average, and so on) that can be applied to every type of sample: legacy (SiteScope, Business Process Monitor, and Real User Monitor) and Enterprise Management Systems (EMS) samples. This is a monitor rule. For details, see "Monitor Rules" on page 557. For details on how the rule works, see "Understanding the Generic Formula Rule" on page 564. For a detailed example of how to create a customized Generic Formula rule, see "Example – Write a Generic Formula Rule" on page 567.	**"Formula" on page 640** **"duration" on page 639** **"Time stamp field" on page 645** **"No data timeout" on page 641**

Rule (Rule #)	Description	Parameters
Generic Sample Rule (21)	Use this rule to create a customized rule. The rule compares the value of a selected field from a sample to the objectives and returns the result of the comparison. The tooltip of the Generic Sample Rule is empty. This is a monitor rule. For details, see "Monitor Rules" on page 557. To use the Generic Sample Rule, you must first customize the rule, and then attach the rule to a KPI, and then attach the KPI to a view. The KPI automatically propagates the rule selected in the Default Rule list to all of the CI parents. For a detailed example of how to create a customized Generic Sample Rule, see "Create a Customized Generic Sample Rule – Scenario" on page 569.	**"No data timeout" on page 641** **"Field name" on page 640** **"Time stamp field" on page 645**
Generic Sum of Values Over Time Rule (1501)	Use this rule to create a customized rule. The rule adds the values of the selected sample field for all of the samples that arrive during the time period specified in the **duration** parameter. The tooltip for the Generic Sum of Value Over Time Rule is empty. This is a monitor rule. For details, see "Monitor Rules" on page 557. To use the Generic Sum of Values Over Time rule, you must first customize the rule, and then attach the rule to a KPI, and then attach the KPI to a view. The KPI automatically propagates the rule selected in the Default Rule list to all of the CI parents. For a detailed example of how to create a customized Generic Sum of Values Over Time rule, see "Create a Customized Generic Sum of Values Over Time Rule – Scenario" on page 571.	**"No data timeout" on page 641** **"Field name" on page 640** **"Time stamp field" on page 645** **"duration" on page 639**

Rule (Rule #)	Description	Parameters
Generic Two Arguments Rule (1500)	Use this rule to perform a specific calculation based on the values of two specific fields. The calculation is performed as follows: calculate a value based on an operation (specified by the arithmetic operator) and two fields that are the sample's keys, multiply the result by a factor, and then compare the result with specified objectives. You must create a KPI and attach the Generic Two Arguments Rule rule to that KPI. The tooltip for the Generic Two Arguments Rule is empty. This is a monitor rule. For details, see "Monitor Rules" on page 557. For a detailed example of how to create a customized Generic Two Arguments rule, see "Use the Generic Two Arguments Rule – Scenario" on page 573.	**"No data timeout" on page 641** **"First Field Name" on page 640** **"Second Field Name" on page 644** **"Operator" on page 642** **"Time stamp field" on page 645** **"Factor" on page 640**

Rule (Rule #)	Description	Parameters
HP OpenView Service Navigator Rule (22)	Calculates the KPI status based on metrics collected from UDX event samples or old format HP OpenView samples for an HP OpenView Service Navigator measurement CI. Status is assigned according to the following values: This is both a monitor and group rule. For details, see "Monitor Rules and Group Rules" on page 557.	**"Time stamp field"** on page 645 **"Number of Problematic Samples"** on page 642 **"Total Number of Samples"** on page 645
HP Worst Child Rule (23)	Calculates the status for the HP System KPI based on the worst status held by any of the child CIs. For example, if at least one child CI in a group has red status, then the parent CI of the group also displays red status. This is a group rule. For details, see "Group Rules" on page 558.	**"InitStatus"** on page 640

Table within Rule 22:

KPI Status	Value for an HP Sample	Value for an old format HP OpenView Sample
Uninitialized	0	0
Informational	1	10
Warning	2	20
Minor	3	30
Major	4	40
Critical	5	50

Rule (Rule #)	Description	Parameters
Impact Over Time Rule (24)	Calculates the financial loss due to non-availability over time.	"DollarImpactFactor."
	The non-availability period starts when the status of the Availability KPI changed to Critical (red) status until the current time. The financial loss for the CI is calculated by multiplying the total Critical period by an hourly $ amount (defined by the **DollarImpactFactor** parameter for the rule) and dividing by 60. The financial loss indication changes from green to red when the figure passes the objectives defined in the **DollarImpactThreshold** parameter for the rule.	"StatusDimension" on page 645
	At the monitor level, attach the Impact Over Time rule to the OT Impact KPI and the Availability KPI to the same CI. The Impact Over Time rule measures the time the Availability KPI attached to the same CI has the red status, and then calculates the financial loss using the rule parameter: DollarImpactFactor. This parameter represents the amount of dollars lost in an hour if the system is unavailable. If the Availability KPI status is not red, then the Real Time Impact value is $0.0.	
	At the group level, attach the Sum of Values rule to the RT Impact KPI. The Sum of Values rule summarizes all of the values of the Real Time Impact KPI of its children.	
	This is a group rule. For details, see "Group Rules" on page 558.	

Rule (Rule #)	Description	Parameters
Locations Grouped Parent Rule (1110)	When a SAP System CI or a Siebel Enterprise CI has Locations group child CIs, the rule uses the results of the Locations Grouped rule for each child CI and calculates and displays the sum of each status. For each result, the tooltip displays the amount of children for each status. This is both a monitor and group rule. For details, see "Monitor Rules and Group Rules" on page 557. **Example:** If a CI has three child CIs, the Locations Parent Group rule summarizes the bars for its children. The rule aggregates the bars calculated by the Locations Grouped Rule for all of the children into one bar. The tooltip displays for each status how many children have that specific status. 	**"Time stamp field"** on page 645 **"duration"** on page 639

Rule (Rule #)	Description	Parameters
Locations Grouped Rule (1105)	For a Locations group CI with child CIs, the rule selects the worst status of **Performance** and **Availability** for each child CI, calculates the sum of children with each specific status and displays that information in a bar. The tooltip displays for each status the sum of all of the CI's children with that status. This is both a monitor and group rule. For details, see "Monitor Rules and Group Rules" on page 557. **Example:** The rule calculates the status of the Locations CI by taking for each child the worst status of **Performance** and **Availability**. It then calculates the sum of children with each specific status and displays that information in a bar:	**"No data timeout"** on page 641 **"duration"** on page 639

Rule (Rule #)	Description	Parameters
Number of Open Incidents (2600)	Returns the total number of incidents whose current state is the state specified in the **Initial State** parameter and whose severity is lower or equal to the value specified in the **Severity** parameter. Incidents whose current state corresponds to the **Final State** or whose **Severity** is higher than the value specified in the **Severity** parameter are not included in the calculation. This is both a monitor and group rule. For details, see "Monitor Rules and Group Rules" on page 557.	**"Initial State" on page 640** **"Final State" on page 640** **"Severity" on page 645**
Number of Running Sessions Rule (1107)	The rule receives the number of sessions from the SiteScope Number of Running Sessions measurement and compares that result with the objectives set for the rule. The result is the number of running sessions colored according to the objectives set for the rule. This rule is used by the HP Business Availability Center for Siebel Applications solution. This is both a monitor and group rule. For details, see "Monitor Rules and Group Rules" on page 557.	**"No data timeout" on page 641**
Number of Tasks in Error Rule (1101)	The rule receives the value of SiteScope Number of Tasks in Error measurement and compares that result with the objectives set for the rule. The result is the number of tasks in error colored according to the objectives set for the rule. This rule is used by the HP Business Availability Center for Siebel Applications solution. This is a group rule. For details, see "Group Rules" on page 558.	**"No data timeout" on page 641**
Percentage Rule (17)	Calculates the weighted average of the statuses of all of the children. The result is in percentages. This is a group rule. For details, see "Group Rules" on page 558. For details on understanding the rule, see "Understanding the Percentage Rule" on page 560.	No parameters

Rule (Rule #)	Description	Parameters
Real Time Impact (19)	Calculates financial loss due to non-availability. The non-availability period starts the last time the status of the CI Availability KPI changed to Critical (red) status to the current time. The financial loss for the CI is calculated by multiplying the total Critical period by an hourly $ amount (defined by the **DollarImpactFactor** parameter for the rule) and dividing by 60. At the monitor/leaf level, you should attach the Real Time Impact rule to the RT impact KPI and the Availability KPI to the same CI. The Real Time Impact rule measures the time the Availability KPI attached to the same CI has the red status, and then calculates the financial loss using the rule parameter: **DollarImpactFactor**. This parameter represents the amount of dollars lost in an hour if the system is unavailable. If the Availability KPI status is not red, then the Real Time Impact value is 0.0$. At the group level, you should attach the Sum of Values rule to the RT Impact KPI. The Sum of Values rule calculates the sum of all of the values of the Real Time Impact KPI of its children. The financial loss indication changes from green to red when the figure passes the threshold defined in the **DollarImpactThreshold** parameter for the rule. This is a group rule. For details, see "Group Rules" on page 558.	**"DollarImpactFactor" on page 639** **"StatusDimension" on page 645**

Rule (Rule #)	Description	Parameters
RUM Application Session Statistics Monitor Availability Rule (56)	Data aggregation is performed in the Real User Monitor server. Every 5 minutes a sample is sent to HP Business Availability Center. The rule's calculations are based on the last sample received from the Real User Monitor server in the selected time period. The rule calculates the result as follows: **100% x (total number of active sessions - number of active sessions with availability events)/total number of active sessions**. If more than one sample is used for the calculation, the sum is weighted, where the weight is the total number of sessions (volume).	**"volumeKPI" on page 645** **"duration" on page 639** **"No data timeout" on page 641** **"relevant_samples" on page 643** **"sample_group_by_fields" on page 644**
RUM Application Session Statistics Monitor Performance Rule (66)	Data aggregation is performed in the Real User Monitor server. Every 5 minutes a sample is sent to HP Business Availability Center. The rule's calculations are based on the last sample received from the Real User Monitor server in the selected time period. The rule calculates the result as follows: **100% x (total number of active sessions - number of active sessions with performance events)/total number of active sessions**. If more than one sample is used for the calculation, the sum is weighted, where the weight is the total number of sessions (volume).	**"volumeKPI" on page 645** **"duration" on page 639** **"No data timeout" on page 641** **"relevant_samples" on page 643** **"sample_group_by_fields" on page 644**

Rule (Rule #)	Description	Parameters
RUM Application Session Statistics Monitor Volume Rule (76)	Data aggregation is performed in the Real User Monitor server. Every 5 minutes a sample is sent to HP Business Availability Center. The rule's calculations are based on the last sample received from the Real User Monitor server in the selected time period. The rule displays the volume, which is the number of active sessions. A session is considered as active if it was created before the beginning of the aggregation interval, or during the aggregation interval, or if it was closed during the aggregation interval. If more than one sample is used for the calculation the total volume is the sum of volumes of individual samples.	**"volumeKPI" on page 645** **"duration" on page 639** **"No data timeout" on page 641** **"relevant_sampl es" on page 643** **"sample_group_ by_fields" on page 644**
RUM End User Monitor Availability Rule (59)	Data aggregation is performed in the Real User Monitor server. Every 5 minutes a sample is sent to HP Business Availability Center. The rule's calculations are based on the last sample received from the Real User Monitor server in the selected time period. The rule calculates the result as follows: **100% x (total number of active sessions - number of active sessions with availability events)/total number of active sessions**. If more than one sample is used for the calculation, the sum is weighted, where the weight is the total number of sessions (volume).	**"volumeKPI" on page 645** **"duration" on page 639** **"No data timeout" on page 641** **"relevant_sampl es" on page 643** **"sample_group_ by_fields" on page 644**

Rule (Rule #)	Description	Parameters
RUM End User Monitor Latency Rule (92)	Displays the average roundtrip time for a packet, between the end users and the server monitored by the Real User Monitor, during the time period specified by the **duration** parameter for the rule. If there are TCP measurements, they are used in the calculation; if there are only HTTP measurements, these are used. The displayed status color represents the average value as follows: ➤ Red (>200) ➤ Yellow (<200) ➤ Green (<50) The thresholds used by this rule are configured in System Availability Management.	**"volumeKPI" on page 645** **"duration" on page 639** **"No data timeout" on page 641** **"relevant_samples" on page 643** **"sample_group_by_fields" on page 644** **"first_choice_sample" on page 640**
RUM End User Monitor Network Rule (91)	Calculates the network availability, based on successful TCP connections. Connection resets and timeouts are considered unsuccessful connections.	**"volumeKPI" on page 645** **"duration" on page 639** **"No data timeout" on page 641** **"relevant_samples" on page 643** **"sample_group_by_fields" on page 644** **"first_choice_sample" on page 640**

Rule (Rule #)	Description	Parameters
RUM End User Monitor Performance Rule (69)	Data aggregation is performed in the Real User Monitor server. Every 5 minutes a sample is sent to HP Business Availability Center. The rule's calculations are based on the last sample received from the Real User Monitor server in the selected time period. The rule calculates the result as follows: **100% x (total number of active sessions or connections - number of active sessions or connections with performance events)/total number of active sessions or connections**. If there are sessions in the sample, the sessions are used in the calculation; if the sample only includes connections, the connections will be used. Performance of connections is calculated by the ratio of requests above threshold to total requests. The rule does not apply to applications that are TCP-streaming. If more than one sample is used for the calculation, the sum is weighted, where the weight is the total number of sessions or connections (volume).	**"volumeKPI" on page 645** **"duration" on page 639** **"No data timeout" on page 641** **"relevant_sampl es" on page 643** **"sample_group_ by_fields" on page 644** **"first_choice_sa mple" on page 640**
RUM End User Monitor Volume Rule (79)	Displays the total number of sessions or connections. If there are sessions in the sample, the sessions are used in the calculation; if the sample only includes connections, the connections will be used.	**"duration" on page 639** **"No data timeout" on page 641** **"relevant_sampl es" on page 643** **"sample_group_ by_fields" on page 644** **"first_choice_sa mple" on page 640**

Rule (Rule #)	Description	Parameters
RUM End User Session Statistics Monitor Availability Rule (57)	Data aggregation is performed in the Real User Monitor server. Every 5 minutes a sample is sent to HP Business Availability Center. The rule's calculations are based on the last sample received from the Real User Monitor server in the selected time period. The rule calculates the result as follows: **100% x (total number of active sessions - number of active sessions with availability events)/total number of active sessions**. If more than one sample is used for the calculation, the sum is weighted, where the weight is the total number of sessions (volume).	**"volumeKPI" on page 645** **"duration" on page 639** **"No data timeout" on page 641** **"relevant_samples" on page 643** **"sample_group_by_fields" on page 644**
RUM End User Session Statistics Monitor Performance Rule (67)	Data aggregation is performed in the Real User Monitor server. Every 5 minutes a sample is sent to HP Business Availability Center. The rule's calculations are based on the last sample received from the Real User Monitor server in the selected time period. The rule calculates the result as follows: **100% x (total number of active sessions - number of active sessions with performance events)/total number of active sessions**. If more than one sample is used for the calculation, the sum is weighted, where the weight is the total number of sessions (volume).	**"volumeKPI" on page 645** **"duration" on page 639** **"No data timeout" on page 641** **"relevant_samples" on page 643** **"sample_group_by_fields" on page 644**

Rule (Rule #)	Description	Parameters
RUM End User Session Statistics Monitor Volume Rule (77)	Data aggregation is performed in the Real User Monitor server. Every 5 minutes a sample is sent to HP Business Availability Center. The rule's calculations are based on the last sample received from the Real User Monitor server in the selected time period. The rule displays the volume, which is the number of active sessions. A session is considered as active if it was created before the beginning of the aggregation interval, or during the aggregation interval, or if it was closed during the aggregation interval. If more than one sample is used for the calculation, the sum is weighted, where the weight is the total number of sessions (volume).	**"volumeKPI" on page 645** **"duration" on page 639** **"No data timeout" on page 641** **"relevant_sampl es" on page 643** **"sample_group_ by_fields" on page 644**
RUM Event Monitor Volume Rule (73)	Counts the total number of times that a defined event or error (monitored by the Real User Monitor) occurred during the time period specified by the **duration** parameter for the rule. The volumes for error have the following thresholds: ➤ Red (>7) ➤ Yellow (<7) ➤ Green (<1)	**"duration" on page 639** **"No data timeout" on page 641**
RUM Location Session Statistics Monitor Availability Rule (58)	Data aggregation is performed in the Real User Monitor server. Every 5 minutes a sample is sent to HP Business Availability Center. The rule's calculations are based on the last sample received from the Real User Monitor server in the selected time period. The rule calculates the result as follows: **100% x (total number of active sessions - number of active sessions with availability events)/total number of active sessions**. If more than one sample is used for the calculation, the sum is weighted, where the weight is the total number of sessions (volume).	**"volumeKPI" on page 645** **"duration" on page 639** **"No data timeout" on page 641** **"relevant_sampl es" on page 643** **"sample_group_ by_fields" on page 644**

Rule (Rule #)	Description	Parameters
RUM Location Session Statistics Monitor Performance Rule (68)	Data aggregation is performed in the Real User Monitor server. Every 5 minutes a sample is sent to HP Business Availability Center. The rule's calculations are based on the last sample received from the Real User Monitor server in the selected time period. The rule calculates the result as follows: **100% x (total number of active sessions - number of active sessions with performance events)/total number of active sessions**. If more than one sample is used for the calculation, the sum is weighted, where the weight is the total number of sessions (volume).	**"volumeKPI" on page 645** **"duration" on page 639** **"No data timeout" on page 641** **"relevant_samples" on page 643** **"sample_group_by_fields" on page 644**
RUM Location Session Statistics Monitor Volume Rule (78)	Data aggregation is performed in the Real User Monitor server. Every 5 minutes a sample is sent to HP Business Availability Center. The rule's calculations are based on the last sample received from the Real User Monitor server in the selected time period. The rule displays the volume, which is the number of active sessions. A session is considered as active if it was created before the beginning of the aggregation interval, or during the aggregation interval, or if it was closed during the aggregation interval. If more than one sample is used for the calculation, the sum is weighted, where the weight is the total number of sessions (volume).	**"volumeKPI" on page 645** **"duration" on page 639** **"No data timeout" on page 641** **"relevant_samples" on page 643** **"sample_group_by_fields" on page 644**
RUM Page Monitor Availability Rule (49)	Calculates (in percentage) the average availability for a page monitored by Real User Monitor, over the time period specified in the duration parameter for the rule. The thresholds for this rule are: ➤ Red (<90%) ➤ Orange (<100%) ➤ Green (=100%)	**"volumeKPI" on page 645** **"duration" on page 639** **"No data timeout" on page 641**

Rule (Rule #)	Description	Parameters
RUM Page Monitor Performance Rule (60)	Calculate the percentage of pages without performance problem (pages with page time over the threshold). The thresholds for this rule are: ➤ Red (<90%) ➤ Orange (<100%) ➤ Green (=100%)	**"volumeKPI" on page 645** **"duration" on page 639** **"No data timeout" on page 641**
RUM Page Monitor Volume Rule (70)	Counts the total number of hits to a page monitored by Real User Monitor, during the time period specified by the **duration** parameter. The volumes for error have the following thresholds: ➤ Red (>7) ➤ Yellow (<7) ➤ Green (<1)	**"duration" on page 639** **"No data timeout" on page 641**
RUM Server Monitor Bandwidth Rule (84)	Displays the amount of traffic (in megabytes) between the application server and end users accessing the server (this includes traffic in both directions), during the time period specified by the **duration** parameter. If there are TCP measurements, they are used in the calculation; if there are only HTTP measurements, these are used.	**"duration" on page 639** **"No data timeout" on page 641** **"sample_group_by_fields" on page 644** **"first_choice_sample" on page 640**
RUM Server Monitor Component Availability Rule (80)	Calculates the percentage of pages without server errors over the time period specified in the **duration** parameter for the rule, for a server monitored by the Real User Monitor. The threshold for the rule are: ➤ Red (<90%) ➤ Orange (<100%) ➤ Green (=100%)	**"duration" on page 639** **"No data timeout" on page 641**

Rule (Rule #)	Description	Parameters
RUM Server Monitor Network Rule (90)	Calculates the network availability, based on successful TCP connections. Connection resets and timeouts are considered unsuccessful connections.	**"volumeKPI" on page 645** **"duration" on page 639** **"No data timeout" on page 641**
RUM Servers Summarized Bandwidth Rule (85)	Calculates the total bandwidth of child server CIs.	No parameters
RUM Session Monitor Availability Rule (52)	Calculates the percentage of available sessions (out of the total number of sessions), over the time period specified in the **duration** parameter for the rule. A session is considered available when all its pages are available. The thresholds for this rule are: ➤ Red (<90%) ➤ Orange (<100%) ➤ Green (=100%)	**"volumeKPI" on page 645** **"duration" on page 639** **"No data timeout" on page 641**
RUM Session Monitor Performance Rule (62)	Calculates the percentage of sessions that do not have a performance problem (out of the total number of sessions). A session is considered to have no performance problem when each one of its pages does not have a performance problem. A page is considered to have a performance problem when page time is over the threshold. The thresholds for this rule are: ➤ Red (<90%) ➤ Orange (<100%) ➤ Green (=100%)	**"volumeKPI" on page 645** **"duration" on page 639** **"No data timeout" on page 641**

Rule (Rule #)	Description	Parameters
RUM Session Monitor Volume Rule (72)	Adds the total number of sessions started for an application in the past 24 hours, the total number of users starting a session in the past 24 hours, and the number of sessions that were closed in the time period specified by the duration parameter for the rule, for sessions monitored by Real User Monitor. The volumes for error have the following thresholds: ➤ Red (>7) ➤ Yellow (<7) ➤ Green (<1)	"duration" on page 639 "No data timeout" on page 641
RUM Transaction Monitor Availability Rule (51)	Calculates the percentage of available transactions (out of the total number of transactions), over the time period specified in the **duration** parameter for the rule. A transaction is considered available when all pages accessed by the transaction are available. The thresholds for this rule are: ➤ Red (<90%) ➤ Orange (<100%) ➤ Green (=100%)	"volumeKPI" on page 645 "duration" on page 639 "No data timeout" on page 641
RUM Transaction Monitor Performance Rule (61)	Calculates the percentage of transactions (out of the total number of transactions) that do not have pages with a performance problem. A page is considered to have a performance problem when page time is over the threshold. The thresholds for this rule are: ➤ Red (<90%) ➤ Orange (<100%) ➤ Green (=100%)	"volumeKPI" on page 645 "duration" on page 639 "No data timeout" on page 641
RUM Transaction Monitor Volume Rule (71)	Counts the total number of times that a transaction monitored by Real User Monitor was completed, during the time period specified by the **duration** parameter for the rule.	"duration" on page 639 "No data timeout" on page 641

Rule (Rule #)	Description	Parameters
SAP Alerts Rule (1111)	Displays the SAP samples from SiteScope as is. The SAP Alerts include the name of the alert and its status. HP Business Availability Center displays two types of SAP Alerts: ➤ Dialog alerts under a Dialog work process ➤ Syslog alerts under a SAP R/3 server. The status of an alert is displayed by the color of the SAP alert KPI (red or yellow), assigned by the SAP system. For details on the colors, see "KPI Status" on page 355.	**"duration" on page 639** **"No data timeout" on page 641**
Service Level Management Tracking Period Alert (361)	This is an internal rule that is used to send alerts to Service Level Management.	**"tracking period id" on page 645** **"No data timeout" on page 641**
Sessions Custom Data Rule (1106)	Calculates the number of running sessions for a CI and all its child CIs.	**"No data timeout" on page 641**

Rule (Rule #)	Description	Parameters
SiteScope EMS Multiple Events Rule (36)	The rule handles the samples sent to HP Business Availability Center by the EMS system. It aggregates all the samples received from a specified CI. The rule saves up to 10 events. If there are more than 10 events, the rule discards samples with the lowest severity (critical is highest) and then the oldest samples. If the CI has more than one KPI, you must define a SiteScope EMS Multiple Events rule for each KPI by using the rule parameters to specify the sample field you are interested in. Specify information about the field in the sample to look at (in the **KPI Type field name** parameter) and the value of that field (in the **KPI type** parameter). The EMS Clear Events context menu, Clear Events context menu item and EMS Sentence tooltip are used to display the data retrieved from the HP Operations Manager system. For details, see "EMS Show Events" on page 701, "Show Events" on page 761, and "EMS Sentence" on page 835. The Clear Events context menu item is used to clear events in Dashboard.	**"No data timeout" on page 641** **Max tooltip events.** The maximum number of events to show in the tooltip. The maximum is 10. **KPI type field name.** The name of the field in the sample. **KPI type.** The valid value of the field in the sample
SiteScope Measurement Rule (3)	Calculates the status based on metrics for a SiteScope measurement CI for sampleType: **ss_t**, monitored by the SiteScope Monitor. The following statuses correspond to the following values: ➤ Informational (1) ➤ Middle (2) ➤ Critical (3) For details on the sample, see "Sample: SiteScope Measurement (ss_t)" in *Reference Information*.	**"No data timeout" on page 641** **"Number of Problematic Samples" on page 642** **"Total Number of Samples" on page 645**

Rule (Rule #)	Description	Parameters
SiteScope Measurement Siebel Processes Rule (1104)	Calculates the status based on metrics for a SiteScope measurement CI for time sampleType: **ss_t**, monitored by the SiteScope Monitor. The following statuses correspond to the following values: ➤ Informational (1) ➤ Middle (2) ➤ Critical (3) The value displayed corresponds to the number of processes. The color of the value is determined by the thresholds on the number of sessions (which can be 25, 64, and so on). For details on the sample, see "Sample: SiteScope Measurement (ss_t)" in *Reference Information*.	**"No data timeout" on page 641**
SiteScope Measurement Time-Based Rule (33)	Calculates the status based on metrics for a SiteScope measurement CI for time sampleType: **ss_t**, monitored by the SiteScope Monitor. The following statuses correspond to the following values: ➤ Informational (1) ➤ Middle (2) ➤ Critical (3) For details on the sample, see "Sample: SiteScope Measurement (ss_t)" in *Reference Information*.	**"duration" on page 639** **"No data timeout" on page 641**
SiteScope Measurement with Custom Data Rule (1100)	Displays the number of tasks that are in error taken from the SiteScope samples with sub-samples listing all of the tasks.	**"No data timeout" on page 641**

Rule (Rule #)	Description	Parameters
SiteScope Monitor Rule (4)	Calculates the status based on metrics for a SiteScope measurement CI for time sampleType: **ss_monitor_t**, monitored by the SiteScope Monitor. The following statuses correspond to the following values: ➤ Informational (1) ➤ Middle (2) ➤ Critical (3) For details on the sample, see "Sample: SiteScope Monitor (ss_monitor_t)" in *Reference Information*.	**"No data timeout" on page 641** **"Number of Problematic Samples" on page 642** **"Total Number of Samples" on page 645**
SiteScope Monitor Time-Based Rule (34)	Calculates the status based on metrics for a SiteScope measurement CI for time sampleType: **ss_monitor_t**, monitored by the SiteScope Monitor. The following statuses correspond to the following values: ➤ Informational (1) ➤ Middle (2) ➤ Critical (3) For details on the sample, see "Sample: SiteScope Monitor (ss_monitor_t)" in *Reference Information*.	**"duration" on page 639** **"No data timeout" on page 641**
SiteScope Profile Rule (35)	Calculates the status of the SiteScope Availability KPI. SiteScope periodically (every minute) sends an out bit to HP Business Availability Center. If the out bit is received by HP Business Availability Center, the status of the SiteScope Availability KPI is green. If the out bit is not received, the status of the SiteScope Availability KPI is grey (No data). This indicates that there is no communication between SiteScope and HP Business Availability Center. The statuses of all the SiteScope CIs is also grey. **Note:** The SiteScope Availability KPI displays values for the supported versions of SiteScope (9.0 and up) and of HP Business Availability Center (7.0 and up).	**"duration" on page 639** **"No data timeout" on page 641**

Rule (Rule #)	Description	Parameters
SiteScope Vertical Measurement (1102)	Takes samples arriving from the Computer Center Management System (CCMS) monitor through SiteScope and displays them, as is, under SAP KPIs. It also takes samples from Siebel Application Server or Siebel Web Server monitors and displays them as is under Siebel KPIs.	**"No data timeout" on page 641**
SiteScope Vertical Rule (1108)	Takes samples arriving from the Computer Center Management System (CCMS) monitor through SiteScope and displays them as is under the SAP KPI. The status is taken from the SAP Quality field, the message from the SAP Message field, and the value from the SAP d_value field. It also takes samples from Siebel Application Server or Siebel Web Server monitors and displays them as is under Siebel KPIs.	**"No data timeout" on page 641** **"Number of Problematic Samples" on page 642** **"Total Number of Samples" on page 645**
SiteScope WS Operation Percentile Performance Rule (1305)	Calculates the percentile performance of a Web service operation defined as the percentage of calls that did not pass the SiteScope threshold out of available calls. The rule works as follows: 1 Sums the number of available calls into **sumOfAvailableCalls**. The calculation for each sample is: calls_count - error_count 2 Sums the number of calls that did not pass the SiteScope threshold into **sumOfNotOverThresholdCalls**. The calculation for each sample is: calls_count - error_count - over_threshold_server_time 3 The result is calculated as: (sumOfNotOverThresholdCalls x 100) / sumOfAvailableCalls **calls_count**, **error_count**, and **over_threshold_client_time** are sample fields.	**"duration" on page 639** **"No data timeout" on page 641**

Rule (Rule #)	Description	Parameters
SiteScope WS Operation Performance Rule (1304)	Calculates the performance of a Web service operation defined as the average client time (ms) of available calls. The average server time data is obtained from SiteScope samples. The rule works as follows: 1 Sums the number of available calls into **sumOfAvailableCalls**. The calculation for each sample is: calls_count - error_count 2 Sums the number of available calls into **sumOfAvailableCallsTime**. 3 The result is calculated as: sumOfAvailableCallsTime/sumOfAvailableCalls **calls_count**, **error_count**, and **avg_server_time** are sample fields.	**"duration" on page 639** **"No data timeout" on page 641**
Sum of Open Incidents (2601)	Calculates the sum of all the incidents of the children in the group.	No parameters
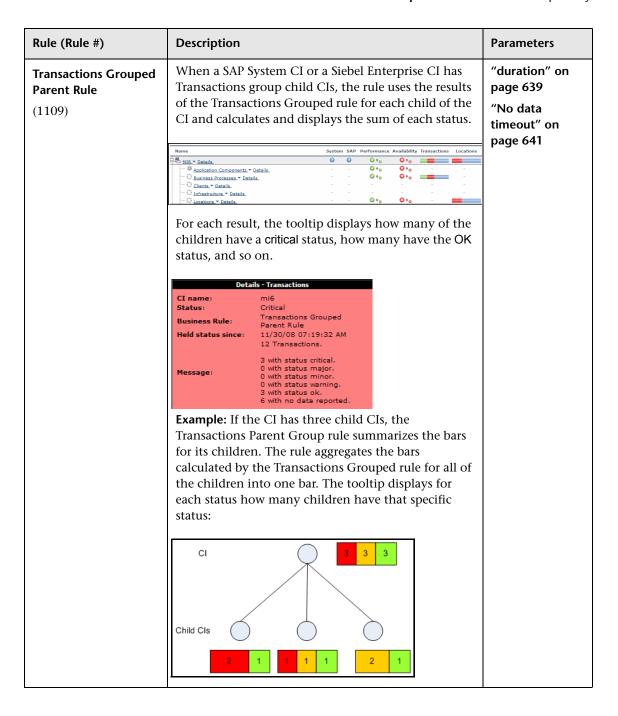
Rule (Rule #)	Description	Parameters
Sum of Values Rule (20)	Calculates the total of the dollar loss (as calculated by Real Time Impact or Over Time Impact) of all of the child CIs of the KPI the rule is attached to. This rule calculates the sum total for all child CIs in the KPI it is attached to. Based on: Sum of the values of the children in the group. If you add the **Impact Over Time** and/or **Real Time Impact** rules to the child CIs of a KPI; at the group level you can use the **Sum of Values** rule to view the sum of the children's values. At the monitor/leaf level, you should attach the Impact Over Time rule to the OT Impact KPI and the Availability KPI to the same CI. The Impact Over Time rule measures the total time the Availability KPI attached to the same CI has the red status, and then calculates the financial loss using the rule parameter: **DollarImpactFactor**. This parameter represents the amount of dollars lost in an hour if the system is unavailable. At the group level, you should attach the Sum of Values rule to the OT impact KPI. The Sum of Values rule calculates the sum of all of the values of the OverTime Impact KPI of its children.	No parameters
Sum of Volume Rule (74)	Group rule that calculates the sum of the users accessing a page or encountering an error on a page.	No parameters
Summary of Values (30)	Calculates the sum of the children's values.	No parameters
Transaction Availability Rule (5)	Calculates how many Business Process Monitor transactions ran successfully during the time period specified by the duration parameter.	**"duration" on page 639** **"No data timeout" on page 641**

Rule (Rule #)	Description	Parameters
Transaction Performance Rule (13)	Calculates the average response time of the Business Process Monitor transactions that ran during the time period specified by the duration parameter.	"duration" on page 639 "No data timeout" on page 641
Transaction Performance Status Average Rule (101)	This rule automatically replaces the Transaction Performance rule attached to a Performance KPI, when Baselining is activated. For details on Baselining, see "Baselines" in *Using End User Management*. The rule compares the response times of the Business Process Monitor transactions that ran during the sampling period specified by the duration parameter, compares them to the baseline threshold to obtain a status, and then calculates the average status weighted by the values specified in **Critical weight**, **Minor weight**, and **OK weight**. If one of those weights is set to **0**, the status is not included in the calculation of the average. If the weight is negative, it is considered to be **1**. By default, the weights are set to **1**. This rule replaces the Transaction Performance Rule assigned to a Performance KPI, when you change the mode to Baselining. **Note:** If you assign this rule to a KPI when Baselining is not in use, the KPI does not display data.	"duration" on page 639 "No data timeout" on page 641 "Critical weight" on page 639 "Minor weight" on page 641 "OK weight" on page 642

627

Rule (Rule #)	Description	Parameters
Transaction Performance Status Percentage Rule (102)	This rule can be attached manually to a Performance KPI when Baselining is activated. For details on Baselining, see "Baselines" in *Using End User Management* The rule compares the response times of the Business Process Monitor transactions that ran during the sampling period specified by the duration parameter, compares them to the baseline threshold to obtain a status, calculates the number of transactions with an **OK** response time relative to the total number of transactions, compares this information with the rule objectives, and returns a status. If GROUPTEXT format is used for the KPI, then the value of the percentage is displayed. For details on GROUPTEXT, see "KPI Details Dialog Box" on page 537. **Note:** If you assign this rule to a KPI when Baselining is not in use, the KPI does not display data.	**"duration" on page 639** **"No data timeout" on page 641**
Transaction Performance Worst Status Rule (100)	This rule can be attached manually to a Performance KPI when Baselining is activated. For details on Baselining, see "Baselines" in *Using End User Management* The rule calculates the worst response time of the Business Process Monitor transactions that ran during the sampling period specified by the duration parameter and compares it to the baseline threshold and returns the resulting status. **Note:** If you assign this rule to a KPI when Baselining is not in use, the KPI does not display data.	**"duration" on page 639** **"No data timeout" on page 641**

Rule (Rule #)	Description	Parameters
Transactions Grouped Parent Rule (1109)	When a SAP System CI or a Siebel Enterprise CI has Transactions group child CIs, the rule uses the results of the Transactions Grouped rule for each child of the CI and calculates and displays the sum of each status. For each result, the tooltip displays how many of the children have a critical status, how many have the OK status, and so on. **Example:** If the CI has three child CIs, the Transactions Parent Group rule summarizes the bars for its children. The rule aggregates the bars calculated by the Transactions Grouped rule for all of the children into one bar. The tooltip displays for each status how many children have that specific status:	"duration" on page 639 "No data timeout" on page 641

Rule (Rule #)	Description	Parameters
Transactions Grouped Rule (1103)	For a Transactions group CI with child CIs, the rule selects the worst of **Performance** and **Availability** for each child CI, calculates the sum of children with each specific status and displays the information in a bar. The tooltip displays for each status the sum of all of the CI's children with that status. **Example:** 	"duration" on page 639 "No data timeout" on page 641

Rule (Rule #)	Description	Parameters
TransactionVision Backlog Rule (In-Process) (1426)	Assigns status to a TV Monitor CI based on the number of backlogged (in-process) transactions in TransactionVision. The number is taken from the last arrived sample. For details on TransactionVision data in Business Availability Center, see "TransactionVision Data" in *Using TransactionVision*. **Note:** To see a status for the KPI, you must define meaningful objectives in the **Admin** > **Dashboard** > **KPIs** tab.	No parameters
TransactionVision Delayed Rate Rule (Completed Transactions) (1411)	Calculates status for a TV Monitor CI based on the percentage of late completed transactions out of the total completed transactions. The values are taken from the last arrived sample from TransactionVision. Transactions are defined as "late" in TransactionVision when their response time exceeded the defined threshold in TransactionVision. For details on TransactionVision data in Business Availability Center, see "TransactionVision Data" in *Using TransactionVision*. **Note:** To see a status for the KPI, you must define meaningful objectives in the **Admin** > **Dashboard** > **KPIs** tab.	No parameters
TransactionVision Delayed Rate Rule (In-Process Transactions) (1421)	Calculates status for a TV Monitor CI based on the percentage of late in-process transactions out of the total in-process transactions. The values are taken from the last arrived sample from TransactionVision. Transactions are defined as "late" in TransactionVision when their response time exceeded the defined threshold in TransactionVision. For details on TransactionVision data in Business Availability Center, see "TransactionVision Data" in *Using TransactionVision*. **Note:** To see a status for the KPI, you must define meaningful objectives in the **Admin** > **Dashboard** > **KPIs** tab.	No parameters

Rule (Rule #)	Description	Parameters
TransactionVision Delayed Value Rule (Completed Transactions) (1412)	Assigns status to a TV Monitor CI based on the monetary value of the late completed transactions. The value is taken from the last arrived sample from TransactionVision. Transactions are defined as "late" in TransactionVision when their response time exceeded the defined threshold in TransactionVision. For details on TransactionVision data in Business Availability Center, see "TransactionVision Data" in *Using TransactionVision*. **Note:** To see a status for the KPI, you must define meaningful objectives in the **Admin** > **Dashboard** > **KPIs** tab.	No parameters
TransactionVision Delayed Value Rule (In-Process Transactions) (1422)	Assigns status to a TV Monitor CI based on the monetary value of the late in-process transactions. The value is taken from the last arrived sample from TransactionVision. Transactions are defined as "late" in TransactionVision when their response time exceeded the defined threshold in TransactionVision. For details on TransactionVision data in Business Availability Center, see "TransactionVision Data" in *Using TransactionVision*. **Note:** To see a status for the KPI, you must define meaningful objectives in the **Admin** > **Dashboard** > **KPIs** tab.	No parameters

Rule (Rule #)	Description	Parameters
TransactionVision Duration Rule (Completed Transactions) (1410)	Calculates status for a TV Monitor CI based on the average response time (in seconds) for successful, completed transactions in TransactionVision. The values for the calculation are taken from the last arrived sample. The objective for **OK** status is taken from the **Duration** threshold set in TransactionVision. Objectives for other statuses must be defined in the **Admin** > **Dashboard** > **KPIs** tab. For details on TransactionVision data in Business Availability Center, see "TransactionVision Data" in *Using TransactionVision*.	No parameters
TransactionVision Exceptions Rate Rule (Completed Transactions) (1414)	Calculates status for a TV Monitor CI based on the percentage of completed transactions marked as exceptions, out of the total completed transactions. The values are taken from the last arrived sample from TransactionVision. Transactions are defined as "exceptions" by TransactionVision when they did not follow the expected flow path on the target machine. For details on TransactionVision data in Business Availability Center, see "TransactionVision Data" in *Using TransactionVision*. **Note:** To see a status for the KPI, you must define meaningful objectives in the **Admin** > **Dashboard** > **KPIs** tab.	No parameters

Rule (Rule #)	Description	Parameters
TransactionVision Exceptions Rate Rule (In-Process Transactions) (1424)	Calculates status for a TV Monitor CI based on the percentage of in-process transactions marked as exceptions, out of the total in-process transactions. The values are taken from the last arrived sample from TransactionVision. Transactions are defined as "exceptions" by TransactionVision when they did not follow the expected flow path on the target machine. For details on TransactionVision data in Business Availability Center, see "TransactionVision Data" in *Using TransactionVision*. **Note:** To see a status for the KPI, you must define meaningful objectives in the **Admin > Dashboard > KPIs** tab.	No parameters
TransactionVision Exceptions Value Rule (Completed Transactions) (1413)	Calculates status for a TV Monitor CI based on the monetary value of completed transactions marked as exceptions. The value is taken from the last arrived sample from TransactionVision. Transactions are defined as "exceptions" by TransactionVision when they did not follow the expected flow path on the target machine. For details on TransactionVision data in Business Availability Center, see "TransactionVision Data" in *Using TransactionVision*. **Note:** To see a status for the KPI, you must define meaningful objectives in the **Admin > Dashboard > KPIs** tab.	No parameters

Rule (Rule #)	Description	Parameters
TransactionVision Exceptions Value Rule (In-Process Transactions) (1423)	Calculates status for a TV Monitor CI based on the monetary value of in-process transactions marked as exceptions. The value is taken from the last arrived sample from TransactionVision. Transactions are defined as "exceptions" by TransactionVision when they did not follow the expected flow path on the target machine. For details on TransactionVision data in Business Availability Center, see "TransactionVision Data" in *Using TransactionVision*. **Note:** To see a status for the KPI, you must define meaningful objectives in the **Admin** > **Dashboard** > **KPIs** tab.	No parameters
TransactionVision Failures Rate Rule (Completed Transactions) (1418)	Calculates status for a TV Monitor CI based on the percentage of failed completed transactions out of the total completed transactions. The values are taken from the last arrived sample from TransactionVision. Transactions are classified as "failed" when they match the attribute or pattern defined as failure in TransactionVision. For details on TransactionVision data in Business Availability Center, see "TransactionVision Data" in *Using TransactionVision*. **Note:** To see a status for the KPI, you must define meaningful objectives in the **Admin** > **Dashboard** > **KPIs** tab.	No parameters

Rule (Rule #)	Description	Parameters
TransactionVision Failures Rate Rule (In-Process Transactions) (1428)	Calculates status for a TV Monitor CI based on the percentage of failed in-process transactions out of the total completed transactions. The values are taken from the last arrived sample from TransactionVision. Transactions are classified as "failed" when they match the attribute or pattern defined as failure in TransactionVision. For details on TransactionVision data in Business Availability Center, see "TransactionVision Data" in *Using TransactionVision*. **Note:** To see a status for the KPI, you must define meaningful objectives in the **Admin** > **Dashboard** > **KPIs** tab.	No parameters
TransactionVision Failures Value Rule (Completed Transactions) (1419)	Assigns status to a TV Monitor CI based on the monetary value of the failed completed transactions. The value is taken from the last arrived sample from TransactionVision. Transactions are classified as "failed" when they match the attribute or pattern defined as failure in TransactionVision. For details on TransactionVision data in Business Availability Center, see "TransactionVision Data" in *Using TransactionVision*. **Note:** To see a status for the KPI, you must define meaningful objectives in the **Admin** > **Dashboard** > **KPIs** tab.	No parameters

Rule (Rule #)	Description	Parameters
TransactionVision Failures Value Rule (In-Process Transactions) (1429)	Assigns status to a TV Monitor CI based on the monetary value of the failed in-process transactions. The value is taken from the last arrived sample from TransactionVision. Transactions are classified as "failed" when they match the attribute or pattern defined as failure in TransactionVision. For details on TransactionVision data in Business Availability Center, see "TransactionVision Data" in *Using TransactionVision*. **Note:** To see a status for the KPI, you must define meaningful objectives in the **Admin** > **Dashboard** > **KPIs** tab.	No parameters
TransactionVision Completed Transaction Value Rule (1415)	Assigns status to a TV Monitor CI based on the monetary value of the completed transactions. The value is taken from the last arrived sample from TransactionVision. For details on TransactionVision data in Business Availability Center, see "TransactionVision Data" in *Using TransactionVision*. **Note:** To see a status for the KPI, you must define meaningful objectives in the **Admin** > **Dashboard** > **KPIs** tab.	No parameters
TransactionVision Value Rule (In-Process Transaction) (1425)	Assigns status to a TV Monitor CI based on the monetary value of the in-process transactions. The value is taken from the last arrived sample from TransactionVision. For details on TransactionVision data in Business Availability Center, see "TransactionVision Data" in *Using TransactionVision*. **Note:** To see a status for the KPI, you must define meaningful objectives in the **Admin** > **Dashboard** > **KPIs** tab.	No parameters

Rule (Rule #)	Description	Parameters
TransactionVision Transaction Volume Rule (1416)	Assigns status to a TV Monitor CI based on the number of completed transactions in TransactionVision. The number is taken from the last arrived sample. For details on TransactionVision data in Business Availability Center, see "TransactionVision Data" in *Using TransactionVision*. **Note:** To see a status for the KPI, you must define meaningful objectives in the **Admin > Dashboard > KPIs** tab.	No parameters
Worst Child Rule (1)	Calculates the status based on the lowest **status** held by any of the child CIs. For example, if at least one child CI in a group has red status, then the parent CI of the group also displays red status.	No parameters
WS Operation Availability Rule (1300)	Calculates the availability of a Web service operation defined as the percentage of available calls out of total calls. The rule works as follows: 1 Sums the **calls_count** field into **sumOfTotalCalls**. 2 Sums the number of available calls into **sumOfAvailableCalls**. The calculation for each sample is: calls_count - error_count 3 The result is calculated as: (sumOfAvailableCalls x 100) / sumOfTotalCalls **calls_count** and **error_count** are sample fields.	**"duration" on page 639** **"No data timeout" on page 641**

🔍 List of Dashboard Business Rule Parameters

The rule parameters are as follows:

Parameter	Description
AtRiskWeight	The weight assigned to **At Risk** instances to provide more importance to a specific status. You can assign any appropriate number with the following specific cases: **1** is the default, **0** causes the status to be ignored in the rule calculation, or a negative number is considered to be 1.
BlockedWeight	The weight assigned to **Blocked** instances to provide more importance to a specific status. You can assign any appropriate number with the following specific cases: **1** is the default, **0** causes the status to be ignored in the rule calculation, or a negative number is considered to be 1.
Critical weight	The weight assigned to the **Critical** status. You can assign any appropriate number with the following specific cases: **1** is the default, **0** causes the status to be ignored in the rule calculation, or a negative number is considered to be 1.
DollarImpactFactor	The financial loss factor per hour. The financial loss factor is used to calculate the financial impact of a CI non-availability.
duration	Dashboard calculates CI status based on the samples received during the duration period (defined in seconds). For example, if a CI has a duration of 5 minutes, status is calculated based on the samples received during the past 5 minutes. **Default:** 15 minutes

Parameter	Description
Factor	The factor used to multiply the result of the operation performed on the two fields, before comparing the result to the objectives.
Field name	The name of the sample field you want to compare to the objectives. The field must have a numeric value.
Final State	The final status of the incident received in the sample. The default is **Closed**.
first_choice_sample	The sample type to be used when calculating data regarding sessions or connections. By default, the following samples are used: rum_eu_t, rum_tcp_eu_t, rum_server_t, and rum_tcp_server_t.
First Field Name	The name of the first field on which to apply the rule. The field must have a numeric value.
Formula	The formula to be used to calculate the value or the status of the KPI to which the Generic Formula rule is attached, for the time period specified in the **duration** parameter.
HealthyWeight	The weight assigned to **Healthy** instances to provide more importance to a specific status. You can assign any appropriate number with the following specific cases: **1** is the default, **0** causes the status to be ignored in the rule calculation, or a negative number is considered to be 1.
Initial State	The initial status of the incident received in the sample. The default is: **Open**.
InitStatus	Defines a different initial status of a group level CI's KPI until samples are received. (The default KPI status for rules that do not include an InitStatus parameter is **No data**.

Parameter	Description
isGroovyRuleType	Internal for API rules; do not modify.
KPI Calculation Script	For API rules, defines the calculateKPI method implementation. Default/Mandatory: (no default)/Yes
logic	Specifies the type of calculation the rule should perform. The valid values can be a subset of: **maximum**, **minimum**, **average**, or **weighted-average**.
Major weight	The weight assigned to the **Major** status. You can assign any appropriate number with the following specific cases: **1** is the default, **0** causes the status to be ignored in the rule calculation, or a negative number is considered to be **1**.
Maximum number of samples	The number of most recent samples to be included in the API Sample Rule calculation.
Minor weight	The weight assigned to the **Minor** status. You can assign any appropriate number with the following specific cases: **1** is the default, **0** causes the status to be ignored in the rule calculation, or a negative number is considered to be **1**.
No data timeout	The timeout period for a KPI. Defines the number of seconds from the time the last sample was received for the KPI, until the KPI is timed out - at which point the KPI changes to **No data**). The default value for this property should be changed with caution. Note that a different default value may actually be used for Business Process Monitor transaction CIs. For details, see "No Data Timeout for Transaction CIs" on page 342.

Parameter	Description
Number of Problematic Samples	The number of samples that have the required status. A specified number of samples (specified in the **Total Number of Samples** parameter) is accumulated. The status of the rule changes to a new status only when, among the accumulated samples, the specified number of samples (specified in the **Number of Problematic Samples** parameter) has the new status. For example, **Total Number of Samples**=5, **Number of Problematic Samples**=3; if three samples in the accumulated samples have a red status, the rule status changes to red.
OK weight	The weight assigned to the **OK** status. You can assign any appropriate number with the following specific cases: **1** is the default, **0** causes the status to be ignored in the rule calculation, or a negative number is considered to be **1**.
Operator	The operator used to calculate the result of the first and second fields. It can be: **+**, **-**, *****, or **/**.
PassedStatus	Status level that is set to serve as the lowest limit above which the instances are considered for the status calculation. **Example:** If **PassedStatus** is defined as 15 (Warning), all instances with status 15 or more (**OK**, or **Warning**) are **PassedStatus** instances. The instances with lower levels (**Minor**, **Major**, or **Warning**) are not taken into consideration in the status calculation.

Parameter	Description
relevant_samples	Provides information about the sample on which the rule's calculations are based. This parameter is used only in RUM Application / End User / Locations Session Statistics Monitor Availability / Performance / Volume rules.
Rule Template Setting Key	Internal for API rules; do not modify.
Sample Fields	For API rules, defines the list of sample fields whose values can be included in the calculation. Default/Mandatory: (no default)/No

Parameter	Description
sample_group_by_fields	Provides information about the sample's field by which the samples are grouped. This parameter is used only in RUM Application / End User / Locations Session Statistics Monitor Availability / Performance / Volume rules. Those rules are based on the last sample received.
	Using sample_group_by_fields, you can combine samples from different aggregation sources.
	When the end user can access more that one application, use grouping by application. The end users are then aggregated by application, and the last sample can be selected.
	When traffic is monitored by more than one Real User Monitor engine, use grouping by engine_id. The end users (IPs) are then aggregated by engine_id, and the last sample can be selected.
	When the end users (IPs) from the same location are monitored and summary for location is needed, all end users (IPs) from the same location should be merged. It is done by grouping by end-users. In case more than one Real User Monitor engine is used for monitoring, grouping can be extended by adding engine_id to grouping parameters. The last sample can then be selected.
Second Field Name	The name of the second field on which to apply the rule. The field must have a numeric value.

Parameter	Description
Severity	The severity of the sample incident that is used in the calculations. The values are: 5 – very low 4 – low 3 – medium 2 – urgent 1 – critical
StatusDimension	Defines the ID of the KPI for which the other rule parameters apply when you want to use KPIs other than Availability.
Time stamp field	The name of the time stamp field in the external source sample, if its name is not **time_stamp**.
Total Number of Samples	The total number of samples. See **Number of Problematic Samples** parameter for more details.
tracking period id	Internal. This parameter must not be modified.
volumeKPI	The KPI number of the Volume KPI (in Real User Monitor). Used to calculate rules in Real User Monitor group rules.
Warning Weight	The weight assigned to the **Warning** status. You can assign any appropriate number with the following specific cases: **1** is the default. **0** causes the status to be ignored in the rule calculation. A negative number is considered to be **1**.

🔖 Business Rules User Interface

This section describes:

➤ Business Rule Repository page on page 646

➤ Global Attributes Dialog Box on page 648

➤ Global Attributes Details Dialog Box on page 652

➤ Parameter Details Dialog Box (Rules) on page 653

➤ Rule Details Dialog Box on page 654

🔖 Business Rule Repository page

Description	Displays the list of factory (predefined) and customized rules. Those rules are available throughout HP Business Availability Center to determine how source data is imported.
	Enables an advanced user to modify existing repository rules and create new ones.
	To Access: Admin > **Dashboard** > **Repositories** > **Business Rules**
Important Information	Cloning or overriding an existing rule, or creating a new rule, adds the corresponding rule entry to the Custom rule list. You can then customize the rule to your organization's specifications. For details, see "Rule Details Dialog Box" on page 654.
	For a list of Dashboard rules and their details, see "List of Dashboard Business Rules" on page 578.
	If you add a rule, a matching tooltip (with the same ID number) is automatically created. For more details, see "Tooltip Repository page" on page 879.
Included in Tasks	"Customize a Business Rule" on page 566

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
	Click to display help on the rule.
	Select a rule in the Custom Rules area, and click the button to open the **Rules Details** dialog box. For details, see "Rule Details Dialog Box" on page 654.
Class Name	The name of the class the rule belongs to. It includes the Java class that implements the rule, with the full path to the root.
Clone	In the Factory Rules or in the Custom Rules areas, select a rule, and click the **Clone** button to create a new rule by cloning. You clone an existing rule to use it as a template. The original rule is still available. **Note:** Change the name of the rule you have cloned to make sure you attach the cloned rule and not the original rule to a specific KPI.
Description	The description of the rule.
Edit Globals	Click to edit the global parameters of the rules. For details, see "Global Attributes Dialog Box" on page 648.
ID	This specifies the ID number used to identify the rule in the source adapter templates. This is the default rule ID.

GUI Element (A-Z)	Description
New Item	Click to create a new rule. For details, see "Customize a Business Rule" on page 566.
Override	In the Factory Rules or in the Custom Rules areas, select a rule, and click the **Override** button to edit an existing rule. You override an existing rule to replace it with a customized rule. The original rule is disabled. The overriding rule and the original rule have the same rule ID. The overriding rule and the original rule have the same rule ID. The rule in the Factory Business Rules area displays the following indication: **Note:** ➤ If you delete a custom rule that overrides a factory rule, the original factory rule is automatically restored. ➤ If you have created a new rule, you must attach it to a KPI. For details, see "Customize a Business Rule" on page 566.

Global Attributes Dialog Box

Description	Lists all rules global parameters.
	To Access: In the Business Rule Repository page, click the **Edit Globals** button.
Important Information	The global attributes for rules are listed in "List of Rule Global Attributes" on page 649.
	To override the global parameters values for individual rules, you must add the relevant parameter to the relevant rule and then modify its value.
Included in Tasks	"Customize a Business Rule" on page 566

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
	Click the button relevant to the attribute to edit existing global attribute details in the Global Attributes Details dialog box.
<Name>	The name of the global attribute. For details on the global attributes, see "List of Rule Global Attributes" on page 649.
<Value>	The value of the global attribute.
New	Click the **New** button to enter new global attribute details in the Global Attribute Details page. For details, see "Global Attributes Details Dialog Box" on page 652.

List of Rule Global Attributes

Display Name	Usual Default Value	Description
saveLastSample	false	Defines whether the last sample is presented in Dashboard when clicking on the status icon. For details, see "Set Up Rules to Display the Last Sample Details" on page 576.
HistoryType	Worst	Defines the type of history calculation to be used when calculating history status. Values can be: **Worst**, **Average**, or **None** (no history status displayed). For details, see "History Calculation" on page 364.
HistorySize	60	Defines a time period (in hours) used when calculating history and trend status. Enter round hours between 1 and 6. For details, see "History Calculation" on page 364.

Display Name	Usual Default Value	Description
saveValuesToPersistency	false	Set **saveValuesToPersistency** to **true** if you want Dashboard to save CIs and KPIs value data to be displayed in the KPI Over Time with Value report. For details, see "KPIs Over Time Report" on page 277.
saveValuesToPersistencyInterval	900	Defines the periodicity (in minutes) with which the value of the KPI is saved to the CMDB (to be used in KPI Over Time with Value reports). For details, see "KPIs Over Time Report" on page 277.
Calculate Trend	false	Defines whether the trend should be calculated (and displayed) or not. For details, see "Trend Calculation" on page 365.

Hidden Parameters

The history and trend statuses use the following hidden parameters. These are parameters with default values that are not visible to the user. However, if necessary, they can be overridden by defining the parameter in the global parameters for the Business Rule Repository. For details on the Trend and History statuses, see "Trend and History" on page 362.

Name	Default Value	Description
TrendRate	0.3	Sets the time rate between the long window (period of time defined by the **HistorySize** parameter) and a short window.

Name	Default Value	Description
CalculationGranularity	20	Sets the time difference, in seconds, between recalculating statuses for a view. This knowledge is shown in **<Data Processing Server root directory> \log\EJBcontainer\TrinityStatistic.log**.
		This determines how many calculations are performed for a CI in a certain period of time. During normal functioning, Dashboard perform the calculation approximately every 20 seconds (~180 calculations/hour) and there is no reason to change the default value.
		If Dashboard have a heavy calculation load, causing the calculations to take more time (for example, calculations may be done on a history size of three hours instead of one hour), Dashboard might automatically adjust the granularity to calculate less often. For example, calculation may take place every minute or more, meaning 60 or less calculations an hour.
		If this calculation rate presents a problem, you can define the **CalculationGranularity** parameter above, to override the automatic granularity rate; however, this modification should be made with great caution, and only by advanced users. Contact HP Software Support for assistance.

🔍 Global Attributes Details Dialog Box

Description	Enables you to edit all rules global parameters.
	You can also modify existing information or enter new information for the global attribute details.
	To Access: In the Global Attributes dialog box, click the **Edit** button ✏️ for the relevant attribute or click **New**.
Important Information	The global attributes for rules are listed in "List of Rule Global Attributes" on page 649.
	To override the global parameters values for individual rules, you must add the relevant parameter to the relevant rule and then modify its value.
Included in Tasks	"Customize a Business Rule" on page 566

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
History Size (approximately)	Enter the time period (in hours) used when calculating history and trend status. The range is 1 to 6 hours.
Key	Enter the global attribute key.
Type	Enter the type of KPI value that is saved to the CMDB. Select **Boolean**, **Number**, or **String**.
Value	Enter the value of the global attribute.

🔍 Parameter Details Dialog Box (Rules)

Description	Enables you to modify existing information or to enter new information about the rule's parameters.
	To Access: In the Rule Details dialog box, in the Rule parameters area, click the **New** button to enter new parameters or click the relevant **Edit** button to modify an existing parameter.
Important Information	For a list of rule parameters and their default values, see each rule description in "List of Dashboard Business Rules" on page 578.
	If the **CalculationGranularity** parameter is not changed when there is a heavy calculation load, this does not cause wrong results, but note that calculations are done on a longer time scale (for example, calculation may be done on a history size of three hours instead of one hour).
Included in Tasks	"Customize a Business Rule" on page 566

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
Default value	Enter the value to be listed as the default value of the parameter in Dashboard. Note that for some of the rules, the default values can be: **sampleBased** or **timeBased** and indicates if the calculation performed by the rule is based on the sample values or is calculated.
Description	Enter or modify the parameter description.
Name	Enter or modify the name of the parameter. The parameter name is used as a key.

GUI Element (A-Z)	Description
Presentation class	Enter the name of the presentation class. For future use.
Type	Enter the type of parameter. Possible values are: **Boolean** (can be 0 or 1), **Integer**, **Long**, **Double** (can be a decimal number), or **String**.

🔖 Rule Details Dialog Box

Description	Enables you to modify existing detailed information for the rule. You can also modify existing information or enter new information about the rule parameters and the Objective parameters. For more details, see "KPI Objectives" on page 343. **To Access:** In the Business Rule Repository page, click **New Item** or click the Edit button 🖉 for the appropriate rule in the Factory or Custom Rules area.
Important Information	For a list of the objective parameters and their details, see "List of Dashboard Business Rule Parameters" on page 639. After you have created a rule you must attach it to a KPI.
Included in Tasks	"Customize a Business Rule" on page 566

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
	In the Rule parameters area, click to modify an existing parameter.
	In the Objective Parameters area, click to modify an existing parameter.
	For details, see "Parameter Details Dialog Box (Rules)" on page 653.
	Click to delete the relevant parameter.
Class Name	Enter the name of the class the rule belongs to. It includes the Java class that implements the rule, with the full path to the root.
Description	Enter the description of the rule.
Display Name	Enter the name of the rule as it is to be displayed in the UI.
New...	In the Rule parameters area, click the **New** button to enter new parameters.
	In the Objective Parameters area, click to enter new objective parameters.
	For details, see "Parameter Details Dialog Box (Rules)" on page 653.
Objective parameters	Default objective values for every rule that uses objectives. For details, see "KPI Objectives" on page 343.
Relevant result type	Select one of the following options: ➤ **Status.** So the rule result is displayed as a status indicator ➤ **Value.** So the rule is displayed as a value For details, see "Persistent Data and Historical Data" on page 366.

GUI Element (A-Z)	Description
Rule parameters	Parameters used by the rule to calculate the resulting value or status. For details, see "List of Dashboard Business Rule Parameters" on page 639.
Rule Type	Select one of the following options: ➤ **Both.** So the rule can be applied both to group and monitor ➤ **Group.** So the rule can be applied to a group ➤ **Monitor.** So the rule can be applied to a monitor For details, see "Monitor Rules and Group Rules" on page 557.
Units	Enter the type of unit applicable to the rule results. For more details on the available units, see "Units of Measurement for Objectives" on page 350.

20

Rules API

This chapter provides information on the Dashboard Rules API.

This chapter includes:

Concepts

Tasks

Reference

🔩 Rules API Overview

This chapter describes how to use the Rules API to create new business rules. Business rules are used to calculate Key Performance Indicators (KPIs). A KPI must have an associated business rule that defines how the KPI is calculated. The default Dashboard rules appear in section "List of Dashboard Business Rules" on page 578.

The recommended way to create new rules is with the Rules API. The Rules API enables you to create rules using the Groovy scripting language. Users of the Rules API should be familiar with Groovy and Java, and with HP Business Availability Center administration and applications.

Important: The Rules API classes are documented in Javadoc format in the *HP BAC Rules API Reference*. These files are located in the following folder: \\<HP Business Availability Center Gateway Server root directory>\AppServer\webapps\site.war\amdocs\eng\doc_lib\Dashboard\ Rules_API\index.html

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This section includes the following topics:

➤ "Dashboard API Rules" on page 658
➤ "Creating API Rules" on page 659
➤ "Tooltips and Log Files" on page 659

Dashboard API Rules

There are three types of Dashboard API rules:

➤ **Group and Sibling Rule**. This rule calculates KPIs based on data received from other KPIs, rather than from original sample data. For details, see "API Group and Sibling Rule" on page 659.

➤ **Sample Rule**. This rule calculates KPIs based on original data taken from sample fields. The number of samples included in the calculation is limited by a maximum number of samples rule parameter. For details, see "API Sample Rule" on page 663.

➤ **Duration-Based Sample Rule**. This rule calculates KPIs based on original data taken from sample fields. A duration parameter defines which samples are included in the calculation. For details, see "API Duration-Based Sample Rule" on page 665.

Creating API Rules

Rules can be created using the Rules API in three ways:

➤ Using the KPIs tab to create a rule for a specific KPI.

➤ Using a text file to create a new rule for multiple KPIs.

➤ Using a clone of an API rule in the Rule Repository to create a new rule.

These methods are described in "Creating Rules with the Rules API" on page 667.

Tooltips and Log Files

To display KPI information in tooltips when working with the Rules API, see "Work with Tooltip Entries" on page 677.

You can write to log files from the Rules API code, as described in "Write to Log Files From the Rules API Code" on page 678.

API Group and Sibling Rule

An API Group and Sibling Rule calculates KPIs based on data received from other KPIs, rather than from original sample data. The received data can come from the KPIs of child CIs, or from another KPI associated with the same CI.

Note: If you are creating a sibling rule, make sure that the KPI is calculated after its sibling KPIs, as defined by the KPI's Calculation Order field. For details, see "KPI Repository page" on page 535.

This section includes the following topics:

Group and Sibling Rule Methods and Fields

The Group and Sibling rule implements the Rules API Interface **GroupAndSiblingCalculator**, using the following guidelines:

➤ In this interface, the only method is **calculateKPI**. The method signature is:

public void calculateKPI(CI ci, KPI kpi)

➤ The **calculateKPI** method includes the parameters **ci** and **kpi**, which represent the current CI, and the KPI whose value the API rule calculates.

➤ The **ci** parameter type is **CI**, and is used as an accessor to KPIs of child CIs or sibling KPIs.

➤ The **kpi** parameter type is **KPI**, and is used to set calculation results.

In the following illustration, the Calculated KPI is calculated based on the sibling or child KPIs, and it is represented by the **kpi** parameter.

The CI to which the Calculated KPI is assigned, is represented by the **ci** parameter, and it is an accessor to the other KPIs.

The Rules API classes are documented in Javadoc format in the *HP BAC Rules API Reference*. These files are located in the following folder:
\\<HP Business Availability Center Gateway Server root directory>\AppServer\webapps\site.war\amdocs\eng\doc_lib\Dashboard\Rules_API\index.html

For detailed examples of Group and Sibling rules, see "Examples - API Group and Sibling Rule" on page 680.

API rules can be defined within the Dashboard KPIs tab or Rule Repository, or using a text file template, as described in "Creating Rules with the Rules API" on page 667.

Defining a Group and Sibling Rule in the KPIs tab or Rule Repository

To define a Group and Sibling rule using the KPIs tab or within the Rule Repository, enter the **calculateKPI** method implementation in the **KPI Calculation Script** area.
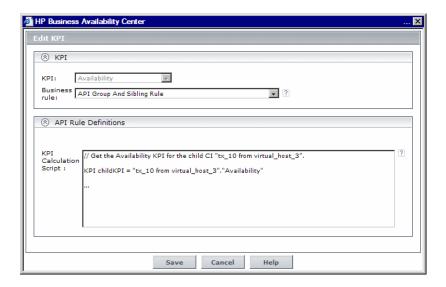
The parameters **ci** and **kpi** of the **calculateKPI** method are available for use in this script.

For detailed instructions, see "Define an API Rule in the KPIs Tab – Workflow" on page 668 or "Define an API Rule in the Rule Repository – Workflow" on page 675.

Accessing a Specific Child KPI in the KPIs Tab

When creating a Group rule for a specific KPI in the KPIs tab, to access a specific child KPI, the API includes a mechanism to simplify the code. When defining your KPI Calculation Script, you can enter the format "**<CI name>**"."**<KPI name>**".

For an example of this, see Example - Specific Child CI Group Rule in "Examples - API Group and Sibling Rule" on page 680.

Defining a Group and Sibling Rule Using a Text File

To define a Group and Sibling rule using a text file, use the **DashboardGroupAndSiblingTemplate.groovy** template as described in "Create a Text File-Based API Rule – Workflow" on page 669.

Within the text file, enter the **calculateKPI** method body.

🔷 API Sample Rule

A Sample rule calculates KPIs based on original data taken from sample fields; the number of samples included in the calculation is limited by a maximum number of samples parameter.

This section includes the following topics:

➤ "Sample Rule Methods and Fields" on page 663

➤ "Defining a Sample Rule in the KPIs tab or Rule Repository" on page 664

➤ "Defining a Sample Rule Using a Text File" on page 665

Sample Rule Methods and Fields

The Sample rule implements the Rules API Interface **LeafCalculator**, using the following guidelines:

➤ In this interface, the only method is **calculateKPI.** The method signature is:

public void calculateKPI(CI ci, KPI kpi, List<Sample> samples)

➤ The **calculateKPI** method includes the parameters **ci, kpi, and samples.** These represent the current CI, the KPI whose value the rule calculates, and the samples to be used in the rule calculation based on the **Maximum number of samples** parameter. (If this parameter value is 1, list one sample in this field.)

➤ The **kpi** parameter type is **KPI**, and is used to set calculation results.

➤ The **samples** parameter is a **List** of **Sample** objects, which hold sample field values.

The Rules API classes are documented in Javadoc format in the *HP BAC Rules API Reference*. These files are located in the following folder: \\\<HP Business Availability Center Gateway Server root directory>\AppServer\webapps\site.war\amdocs\eng\doc_lib\Dashboard\ Rules_API\index.html

➤ The rule must also set the **sampleFields** field to define which sample fields are held by the **Sample** object. These values are the values used by the rule.

For detailed examples of Sample rules, see "Examples - API Sample Rule" on page 688.

API rules can be defined within the Dashboard KPIs tab or the Rule Repository, or using a text file template, as described in "Creating Rules with the Rules API" on page 667.

Defining a Sample Rule in the KPIs tab or Rule Repository

To define a Sample rule using the KPIs tab or within the Rule Repository, fill in the fields as follows:

➤ **Sample Fields**. List the sample fields which are held by the **Sample** object; separate between the sample names with a comma (for example: "u_Istatus", "dResponseTime").

➤ **KPI Calculation Script**. Enter the **calculateKPI** method implementation; do not enter the method signature. The parameters **ci**, **kpi, and samples** of the **calculateKPI** method are available for use in this script.

➤ **Maximum number of samples**. By default only the most recent sample is included (default=1). You can use this field to change this setting.

For detailed instructions, see "Define an API Rule in the KPIs Tab – Workflow" on page 668 or "Define an API Rule in the Rule Repository – Workflow" on page 675.

Defining a Sample Rule Using a Text File

To define a Sample rule using a text file template, use the **DashboardSampleRuleTemplate.groovy** template file as described in "Create a Text File-Based API Rule – Workflow" on page 669.

Within the text file, enter the **calculateKPI** method body, and define the **sampleFields** field.

🍀 API Duration-Based Sample Rule

A Duration-Based Sample rule calculates KPIs based on original data taken from sample fields; the duration rule parameter defines which samples are included in the calculation. For example, if duration is defined as fifteen minutes, all samples collected during the last fifteen minutes are included in the calculation.

This section includes the following topics:

➤ "Duration-Based Sample Rule Methods and Fields" on page 665

➤ "Defining a Duration-Based Sample Rule in the KPIs tab or Rule Repository" on page 666

➤ "Defining a Duration-Based Sample Rule Using a Text File" on page 667

Duration-Based Sample Rule Methods and Fields

The Duration-Based Sample rule implements the Rules API Interface **LeafCalculator**, using the following guidelines:

➤ In this interface, the only method is **calculateKPI**. The method signature is:

public void calculateKPI(CI ci, KPI kpi, List<Sample> samples)

➤ The **calculateKPI** method includes the parameters **ci**, **kpi, and samples.** These represent the current CI, the KPI whose value the rule calculates, and the list of samples to be used in the rule calculation.

  ➤ The **kpi** parameter type is **KPI**, and is used to set calculation results.

  ➤ The **samples** parameter is a **List** of **Sample** objects, which hold sample field values.

665

The Rules API classes are documented in Javadoc format in the *HP BAC Rules API Reference*. These files are located in the following folder:
\\<HP Business Availability Center Gateway Server root directory>\AppServer\webapps\site.war\amdocs\eng\doc_lib\Dashboard\Rules_API\index.html

➤ The rule must also set the **sampleFields** field to define which sample fields are held by the **Sample** object. These values are the values used by the rule.

For detailed examples of this rule, see "Examples - API Sample Rule" on page 688.

API rules can be defined using the Dashboard KPIs tab, using a text file, or within the Rule Repository, as described in "Creating Rules with the Rules API" on page 667.

Defining a Duration-Based Sample Rule in the KPIs tab or Rule Repository

To defining a Duration-Based Sample rule using the KPIs tab or within the Rule Repository, fill in the fields as follows:

➤ **Sample Fields**. List the sample fields which are held by the **Sample** object; separate between the sample names with a comma (for example: **"u_Istatus"**, **"dResponseTime"**).

➤ **KPI Calculation Script**. Enter the method implementation; do not enter the method signature. The parameters **ci, kpi, and samples** of the **calculateKPI** method are available for use in this script.

➤ **No data timeout** and **duration**. (Optional) You can define the timeout period and duration parameters, as described in "List of Dashboard Business Rule Parameters" on page 639.

For detailed instructions, see "Define an API Rule in the KPIs Tab – Workflow" on page 668 or "Define an API Rule in the Rule Repository – Workflow" on page 675.

Defining a Duration-Based Sample Rule Using a Text File

To define a Duration-Based Sample rule using a text file template, use the **DashboardDurationBasedSampleRuleTemplate.groovy** template file as described in "Create a Text File-Based API Rule – Workflow" on page 669.

Within the text file, enter the **calculateKPI** method body, and define the **sampleFields** field.

🍀 Creating Rules with the Rules API

There are a number of ways to create rules using the Rules API:

➤ **Defining a rule for a specific KPI using the Dashboard KPIs tab.** Each Dashboard KPI has three applicable API rules: API Group and Sibling Rule, API Sample Rule, or API Duration-Based Sample Rule. From the KPIs tab, you can assign one of the API rules to a KPI, and enter a calculation script (and other rule details) to define rule logic for that KPI.

You can then edit the rule details in the KPIs tab at any time to change the rule logic for the KPI.

For details, see "Define an API Rule in the KPIs Tab – Workflow" on page 668.

➤ **Creating a rule using a text file**. For each of the three API rules (Group and Sibling Rule, Sample Rule, or Duration-Based Sample Rule) there is a corresponding template file, located in the **<Data Processing server root directory>\BLE\rules\groovy\templates** directory. You can use one of the template files to create a text file defining a new rule. You then add this rule to the Rule Repository, and it can be applied like any out-of-the-box rule.

The API code cannot be seen or changed within Dashboard, but only within the text file. If you make changes to the code within the text file, these changes are applied to all instances where the rule has been assigned, after you reload Dashboard rules.

For details, see "Create a Text File-Based API Rule – Workflow" on page 669.

➤ **Defining a rule within the Rule Repository**. The Rule Repository contains three API rules: API Group and Sibling Rule, API Sample Rule, or API Duration-Based Sample Rule. You can use the Rule Repository to clone an API rule and enter a calculation script (and other rule details) to define the rule logic.

After the rule is applied to a KPI, you can edit rule details within the KPIs tab at any time to change the rule logic for a specific KPI.

For details, see "Define an API Rule in the Rule Repository – Workflow" on page 675.

Define an API Rule in the KPIs Tab – Workflow

Each KPI has three applicable API rules. Within the KPIs tab, assign one of the API rules to a KPI, and enter the calculation script (and other rule details) to define the rule logic for that KPI.

This task includes the following steps:

➤ "Assign an API Rule to a KPI" on page 668
➤ "Define the KPI's Rule Logic" on page 669

1 Assign an API Rule to a KPI

To assign an API rule for a specific KPI assigned to a CI, select **Admin** > **Dashboard** > **KPIs**. Select **New KPI** to assign a new KPI to the CI, or **Edit KPI** to modify an existing KPI. For details on this process, see "Attach KPIs to CIs and Configure the KPIs" on page 374.
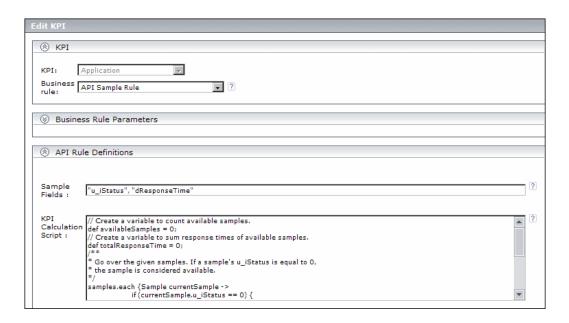
From the list of applicable business rules, select one of the API rules: API Group and Sibling Rule, API Sample Rule, or API Duration-Based Sample Rule. For a description of the rule types see "Rules API Overview" on page 658.

2 Define the KPI's Rule Logic

Depending on the type of rule you are creating, define the rule methods and fields as described in:

➤ "API Group and Sibling Rule" on page 659

➤ "API Sample Rule" on page 663

➤ "API Duration-Based Sample Rule" on page 665

The following screen illustrates an API Sample rule.

🔨 Create a Text File-Based API Rule – Workflow

There are three rule template files corresponding to the three API rules; each template implements the rule's interface.

Create a text file defining a new rule using one of the templates, and then add the new rule to the Business Rule Repository. The rule can then be applied like any out-of-the-box rule.

The API code cannot be seen or changed within Dashboard, but only within the text file. If you make changes to the code within the text file, these changes are applied to all instances where the rule has been assigned, after you reload Dashboard rules.

This task includes the following steps:

➤ "Create a Text File for a Rule" on page 670

➤ "Add a Rule in the Rule Repository" on page 670

➤ "Add the Rule to the KPI's Applicable Rules List" on page 673

➤ "Add Tooltip Parameters to the New Tooltip" on page 674

➤ "Reload Rules After Editing the Text File" on page 674

1 Create a Text File for a Rule

Based on the type of rule you want to create, copy and rename one of the template files located in the **<Data Processing server root directory>\BLE\rules\groovy\templates** directory.

Within your copy of the template, define the rule methods and fields as described in:

➤ "API Group and Sibling Rule" on page 659

➤ "API Sample Rule" on page 663

➤ "API Duration-Based Sample Rule" on page 665

Save the file to the **<Data Processing server root directory>\BLE\rules\groovy\rules** directory.

You must now add a rule in the Rule Repository that uses the rule logic in the text file.

2 Add a Rule in the Rule Repository

Select **Admin> Dashboard > Repositories > Business Rules > New Item** and add a new rule. For details on adding rules, see "Customize a Business Rule" on page 566.

a In the **Display Name** field, type the name of the rule you want to create (mandatory).

b In the **Class Name** field, type **groovy:** <file name>. Note that the file name must be identical (case sensitive) to the file name in the **<Data Processing server root directory>\BLE\rules\groovy\rules** directory.

c In the **Rule type** field, select **Group** to define a Group and Sibling rule. Select **Monitor** for other rules.

d Create Rule parameters depending on your API rule type, as follows:

  ➤ In the **Rule parameters** area, click **New**.

  ➤ For API Sample rules:

    In the **Name** field type **Maximum number of samples**. In the **Type** field, select **Integer**. In the **Default Value** field, type **1**.

    Click **OK** to Save.

  ➤ For API Duration-Based Sample rules:

    In the **Name** field type **duration**. In the **Type** field, select **Long**. In the **Default Value** field, type **990**.

    Click **OK** to Save.

    Repeat these steps to add the **No Data Timeout** rule parameter (Type: Long; Default Value = 990).
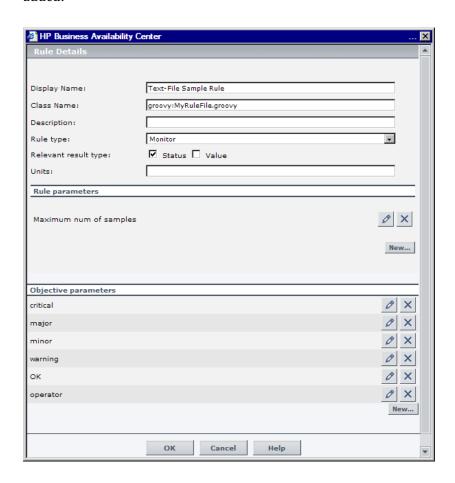
e Create Objective parameters: critical, major, minor, warning, informational, and operator. (Skip this step if you are defining a Group and Sibling rule that does not have Objectives, where status is calculated by the rule code.)

  ➤ In the **Objective parameters** area, click **New**.

  ➤ In the **Name** field, type **critical**. In the **Type** field, select **Float**.

  ➤ Click **OK** to save.

  Repeat the above steps for each of the other Objective parameters (major, minor, warning, informational, and operator).
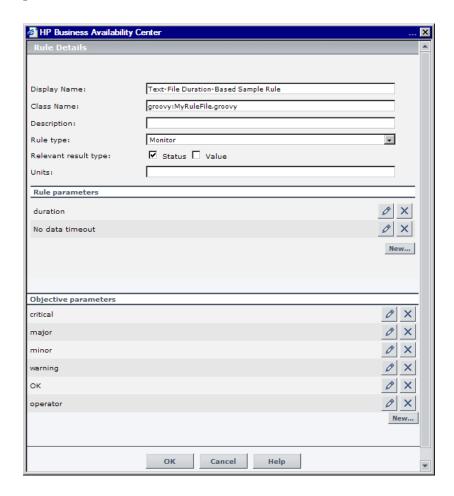
  ➤ When defining the **operator** parameter, select **String** in the **Type** field.

The following image shows a Sample rule after the rule parameter has been added:

The following image shows a Duration-Based Sample rule after the rule parameters have been added:

3 Add the Rule to the KPI's Applicable Rules List

Add the new rule to the list of applicable rules already attached to the relevant KPI. For details, see the Applicable Rules GUI parameter in "KPI Details Dialog Box" on page 537.

4 Add Tooltip Parameters to the New Tooltip
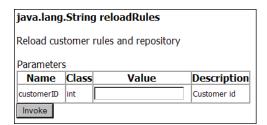
When a rule is created using this procedure, a corresponding tooltip is created in the Tooltip Repository, with no tooltip parameters.

For instructions on adding tooltip parameters to the new tooltip, see "Work with Tooltip Entries" on page 677.

5 Reload Rules After Editing the Text File

If you make changes to the text file at any time after the rule is created, perform the following steps to apply the changes.

a In the browser, enter, using JMX login credentials:

http://<HP Business Availability Center Data Processing server name>:29909

b Click **service=BLE Online Server** listed under **Topaz**.

c In the page that opens, go to the section **java.lang.String reloadRules** for customer rules and repository. Enter the customer ID and click **Invoke**.

java.lang.String reloadRules

Reload customer rules and repository

Parameters

Name	Class	Value	Description
customerID	int		Customer id

Invoke

🔨 Define an API Rule in the Rule Repository – Workflow

Within the Business Rule Repository, create an API rule that can be applied to multiple KPIs. This is done by cloning one of the three API rules, and setting default rule values for specific rule parameters. After the rule is applied to a KPI, you can edit its script within the KPIs tab at any time to change the rule logic for the specific KPI.

This task includes the following steps:

➤ "Clone an API Rule" on page 675

➤ "Edit Rule Details" on page 675

➤ "Add the Rule to the KPI's Applicable Rules List" on page 677

1 Clone an API Rule

Select **Admin> Dashboard > Repositories > Business Rules**. In the Business Rule Repository page, clone one of the following rules: API Group and Sibling Rule, API Sample Rule, or API Duration-Based Sample Rule.
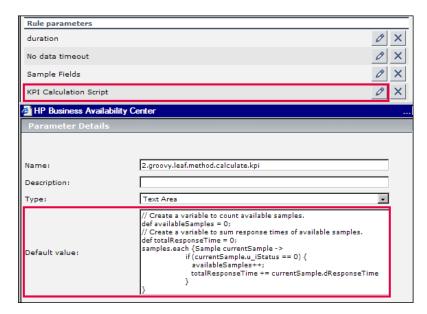
For details on cloning a rule, see "Customize a Business Rule" on page 566.

2 Edit Rule Details

a Click the **Edit** button corresponding to the custom rule.

b In the **Display Name** field, rename the cloned rule.

c Edit the **KPI Calculation Script** rule parameter. In the **Default Value** field, enter the rule calculation script. The code that you enter is the default code for this rule, and appears in the KPIs tab for all KPIs assigned this rule. (Do not change any other fields.)

d If you are creating a Sample rule or Duration-Based Sample rule, edit the **Sample Fields** rule parameter. The sample fields that you enter are the default sample fields for this rule, and appear in the KPIs tab for all KPIs assigned this rule. (Do not change any other fields.)

For details on these rule parameters, see the following sections (depending on the type of rule you are creating):

➤ "API Group and Sibling Rule" on page 659

➤ "API Sample Rule" on page 663

➤ "API Duration-Based Sample Rule" on page 665

The Rules API classes are documented in Javadoc format in the following location *HP BAC Rules API Reference*. These files are located in the following folder:

\\<HP Business Availability Center Gateway Server root directory>\AppServer\webapps\site.war\amdocs\eng\doc_lib\Dashboard\ Rules_API\index.html

3 Add the Rule to the KPI's Applicable Rules List

Add the new rule to the list of applicable rules already attached to the relevant KPI. For details, see the Applicable Rules GUI parameter in "KPI Details Dialog Box" on page 537.

⚒ Work with Tooltip Entries

The following section describes how to work with tooltip entries in order to display information calculated by the Rules API.
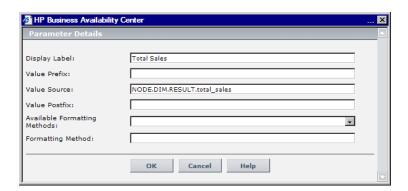
1 Select **Admin> Dashboard** > **Repositories** > **Tooltips**. In the Tooltip Repository page, add any required tooltip entries for the new rule. The following table lists common tooltip entries and their corresponding value sources and formatting methods:

Tooltip Parameter	Value Source	Formatting Method
Business Rule	NODE.DIM.RULE.ID_CUST	ruleIDtoString
CI name	NODE.PROPS.BamNodeNameKey	toLowerCase
Held status since	NODE.DIM.RESULT.LastStatusChange	returnDateAsString
Status	NODE.DIM.RESULT.Status	getStatusString
Value	NODE.DIM.RESULT.Value	returnNumOfDigitAfterPoint

For details, see "Customize a Tooltip" on page 814.

2 If you have used the **kpi.setTooltip** method, you must set a corresponding tooltip entry in the Tooltip Repository as described above. In the **Value Source** field, type the name of the tooltip entry exactly as used in the code, and leave the **Formatting Method** field empty.

For example, if your code contains the method invocation
kpi.setTooltip("total_sales", value), type **NODE.DIM.RESULT.total_sales** in
the **Value Source** field.

✌ Write to Log Files From the Rules API Code

Within your API rules, you can write to log files from rule methods using a
logger object. There are five log levels: debug, info, warn, error and fatal.
Each of these uses a specific logger method.

By default, only log method invocations of error and fatal severity are
written to the log files. You can modify this within the log configuration
files.

To write to log files using the Rules API:

1 Within the rule method, implement one of the following methods (listed in
ascending order of severity):

➤ **logger.debug("<API rule name> : log message");**

➤ **logger.info("<API rule name> : log message");**

➤ **logger.warn("<API rule name> : log message");**

➤ **logger.error("<API rule name> : log message");**

➤ **logger.fatal("<API rule name> : log message");**

Type the name of your API rule inside the log message to identify each log
message with its source rule.

2 The Rules API log files are found in the **<Data Processing server root directory>\log\mercury_online_engine\RulesAPI** directory.

Open one of the following files to view the log messages (depending on your rule type):

➤ **groupAndSiblingRule.log** (for API Group and Sibling rules)

➤ **sampleRule.log** (for API Sample rules)

➤ **durationBasedSampleRule.log** (for API Duration-Based sample rules)

To modify the severity level written to a log file:

1 By default, only log method invocations of error and fatal severity are written to log files. To modify this setting, open the log configuration file located in **<Data Processing server root directory>\conf\ core\Tools\log4j\mercury_online_engine\dashboard_rules.properties**.

2 In the line corresponding with your rule type, replace the string **${loglevel}** with the severity level you want logged (either DEBUG, INFO, WARN, ERROR, or FATAL). Edit the following line, depending on your rule type:

➤ Group and Sibling rules:
log4j.category.com.mercury.am.rules.dashboard.blDashboardRules. simplifiedRule.groupAndSiblingRule.DashboardGroupAndSiblingRule = **${loglevel}**, bam.app.rules.api.group.appender

➤ Sample rules:
log4j.category.com.mercury.am.rules.dashboard.blDashboardRules. simplifiedRule.leaf.DashboardSimplifiedSampleBasedRule = **${loglevel}**, bam.app.rules.api.leafsample.appender

➤ Duration-Based Sample rules:
log4j.category.com.mercury.am.rules.dashboard.blDashboardRules. simplifiedRule.leaf.DashboardSimplifiedTimeBasedRule = **${loglevel}**, bam.app.rules.api.leafduration.appender

🔍 **Examples - API Group and Sibling Rule**

This section provides examples of API Group and Sibling Rules. The following examples are described:

🔖 Example - Worst Child Rule

The following rule finds the worst status from all of the KPIs of the calculated CI's child CIs, which are of the same type as the calculated KPI, based on active statuses only. Active statuses are CRITICAL, MAJOR, MINOR, WARNING, and OK.

```
public void calculateKPI(CI ci, KPI kpi) {

// Get the calculated KPI's type ID (as defined in the Dashboard KPI Repository).
int kpiId = kpi.getType();
// Get a list of all of the KPIs of the calculated CI's child CIs, which are of the same
// type as the calculated KPI.
List<KPI> childKpiList = ci.getChildrenKPIsByID(kpiId);
// Create a variable to set the status of the calculated KPI,
// only if an active status is found.
boolean isActiveStatusFound = false;
// Set the current worst status to OK; if a worse status is found this will be updated.
Status worstStatus = Status.OK;
// Go over the list of child KPIs.
childKpiList.each{KPI childKPI->
    // Get the child KPI's status.
    Status childKpiStatus = childKPI.status;
    // Check if the child KPI's status is an active status.
    if(childKpiStatus.isActive()){
        // Mark that an active status was found.
        isActiveStatusFound = true;
        // Check if the child KPI's status is worse than the current worst status.
        if(childKpiStatus.isWorse(worstStatus)){
            // Update the worst status.
            worstStatus = childKpiStatus;
        }
    }
}
// Check if an active status was found in the child KPI.
if(isActiveStatusFound){
    // Set the calculated KPI status.
    kpi.setStatus(worstStatus);
}

}
```

🔍 Example - Worst Sibling Status Rule

The following rule finds the worst status from sibling KPIs, based on active statuses only. Active statuses are CRITICAL, MAJOR, MINOR, WARNING, and OK.

```
public void calculateKPI(CI ci, KPI kpi) {

// Get a list of all the KPIs for the CI.
List<KPI> ciKpiList = ci.getAllKPIs();
/**
 * Create a variable to set the status of the calculated KPI,
 * only if an active status is found.
 */
boolean isActiveStatusFound = false;
// Set the current worst status to OK; if a worse status is found this will be updated.
Status worstStatus = Status.OK;
// Go over the list of the CI's KPIs.
ciKpiList.each {KPI ciKPI ->
    /**
     * Check that the CI's KPI is not the calculated KPI.
     * This is needed because getAllKPIs method returns all the KPIs for the CI.
     */
    if (ciKPI !=  kpi) {
        /**
         * The ciKPI represents a sibling KPI of the calculated KPI.
         * Get the sibling KPI's status.
         */
        Status siblingKpiStatus = ciKPI.status;
        // Update worstStatus if necessary.
        if (siblingKpiStatus.isActive()) {
            isActiveStatusFound = true;
            if (siblingKpiStatus.isWorse(worstStatus)) {
                worstStatus = siblingKpiStatus;
            }
        }
    }
}
// Check if an active status was found in the sibling KPI.
if (isActiveStatusFound) {
    // Set the calculated KPI's status.
    kpi.setStatus(worstStatus);
}
}
```

🔍 Example - Specific Child CI Group Rule

The following rule calculates KPI status based on the Availability KPI of a specific child CI (CMDB ID = "96c2df2b544683c7f79bb382d1d7b3a9").

If the child CI's Availability KPI value is 100, the calculated KPI's status is set to OK. All other values set the KPI's status to CRITICAL.

Status is set only if the child CI exists, has the Availability KPI, and its Availability KPI has value.

```
public void calculateKPI(CI ci, KPI kpi) {

/**
 * Get the Availability KPI for the child CI "tx_10 from virtual_host_3".
 * The CMDB ID of "tx_10 from virtual_host_3" is
"96c2df2b544683c7f79bb382d1d7b3a9".
 *
 * Note: Within the UI, the following line can be written as
 * KPI childKPI = "tx_10 from virtual_host_3"."Availability"
 */
KPI childKPI = ci.getChildKpiByChildId(KpiType.Availability,
"96c2df2b544683c7f79bb382d1d7b3a9");

// Check if childKPI is not null. It is null if no child CI with this CMDB ID exists, or if this
CI does not have the Availability KPI.
if (childKPI != null) {

    // Check if the child KPI has a value.
    if (childKPI.valueExist) {
        if (childKPI.value == 100.0) {
            kpi.status = Status.OK
    }
    else {
            kpi.status = Status.CRITICAL
        }
    }
}
}
```

🔍 **Example - Sibling Rule Based on Availability and Performance KPIs**

The following rule calculates KPI status based on the status of sibling Availability and Performance KPIs.

If these KPIs do not exist or do not have active status, no status is set.

If these sibling KPIs exist and are both OK, the calculated KPI status is set to OK. Otherwise, its status is set to CRITICAL. (Active statuses are CRITICAL, MAJOR, MINOR, WARNING, and OK.)

```
public void calculateKPI(CI ci, KPI kpi) {

/**
 * Get the sibling KPI of type Availability.
 * If Availability KPI does not exist, null will be returned.
 */
KPI availabilityKPI = ci.getKPI(KpiType.Availability);
// Get the sibling KPI of type Performance.
KPI performanceKPI = ci.getKPI(KpiType.Performance);

if (availabilityKPI != null && performanceKPI != null) {
     // Both KPIs exist for this CI. Check if the KPIs status is active.
     if (availabilityKPI.status.isActive() && performanceKPI.status.isActive()) {
          // Check the KPI's status.
          if (availabilityKPI.status == Status.OK &&
               performanceKPI.status == Status.OK) {
               /**
                * Both statuses are active and both are OK. Set this KPI's status to OK.
                */
               kpi.status = Status.OK
          }
          else {
               /**
                * Both statuses are active, and not both are OK.
                * Set this KPI's status to CRITICAL
                */
               kpi.status = Status.CRITICAL
          }
     }
  }
}
```

🔖 **Example - Group Average Value by CI Type**

The following rule calculates the average status of the KPIs of child CIs, which are of the same CI type as the calculated KPI.

Only child CIs of type "bpm_tx_from_location" are used in the calculation. If there are no child CIs of this type, or no child CI KPIs have value, no value is set for the KPI.

```
public void calculateKPI(CI ci, KPI kpi) {

// Get the calculated KPI's type ID (as defined in the Dashboard KPI Repository).
int kpiId = kpi.getType();
// Get a list of the KPIs of the child CIs, which are of the same CI type as the calculated
// KPI, whose CI type is  "bpm_tx_from_location".
List<KPI> bpmTxFromLocationChildKpiList = ci.getChildrenKPIsByIDAndCiType(kpiId,
"bpm_tx_from_location")

// Create a variable to sum the total values from child KPIs.
// If no child exists or no child has value the variable will remain null.
Double totalChildValue = null;
// Write information to the log file.
logger.debug("DashboardGroupAvgValueByCiTypeRule : number of child CIs with type
bpm_tx_from_location: " + bpmTxFromLocationChildKpiList.size())
// Go over the list of child KPIs.
bpmTxFromLocationChildKpiList.each {KPI childKPI ->
      // Sum values of the child KPIs using the Utils class, which handles null values.
      totalChildValue = Utils.sum(totalChildValue, childKPI.value);
}
// Set the calculated KPI's value to the average value, using the Utils class.
// If totalChildValue is null, null value will be set.
kpi.value = Utils.divide(totalChildValue, bpmTxFromLocationChildKpiList.size());
}
```

🔍 Example - Using Groovy Closure

The following rule sets the calculated KPI's status to Critical, if at least one Availability KPI with Major status exists for the calculated CI`s child CIs.

This rule illustrates Groovy Closure. Refer to http://groovy.codehaus.org/Closures for more information.

```
public void calculateKPI(CI ci, KPI kpi) {

/**
 * Use Groovy Closure with the CI class getChildrenKPIs method,
 * to get List of KPIs from the CI`s child CIs, where
 * 1. KPI type is Availability
 * 2. Status is MAJOR

 Closure description:

 { KPI childKPI ->
      childKPI.type == KpiType.Availability.getID("DASHBOARD") && childKPI.status ==
Status.MAJOR
  }

 The Closure defines one parameter named childKPI of type KPI.

 Each KPI from the CI`s child CIs will be passed to the Closure by the getChildrenKPIs
method.

 The Closure body returns a boolean value based on the logical expression result.
 Each KPI that the Closure body will return true for, will be part of the returned List

 The expression KpiType.Availability.getID("DASHBOARD") returns an int representing
the Availability KPI ID from the Dashboard KPI Repository.
 */
```

```
 List<KPI> kpiList = ci.getChildrenKPIs {KPI childKPI ->
      childKPI.type == KpiType.Availability.getID("DASHBOARD") && childKPI.status ==
Status.MAJOR
 }
 // Check if such a KPI exists.
 if (kpiList.isEmpty()) {
      // No such KPI exists.
      // Write to a log file at debug level.
      logger.debug "Closure Rule: no Availability KPI with  MAJOR status exist"
 }
 else {
      //  At least one Availability KPI with MAJOR status exists.
      logger.debug("Closure Rule: At least one Availability KPI  with  MAJOR status
exist")
      // Set calculated KPI status to CRITICAL.
      kpi.status = Status.CRITICAL;
 }
 }
```

Examples - API Sample Rule

This section provides examples of API Sample Rules. The following examples are described:

➤ "Example - Average Availability Rule" on page 688

➤ "Example - Average Performance Rule" on page 689

➤ "Example - Average Performance Rule Using a Rule Parameter Filter" on page 690

Example - Average Availability Rule

The following rule calculates average availability of samples, based on the u_iStatus sample field.

The rule logic is (available samples / total samples) * 100.

```
// This rule uses the u_iStatus sample field.
def sampleFields = ["u_iStatus"];

public void calculateKPI(CI ci, KPI kpi, List<Sample> samples) {
 // Keep total number of samples for this calculation cycle.
 def totalSamples = samples.size();
 // Create a variable to count available samples.
 def availableSamples = 0;
 /**
 * Go over the given samples. If a sample's u_iStatus is equal to 0,
 * the sample is considered available.
 */
 samples.each {Sample currentSample->
 if (currentSample.u_iStatus == 0) {
     // Increase the count of available samples.
     availableSamples++;
     }
 }
 if (totalSamples > 0) {
     // Set KPI value, converted to percentage.
 kpi.setValue ((availableSamples/totalSamples)*100.0);
 }
 }
```

🔍 Example - Average Performance Rule

The following rule calculates average performance in seconds, based on the dResponseTime and u_iStatus sample fields.

Only samples with a u_iStatus value of 0 (available samples) are used in the calculation. The rule logic is: sum(dResponseTime) / available samples.

```
// This rule uses the u_iStatus and dResponseTime sample field.
def sampleFields = ["u_iStatus", "dResponseTime"];

public void calculateKPI(CI ci, KPI kpi, List<Sample> samples) {

// Create a variable to count available samples.
def availableSamples = 0;
// Create a variable to sum response times of available samples.
def totalResponseTime = 0;
/**
 * Go over the given samples. If a sample's u_iStatus is equal to 0,
 * the sample is considered available.
 */
samples.each {Sample currentSample ->
    if (currentSample.u_iStatus == 0) {
        // Increase the count of available samples.
        availableSamples++;
        // Add the current sample's dResponseTime value to totalResponseTime.
        totalResponseTime += currentSample.dResponseTime
    }
}
if (availableSamples > 0) {
    // Set KPI value, converted to percentage.
    kpi.setValue((totalResponseTime / availableSamples))
}
}
```

✏ **Example - Average Performance Rule Using a Rule Parameter Filter**

The following rule calculates average performance in seconds, based on the dResponseTime and u_iStatus sample fields.

Only samples with a u_iStatus value of 0 (available samples) are used in the calculation.

The rule uses an optional rule parameter: Response time limit. If this rule parameter value has been set in the Dashboard Admin, samples with a dResponseTime value greater then the rule parameter value are not used in the calculation.

Note: A rule parameter with the same name must be set for the rule in the Rule Repository. For details, see "Parameter Details Dialog Box (Rules)" on page 653.

The rule logic is: sum(dResponseTime) / available samples.

```
/ This rule use the u_iStatus and dResponseTime sample fields.
def sampleFields = ["u_iStatus", "dResponseTime"];

public void calculateKPI(CI ci, KPI kpi, List<Sample> samples) {

 // Create a variable to count available samples.
 def availableSamples = 0;
 // Create a variable to sum response times of available samples.
 def totalResponseTime = 0;
 /**
  * Get the value of the rule parameter named "Response time limit"
  * from the KPI, as defined for the KPI in Dashboard Admin.
  * This rule parameter is optional, so responseTimeLimit can be null.
  */
 Long responseTimeLimit = kpi.getRuleParameter("Response time limit")
```

```
/**
 * Go over the given samples. If a sample's u_iStatus is equal to 0,
 * the sample is considered available.
 */
samples.each {Sample currentSample ->
    if (currentSample.u_iStatus == 0) {
        /**
         * Check the value of the rule parameter.
         * If it is not null (meaning the user has set a value),
         * and the sample's dResponseTime is greater than the
         * rule parameter value, the value is not valid.
         */
        boolean isSampleValid = true;
        if (responseTimeLimit != null) {
            // Check if ResponseTime exceeds the rule parameter value.
            if (currentSample.dResponseTime > responseTimeLimit) {
                // The sample is not valid.
                isSampleValid = false;
            }
        }
        if (isSampleValid) {
            // Increase the count of available samples.
            availableSamples++;
            // Add the sample's dResponseTime value to totalResponseTime.
            totalResponseTime += currentSample.dResponseTime
        }
    }
}
if (availableSamples > 0) {
    // Set KPI value, converted to percentage.
    kpi.setValue((totalResponseTime / availableSamples))
}
}
```

21

Context Menu Repository

This chapter provides information on the Dashboard Context Menu Repository.

This chapter includes:

Concepts

➤ Context Menu Repository Overview on page 693

Tasks

➤ Customize a Context Menu on page 695

Reference

➤ List of Context Menus on page 697

➤ Context Menus User Interface on page 712
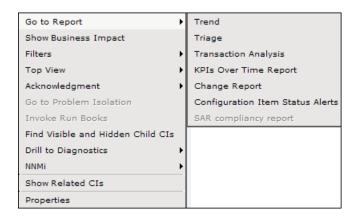
Context Menu Repository Overview

The Context Menu Repository page displays the list of factory (predefined) context menus available throughout Dashboard to determine appearance and functionality for the CIs in the presentation layer.

A context menu defines the menu options that are available in the menu for a KPI or a CI in the Dashboard application. The adapter template assigns every configuration item type (CIT), a default context menu.

The actions required by each menu option are defined in "Context Menu Item Repository page" on page 806.

For example, in the Console tab of the Dashboard application, the menu: **Go to Report** > **Trend** is displayed:

Go to Report	▶	Trend
Show Business Impact		Triage
Filters	▶	Transaction Analysis
Top View	▶	KPIs Over Time Report
Acknowledgment	▶	Change Report
Go to Problem Isolation		Configuration Item Status Alerts
Invoke Run Books		SAR compliancy report
Find Visible and Hidden Child CIs		
Drill to Diagnostics	▶	
NNMi	▶	
Show Related CIs		
Properties		

For details about the menu options, see "Customize Dashboard Display and Refresh Rate" on page 69.

For details about creating or editing context menus, see "Context Menu Repository page" on page 712.

Note: If you are using HP Operations Manager *i* with Business Availability Center, then the Context Menu Repository page contains OMi-related context menus. For more information, see *Using HP Operations Manager i*.

Advanced Users

You can modify existing repository objects and create new ones. This may be necessary when you want to customize the way information is presented in Dashboard, to fit the needs of your organization; or you may need to create new objects when integrating data from a new external system into Dashboard.

⚓ Customize a Context Menu

You customize a context menu by creating a new context menu, or by editing an existing context menu.

For a detailed scenario that includes adding context menu items to a context menu, see "Create a Dynamic URL – Scenario" on page 493 and view the appropriate steps.

This task includes the following steps:

➤ "Create a Customized Context Menu" on page 695

➤ "Edit Context Menu Details" on page 696

➤ "Specify the Menu Entity Details" on page 696

➤ "Set a Context Menu and its Parameters Back to Default" on page 696

1 Create a Customized Context Menu

There are three ways to customize repository elements:

➤ **New Item.** Creates a new repository element that is not based on an existing element. You customize the new element to fit your needs. To create a new context menu, click **New Item** in the Context Menu Repository page.

➤ **Clone**. Creates a new repository element by cloning an existing factory or custom element. The original element is still available, and the new cloned element can be modified. To clone a context menu, select a factory context menu and click **Clone** in the Context Menu Repository page.

➤ **Override**. Overrides an existing factory element. The original element is labeled overridden (disabled) in the Factory area, and an editable copy appears in the Custom area. To override a context menu, select a factory context menu and click **Override** in the Context Menu Repository page.

For details, see "Context Menu Repository page" on page 712.

2 **Edit Context Menu Details**

In the **Context Menu Details** page, you can either modify information or enter new information for the context menu.

You can also modify existing information or add new information about the context menu entity. For details on the possible values, see "Context Menu Details Dialog Box" on page 714.

3 **Specify the Menu Entity Details**

In the **Menu Entity Details** page, you can either modify existing information or enter new information about the menu entity. For details, see "Menu Entity Details Dialog Box" on page 715.

4 **Set a Context Menu and its Parameters Back to Default**

If you have modified a context menu or its parameters, you might need to return the context menu and its parameters to their defaults.

To set a context menu and its parameters back to default, select **Admin > Dashboard** > **Repositories** > **Context Menus**. In the **Custom Context Menus** area, delete the copy of the context menu you want to return to default and click **OK**. The context menu and its parameters are returned to their defaults.

🔍 List of Context Menus

This section provides descriptions of the context menus available in the Context Menu Repository, and their default context menu items.

Several context menus with the same name might be listed in the Context Menu Repository and might have different parameters.

For details about configuring the context menus, see "Context Menus User Interface" on page 712.

Context Menu	Description	Context Menu Items
BMC Measurement Menu	Context menu for measurement CIs originating from a BMC PATROL system.	"Go To Report" on page 740 "Filters" on page 738 "Show Path to Root" on page 763 "Show Problematic Subtree" on page 763 "Acknowledgement" on page 721 "Go To Problem Isolation" on page 739 "Find Visible and Hidden Child CIs" on page 738
BPM Group Menu with Layers View	Context menu for group CIs.	"Go To Report" on page 740 "Filters" on page 738 "Top View" on page 774 "Acknowledgement" on page 721 "Go To Problem Isolation" on page 739 "Find Visible and Hidden Child CIs" on page 738 "Drill to Diagnostics" on page 727
Business Process Insight Flow Map Menu	Context menu available on Business Process Step nodes in the BPI flow map.	"Show Business Process Step Summary" on page 760"Show Top View" on page 766 "Go to Console" on page 739

Context Menu	Description	Context Menu Items
Business Process Insight Menu	Context menu for Business Process CIs and BPI Monitor CIs.	"Go To Report" on page 740 "Go to BPI Application Health Tab" on page 739 "Show Business Impact" on page 759 "Filters" on page 738 "Top View" on page 774 "Acknowledgement" on page 721 "Find Visible and Hidden Child CIs" on page 738
Business Process Insight Process Step Menu	This Context menu is available for Business Process Step CIs, from the Business Processes view.	"Go To Report" on page 740 "Go to BPI Application Health Tab" on page 739 "Show Business Impact" on page 759 "Filters" on page 738 "Top View" on page 774 "Acknowledgement" on page 721 "Find Visible and Hidden Child CIs" on page 738
Business Process Insight Scorecard Menu	Context menu available from the Scorecard page, in the Business Process Insight application.	"Show Business Process Over Time" on page 759"Show Top View" on page 766 "Go to Console" on page 739

Context Menu	Description	Context Menu Items
Business Process Monitor Group Menu	Context menu for group CIs where the data originates from a Business Process Monitor source.	"Go To Report" on page 740 "Filters" on page 738 "Top View" on page 774 "Acknowledgement" on page 721 "Go To Problem Isolation" on page 739 "Find Visible and Hidden Child CIs" on page 738 "Drill to Diagnostics" on page 727
Business Unit Menu	Internal.	"SLAs Summary Report" on page 772
CI Neighbors	Context menu in the CMDB.	"Show Related CIs" on page 764
CI Properties	Context menu in the CMDB.	"Properties" on page 751
CIM Measurement Menu	(Deprecated) Context menu for measurement CIs originating from a Compaq Insight Manager (CIM) system.	"Go To Report" on page 740 "Filters" on page 738 "Top View" on page 774 "Acknowledgement" on page 721 "Go To Problem Isolation" on page 739 "Find Visible and Hidden Child CIs" on page 738
Config File Menu	Not in use.	"Go To Report" on page 740 "Show Business Impact" on page 759
Dashboard Administration Menu	Displays the context menu in Dashboard Admin.	"Add KPI" on page 722 "KPI Data Over Time" on page 743

Context Menu	Description	Context Menu Items
Default Menu	Displays the context menu in Dashboard Console tab.	"Go To Report" on page 740 "Filters" on page 738 "Top View" on page 774 "Acknowledgement" on page 721 "Go To Problem Isolation" on page 739 "Find Visible and Hidden Child CIs" on page 738
Delete CI	Context menu in the CMDB.	"Delete CI" on page 726 "Drill to Diagnostics" on page 727
Diagnostics BPM Menu	Context menu that is used in Dashboard in monitoring views, to drill from a specific transaction to the Diagnostics transaction screen.	"Go To Report" on page 740 "Filters" on page 738 "Top View" on page 774 "Acknowledgement" on page 721 "Go To Problem Isolation" on page 739 "Drill to Diagnostics" on page 727
Diagnostics Monitor Menu	Context menu that is used in Dashboard.	"Go To Report" on page 740 "Filters" on page 738 "Top View" on page 774 "Acknowledgement" on page 721 "Go To Problem Isolation" on page 739
Diagnostics Probe Group Menu	Context menu that is used in Dashboard Diagnostics Views to drill down from a specific probe group CI to the Diagnostics Console screen.	"Drill to Diagnostics" on page 727

Context Menu	Description	Context Menu Items
Diagnostics Probe Menu	Context menu that is used from the monitoring views in Dashboard, to drill down from a specific probe CI to the Diagnostics transaction screen.	"Drill to Diagnostics" on page 727
EMS Measurement Menu	Context menu for measurement CIs originating from an Enterprise Management Systems (EMS) source.	"Go To Report" on page 740 "Filters" on page 738 "Top View" on page 774 "Acknowledgement" on page 721 "Go To Problem Isolation" on page 739 "Find Visible and Hidden Child CIs" on page 738
EMS Show Events	Context menu for CIs: ➤ Originating from the Operations Manager source adapter. ➤ Originating from Netscout.	"Show Events" on page 761
Group Menu	The default context menu for most of the business configuration item types (CITs).	"Go To Report" on page 740 "Filters" on page 738 "Top View" on page 774 "Acknowledgement" on page 721 "Go To Problem Isolation" on page 739 "Find Visible and Hidden Child CIs" on page 738
HP SC Menu	Context menu for Business Service CIs or EMS Monitor CIs under Business Service CIs.	"HP Service Manager" on page 742 "Go To Report" on page 740 "Filters" on page 738 "Top View" on page 774
Locate CI	Context menu after a search operation in IT Universe.	"Locate CI in View" on page 745

Context Menu	Description	Context Menu Items
Locate CI in SLA	Internal.	"Locate CI in SLA" on page 744
OVO Drill Down Event	Context menu attached to EMS Monitor CIs that enables drilling down to the HP Operations Manager application. **Limitations:** ➤ You must have specified the user name, password, and host machine in the EMS integration definition. For details, see "Add Integration Dialog Box" in *Solutions and Integrations*. ➤ This capability is only supported for one HP Operations Manager application. If more than one Operations Manager integration exists, the drill down feature works only for one of them.	"OVO Drill Down" on page 747
RUM Application Error Monitor Menu	Context menu for RUM Error Event CIs in the Real User Application view.	"Go To Report" on page 740 "Filters" on page 738 "Top View" on page 774 "Acknowledgement" on page 721 "Go To Problem Isolation" on page 739 "Find Visible and Hidden Child CIs" on page 738

Context Menu	Description	Context Menu Items
RUM Application Menu	Context menu for Application CIs in the Real User Application view.	"Go To Report" on page 740 "Filters" on page 738 "Top View" on page 774 "Acknowledgement" on page 721 "Go To Problem Isolation" on page 739 "Find Visible and Hidden Child CIs" on page 738
RUM End User Group Container Menu	Context menu for RUM End User Group Container CIs in the Real User End Users view.	"Go To Report" on page 740 "Filters" on page 738 "Top View" on page 774 "Acknowledgement" on page 721 "Go To Problem Isolation" on page 739 "Invoke Run Books" on page 742 "Find Visible and Hidden Child CIs" on page 738
RUM End User Group Menu	Context menu for RUM End User Groups CIs in the Real User End Users view.	"Go To Report" on page 740 "Filters" on page 738 "Top View" on page 774 "Acknowledgement" on page 721 "Go To Problem Isolation" on page 739 "Invoke Run Books" on page 742 "Find Visible and Hidden Child CIs" on page 738

Context Menu	Description	Context Menu Items
RUM End User's Menu	Context menu for RUM End User Group monitor CIs in the Real User End Users view.	"Go To Report" on page 740 "Filters" on page 738 "Top View" on page 774 "Acknowledgement" on page 721 "Go To Problem Isolation" on page 739 "Invoke Run Books" on page 742 "Find Visible and Hidden Child CIs" on page 738
RUM Errors Menu	Context menu for RUM Errors Event CIs in the Real User Application view.	"Go To Report" on page 740 "Filters" on page 738 "Top View" on page 774 "Acknowledgement" on page 721 "Go To Problem Isolation" on page 739 "Find Visible and Hidden Child CIs" on page 738
RUM Group Menu	Context menu for RUM End User Group monitor CIs in the Real User End Users view.	"Go To Report" on page 740 "Filters" on page 738 "Top View" on page 774 "Acknowledgement" on page 721 "Go To Problem Isolation" on page 739 "Find Visible and Hidden Child CIs" on page 738 "Drill to Diagnostics" on page 727

Context Menu	Description	Context Menu Items
RUM HTTP Error Monitor Menu	Context menu for RUM HTTP Error Monitor CIs in the Real User Application view.	"Go To Report" on page 740 "Filters" on page 738 "Top View" on page 774 "Acknowledgement" on page 721 "Go To Problem Isolation" on page 739 "Find Visible and Hidden Child CIs" on page 738
RUM Informational Event Monitor Menu	Context menu for RUM Informational Event Monitor CIs in the Real User Application view.	"Go To Report" on page 740 "Filters" on page 738 "Top View" on page 774 "Acknowledgement" on page 721 "Go To Problem Isolation" on page 739 "Find Visible and Hidden Child CIs" on page 738
RUM Informational Events Menu	Context menu for RUM Informational Events CIs in the Real User Application view.	"Go To Report" on page 740 "Filters" on page 738 "Top View" on page 774 "Acknowledgement" on page 721 "Go To Problem Isolation" on page 739 "Find Visible and Hidden Child CIs" on page 738

Context Menu	Description	Context Menu Items
RUM Page Monitor Menu	Context menu for RUM Page Monitor CIs in the Real User Application view.	"Go To Report" on page 740 "Filters" on page 738 "Top View" on page 774 "Acknowledgement" on page 721 "Go To Problem Isolation" on page 739 "Find Visible and Hidden Child CIs" on page 738 "Drill to Diagnostics" on page 727
RUM Server Menu	Context menu for RUM Server Monitor CIs in the Real User Servers view.	"Go To Report" on page 740 "Filters" on page 738 "Top View" on page 774 "Acknowledgement" on page 721 "Go To Problem Isolation" on page 739 "Invoke Run Books" on page 742 "Find Visible and Hidden Child CIs" on page 738
RUM Servers Menu	Context menu for RUM Servers CIs in the Real User Servers view.	"Go To Report" on page 740
RUM Session Monitor Menu	Context menu for RUM Session Monitor CIs in the Real User Applications view.	"Go To Report" on page 740 "Filters" on page 738 "Top View" on page 774 "Acknowledgement" on page 721 "Go To Problem Isolation" on page 739 "Find Visible and Hidden Child CIs" on page 738

Context Menu	Description	Context Menu Items
RUM Transaction Monitor Menu	Context menu for RUM Transaction Monitor CIs in the Real User Applications view.	"Go To Report" on page 740 "Filters" on page 738 "Top View" on page 774 "Acknowledgement" on page 721 "Go To Problem Isolation" on page 739 "Find Visible and Hidden Child CIs" on page 738
SAP Alert Acknowledgment	Context menu for a SAP Alert CI.	"Complete Alert" on page 724 "Go To Report" on page 740 "Filters" on page 738 "Top View" on page 774 "Acknowledgement" on page 721 "Go To Problem Isolation" on page 739 "Find Visible and Hidden Child CIs" on page 738
SAP Menu	Context menu for a SAP-related CI.	"Go To Report" on page 740 "Filters" on page 738 "Top View" on page 774 "Application Mapping" on page 722 "Acknowledgement" on page 721 "Go To Problem Isolation" on page 739 "Find Visible and Hidden Child CIs" on page 738

Context Menu	Description	Context Menu Items
SAP System Menu	Context menu for a SAP System CI.	"Go To Report" on page 740 "Filters" on page 738 "Application Mapping" on page 722 "Top View" on page 774 "Acknowledgement" on page 721 "Go To Problem Isolation" on page 739 "Find Visible and Hidden Child CIs" on page 738
SAP Transaction Menu	Context menu for a Transaction CI.	"Go To Report" on page 740 "Filters" on page 738 "Application Mapping" on page 722 "Top View" on page 774 "Acknowledgement" on page 721 "Go To Problem Isolation" on page 739 "Find Visible and Hidden Child CIs" on page 738
SAP Transport Menu	Context menu for a Transport CI.	"Go To Report" on page 740 "Filters" on page 738 "Application Mapping" on page 722 "Top View" on page 774 "Acknowledgement" on page 721 "Go To Problem Isolation" on page 739 "Find Visible and Hidden Child CIs" on page 738
Service Menu	Internal.	"CI Impact Report" on page 724

Context Menu	Description	Context Menu Items
Service Mng Menu	Internal.	"Create New Business Service" on page 725 "Edit Business Service" on page 727 "Delete Business Service" on page 726 "Create New SLA from Business Service" on page 725
Siebel Database Breakdown Diagnostics Menu	Context menu for Siebel-specific CIs.	"Go To Siebel Diagnostics" on page 740
Siebel Diagnostics Menu	Context menu for Siebel-specific CIs.	"Go To Siebel Diagnostics" on page 740
Siebel Menu	Context menu for Siebel-specific CIs.	"Go To Report" on page 740 "Filters" on page 738 "Top View" on page 774 "Acknowledgement" on page 721 "Go To Problem Isolation" on page 739 "Find Visible and Hidden Child CIs" on page 738
Siebel SARM and DBBD Diagnostics Menu	Context menu for Siebel-specific CIs.	"Go To Siebel Diagnostics" on page 740
SiteScope Web Service Monitor Menu	Context menu for SiteScope Web Service Monitor CIs.	"Go To Report" on page 740 "Filters" on page 738 "Top View" on page 774 "Acknowledgement" on page 721 "Go To Problem Isolation" on page 739

Context Menu	Description	Context Menu Items
SiteScope Group Menu	Context menu for SiteScope group CIs.	"Go To Report" on page 740 "Filters" on page 738 "Top View" on page 774 "Acknowledgement" on page 721 "Go To Problem Isolation" on page 739 "Find Visible and Hidden Child CIs" on page 738
SiteScope Measurement Menu	Context menu for measurements CIs originating from SiteScope.	"Go To Report" on page 740 "Filters" on page 738 "Top View" on page 774 "Acknowledgement" on page 721 "Go To Problem Isolation" on page 739
SiteScope Monitor Menu	Context menu for SiteScope monitor CIs when there is no measurement level for the monitor.	"Go To Report" on page 740 "Filters" on page 738 "Top View" on page 774 "Acknowledgement" on page 721 "Go To Problem Isolation" on page 739
Top View Menu	Context menu for CIs in Top View, appended to the CI's standard context menu.	"Expand More Levels" on page 736 "Expand to Problem" on page 737 "Open in New Window" on page 745
Transaction Measurement Menu	Context menu for transaction measurement CIs.	"Go To Report" on page 740 "Filters" on page 738 "Top View" on page 774 "Acknowledgement" on page 721 "Go To Problem Isolation" on page 739

Context Menu	Description	Context Menu Items
TransactionVision Menu	Context menu for TransactionVision CIs.	"Go to TransactionVision" on page 741 "Go To Report" on page 740 "Filters" on page 738 "Top View" on page 774 "Go To Problem Isolation" on page 739
VM Context Menu	Context menu in View Manager in the CMDB.	"New Folder" on page 745 "Rename Folder" on page 752 "Delete Folder" on page 726
Web Service Menu	Context menu for Web Service CIs.	"Go To Report" on page 740 "Filters" on page 738 "Top View" on page 774 "Acknowledgement" on page 721 "Go To Problem Isolation" on page 739 "Find Visible and Hidden Child CIs" on page 738
Web Service Operations Menu	Context menu for Web Service Operation CIs.	"Go To Report" on page 740 "Filters" on page 738 "Top View" on page 774 "Acknowledgement" on page 721 "Go To Problem Isolation" on page 739 "Find Visible and Hidden Child CIs" on page 738

🔖 Context Menus User Interface

This section describes:

➤ Context Menu Repository page on page 712

➤ Context Menu Details Dialog Box on page 714

➤ Menu Entity Details Dialog Box on page 715

🔖 Context Menu Repository page

Description	Displays the list of factory (predefined) and customized context menus. Those context menus are available throughout HP Business Availability Center to help you navigate to other pages. Enables an advanced user to modify existing repository context menus and create new ones. **To Access: Admin** > **Dashboard** > **Repositories** > **Context Menus**
Important Information	Cloning or overriding an existing context menu, or creating a new context menu, adds the corresponding context menu entry to the Custom Context Menus list. You can then customize the context menu to your organization's specifications. You can modify the context menu information or enter new information. You can also modify existing information or add new information about the context menu entity. For details, see "Context Menu Details Dialog Box" on page 714. You can modify existing information or enter new information about the menu entity. For details, see "Menu Entity Details Dialog Box" on page 715.
Included in Tasks	"Customize a Context Menu" on page 695

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
⁇	Click to display help on the context menu.
✎	Select a context menu in the Custom Context Menus area, and click the button to open the **Context Menus Details** dialog box. For details, see "Edit Context Menu Details" on page 696.
Clone	In the Factory Context Menus or in the Custom Context Menus areas, select a context menu, and click the **Clone** button to create a new context menu by cloning. You clone an existing context menu to use it as a template. The original context menu is still available. **Note:** Change the name of the context menu you have cloned to make sure you attach the cloned context menu and not the original context menu to a specific KPI.
ID	The internal name of the context menu.
Display Name	The name of the context menu.

GUI Element (A-Z)	Description
New Item	Click to create a new context menu in the Context Menu Details dialog box.
Override	In the Factory Context Menus or in the Custom Context Menus areas, select a context menu, and click the **Override** button to edit an existing context menu. You override an existing context menu to replace it with a customized rule. The original context menu is disabled. The overriding context menu and the original context menu have the same context menu ID. The context menu in the Factory Context Menus area displays the following indication: **Note:** If you later delete the custom context menu that overrode the factory context menu, the original factory context menu is automatically restored.

Context Menu Details Dialog Box

Description	Enables you to modify the information or enter new information for the context menu. You can also modify existing information or add new information about the context menu entity. **To Access:** In the Context Menu Repository page, click the **New** button, or click the relevant **Edit** button for a cloned or overridden context menu.
Important Information	A detailed list of context menus and their details is available in "List of Context Menus" on page 697.
Included in Tasks	"Customize a Context Menu" on page 695

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
<Menu entity>	Click the **Delete** button ![X] to delete an existing menu entity details. Click the **Edit** button ![pencil] to modify existing menu entity details. For more details, go to "Menu Entity Details Dialog Box" on page 715.
Display Name	Enter or modify the name of the context menu.
New	Click the **New** button to enter new menu entity details. For more details, go to "Menu Entity Details Dialog Box" on page 715.

Menu Entity Details Dialog Box

Description	Enables you to modify existing information or enter new information about the menu entity. **To Access:** In the Context Menu Details page, click the **New** button, or click the relevant **Edit** button ![pencil] for a menu entity.
Included in Tasks	"Customize a Context Menu" on page 695

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
Context Menu Item	Select the name of the context menu item (the main menu element that is displayed).
	For details about the available context menu items, see "List of Context Menu Items" on page 721.
Sub-context Menu Items	Select or de-select the sub-menu items.
	For details about the available context menu items, see "List of Context Menu Items" on page 721.
Applicable Sections	Select or de-select the applications where the menus appear. If you specify nothing, the menu appears in all tabs.

22

Context Menu Item Repository

This chapter includes the pages and dialog boxes that are part of the Context Menu Item Repository user interface.

The Context Menu Item Repository includes the context menu items available in Dashboard and enables you to create new context menu items and to edit existing context menu items.

This chapter includes:

Concepts

Tasks

Reference

🔷 Context Menu Item Repository Overview

The Context Menu Item Repository page displays the list of factory (predefined) context menu items available throughout Dashboard to determine appearance and functionality for the CIs in the presentation layer.

The Context Menu Item Repository defines the options available in the context menus. Each context menu item either specifies an operation that is to take place, or acts as a parent for a sub-menu. For a list of the context menu items defined for Dashboard, see "List of Context Menu Items" on page 721.

For details about creating or editing context menu items, see "Context Menu Item Repository page" on page 806.

Note: If you are using HP Operations Manager *i* with Business Availability Center, then the Context Menu Item Repository page contains OMi-related context menu items. For more information, see *Using HP Operations Manager i*.

Advanced Users

You can modify existing repository objects and create new ones. This may be necessary when you want to customize the way information is presented in Dashboard, in order to fit the needs of your organization; or you may need to create new objects when integrating data from a new external system into Dashboard.

⚓ Customize a Context Menu Item

You customize a context menu item by creating a new context menu item or by editing an existing context menu item.

For a detailed scenario that includes creating a context menu item, see "Create a Dynamic URL – Scenario" on page 493 and view the appropriate steps.

This task includes the following steps:

➤ "Create a Customized Context Menu Item" on page 719
➤ "Edit Context Menu Item Details" on page 720
➤ "Specify the Processor Parameter Details" on page 720
➤ "Set a Context Menu Item and its Parameters Back to Default" on page 720

1 Create a Customized Context Menu Item

There are three ways to customize repository elements:

➤ **New Item.** Creates a new repository element that is not based on an existing element. You customize the new element to fit your needs. To create a new context menu item, click **New Item** in the Context Menu Item Repository page.

➤ **Clone**. Creates a new repository element by cloning an existing factory or custom element. The original element is still available, and the new cloned element can be modified. To clone a context menu item, select a factory context menu item and click **Clone** in the Context Menu Item Repository page.

➤ **Override**. Overrides an existing factory element. The original element is labeled overridden (disabled) in the Factory area, and an editable copy appears in the Custom area. To override a context menu item, select a factory context menu item and click **Override** in the Context Menu Item Repository page.

For details, see "Context Menu Repository page" on page 712.

2 Edit Context Menu Item Details

In the Items Details window, you can either modify context menu item information or enter new information.

You can also modify existing information or enter new information about the pre- or post-processor parameters. For details on the possible values, see "Context Menu Item Details Dialog Box" on page 802.

3 Specify the Processor Parameter Details

Note: It is **not** recommended to:

➤ Add new parameters to a pre-processor or post-processor class.

➤ Make changes to a pre-processor or post-processor class as it might change the class behavior. Classes are built for specific context menus.

In the **Pre-** or **Post-Processor Parameter Details** window, you can either modify existing information or enter new information about the pre-processor parameter or the post-processor parameter.

For details about the pre-processor parameters, see "Pre-Processor Parameter Details Dialog Box" on page 809.

For details about the post-processor parameters, see "Post-Processor Parameter Details Dialog Box" on page 810.

4 Set a Context Menu Item and its Parameters Back to Default

If you have modified a context menu item or its parameters, you might need to return the context menu item and its parameters to their defaults.

To set a context menu item and its parameters back to default, select **Admin > Dashboard** > **Repositories** > **Context Menu Items**. In the **Custom Context Menu Items** area, delete the copy of the context menu item you want to return to default and click **OK**. The context menu item and its parameters are returned to their defaults.

🔍 List of Context Menu Items

This section provides details about the context menu items available in the Context Menu Item Repository, their pre- and post-processor classes, and class parameters.

For details about configuring the context menu items, see "Context Menu Items User Interface" on page 802.

For a description of the classes and the complete list of their parameters, see "List of Pre-Processor Classes" on page 785 or "List of Post-Processor Classes" on page 791.

Context Menu Item	Description, Pre-Processor Class and Its Parameters, and Post-Processor Class and Its Parameters	
Acknowledgement	Opens the Set/Unset Acknowledgment window relevant to the CI, in Dashboard. For details, see "Acknowledge Performance Problems" on page 102.	
	Pre-Processor Class:	**Post-Processor Class:**
	None	None
	Parameters:	**Parameters:**
	None	None
Acknowledgement Details	Opens the Acknowledgment details window relevant to the CI, in Dashboard. For details, see "Acknowledgments Details Dialog Box" on page 109.	
	Pre-Processor Class:	**Post-Processor Class:**
	"Dashboard Generic URL" on page 785	"Open Window" on page 798
	Parameters:	**Parameters:**
	➤ ack.cmdbObjectID	➤ SCROLL
	➤ ack.ackID	➤ HEIGHT
	➤ URL	➤ SLAVE_WIN
		➤ WIDTH
		➤ WIN_NAME
		➤ RESIZE

Context Menu Item	Description, Pre-Processor Class and Its Parameters, and Post-Processor Class and Its Parameters	
Add KPI	Opens the New KPI page in Dashboard Administration. For details, see "How Dashboard KPIs Work" on page 338.	
	Pre-Processor Class: None **Parameters:** None	**Post-Processor Class:** None **Parameters:** None
Application Mapping	Opens the Acknowledgment details window relevant to the CI, in Dashboard. For details, see "HP Business Availability Center for SAP Applications" in *Solutions and Integrations*.	
	Pre-Processor Class: None **Parameters:** None	**Post-Processor Class:** None **Parameters:** None
BPI Monitors Over Time	Opens the BPI Monitors Over Time report relevant for the CI.	
	Pre-Processor Class: BPIMonitorOTPreprocessor **Parameters:** None	**Post-Processor Class:** "Open Window" on page 798 **Parameters:** ➤ SCROLL ➤ HEIGHT ➤ SLAVE_WIN ➤ WIDTH ➤ WIN_NAME ➤ RESIZE

Context Menu Item	Description, Pre-Processor Class and Its Parameters, and Post-Processor Class and Its Parameters	
Business Process Over Time	Opens the BPI Monitors Over Time report relevant for the CI.	
	Pre-Processor Class:	**Post-Processor Class:**
	BPIBusinessProcessOTReport Preprocessor	"Open Window" on page 798
	Parameters:	**Parameters:**
	None	➤ SCROLL
		➤ HEIGHT
		➤ SLAVE_WIN
		➤ WIDTH
		➤ WIN_NAME
		➤ RESIZE
Change Report	Opens the Change report in Dashboard. For details, see "Change Report Page" in *Model Management*.	
	Pre-Processor Class:	**Post-Processor Class:**
	None	"Open Window" on page 798
	Parameters:	**Parameters:**
	➤ **USER.** Internal. This parameter must not be modified.	➤ SCROLL
	➤ **CMDB_NODE_ID.** Internal. This parameter must not be modified.	➤ HEIGHT
		➤ SLAVE_WIN
	➤ **PASSWORD.** Internal. This parameter must not be modified.	➤ WIDTH
		➤ WIN_NAME
	➤ **PROTOCOL.** The type of protocol to be used	➤ RESIZE
	➤ **PORT.** The target port	
	➤ **URL_SUFFIX.** The suffix to add at the end of the URL	

Context Menu Item	Description, Pre-Processor Class and Its Parameters, and Post-Processor Class and Its Parameters	
CI Impact Report	Opens the Related Change Request report in Dashboard.	
	Pre-Processor Class:	**Post-Processor Class:**
	None	None
	Parameters:	**Parameters:**
	None	None
Complete Alert	Activates a URL call to the relevant SAP system and completes the selected SAP alert.	
	Pre-Processor Class:	**Post-Processor Class:**
	None	None
	Parameters:	**Parameters:**
	None	➤ ALERTTIME
		➤ ALSYSID
		➤ MSG
		➤ szTargetHostName
		➤ MSEGNAME
		➤ ALINDEX
		➤ szTargetHostIP
		➤ ALERTDATE
		➤ ALUNIQNUM
		➤ SapConnId
Configuration Item Status Alerts	Opens the Configuration Item Status Alert report relevant to the CI. For details, see "Configuration Item Status Alerts Report" in *Alerts*.	
	Pre-Processor Class:	**Post-Processor Class:**
	None	None
	Parameters:	**Parameters:**
	None	None

Context Menu Item	Description, Pre-Processor Class and Its Parameters, and Post-Processor Class and Its Parameters	
Console	Opens the Console tab in the Dashboard Application.	
	Pre-Processor Class: None **Parameters:** None	**Post-Processor Class:** "Switch Dashboard Tabs" on page 800 **Parameters:** ➤ TAB_ID
Create New Business Service	Available in the Service Level Management application. It opens the Business Service CI wizard where you can create a new Business Service CI. For details, see "Business Service Wizard" in *Service Level Management*.	
	Pre-Processor Class: None **Parameters:** None	**Post-Processor Class:** None **Parameters:** None
Create New SLA from Business Service	Available in the Service Level Management application. It enables you to create a new SLA for the selected Business Service CI. It opens the Create Agreement wizard with the selected Business Service CI already attached. For details, see "Agreement Wizard" in *Service Level Management*.	
	Pre-Processor Class: None **Parameters:** None	**Post-Processor Class:** None **Parameters:** None
Custom Map	Opens the Custom Map tab in Dashboard.	
	Pre-Processor Class: None **Parameters:** None	**Post-Processor Class:** "Switch Dashboard Tabs" on page 800 **Parameters:** ➤ TAB_ID

Context Menu Item	Description, Pre-Processor Class and Its Parameters, and Post-Processor Class and Its Parameters	
Customer	This context menu option is available in the Service Level Management application. It displays the customer defined for the selected service.	
	Pre-Processor Class:	**Post-Processor Class:**
	None	None
	Parameters:	**Parameters:**
	None	None
Delete Business Service	This context menu option is available in the Service Level Management application. It deleted the selected Business Service CI.	
	Pre-Processor Class:	**Post-Processor Class:**
	None	None
	Parameters:	**Parameters:**
	None	None
Delete CI	Opens a dialog box to confirm that you want to delete the relevant CI in IT Universe Manager.	
	Pre-Processor Class:	**Post-Processor Class:**
	None	None
	Parameters:	**Parameters:**
	None	None
Delete Folder	Opens the Delete Folder dialog box to enable you to delete the folder.	
	Pre-Processor Class:	**Post-Processor Class:**
	"View Manager (New Folder) Processor" on page 790	"General View-manager Context Menu" on page 792
	Parameters:	**Parameters:**
	➤ URL	➤ SCROLL
		➤ HEIGHT
		➤ WIDTH
		➤ RESIZE

Context Menu Item	Description, Pre-Processor Class and Its Parameters, and Post-Processor Class and Its Parameters	
Drilldown to Web Service Topology	This option is displayed only for Web Service CIs. It opens the Diagnostics Service Topology view for the selected Web Service CI.	
	Pre-Processor Class:	**Post-Processor Class:**
	None	None
	Parameters:	**Parameters:**
	None	None
Disable	Disables the KPI attached to a CI in the KPI tab in Dashboard Administration. For details, see "Change the No Data Timeout Value for Transaction CIs – Optional" on page 369.	
	Pre-Processor Class:	**Post-Processor Class:**
	None	None
	Parameters:	**Parameters:**
	None	➤ **POSTPROCESS_OPERATION.** Indicates whether the post-process operation is to be run (**true**) or not (**false**).
Drill to Diagnostics	Drills down in the Diagnostics application. For details, see the *HP Diagnostics* documentation.	
	Pre-Processor Class:	**Post-Processor Class:**
	None	None
	Parameters:	**Parameters:**
	None	None
Edit Business Service	Available in the Service Level Management application. It opens the Business Service CI wizard in edit mode where you can edit the selected Business Service CI. For details, see "Business Service Wizard" in *Using Service Level Management*.	
	Pre-Processor Class:	**Post-Processor Class:**
	None	None
	Parameters:	**Parameters:**
	None	None

Context Menu Item	Description, Pre-Processor Class and Its Parameters, and Post-Processor Class and Its Parameters	
Enable	Enables the KPI attached to a CI in the KPI tab in Dashboard Administration. For details, see "Change the No Data Timeout Value for Transaction CIs – Optional" on page 369.	
	Pre-Processor Class:	**Post-Processor Class:**
	None	None
	Parameters:	**Parameters:**
	None	➤ **POSTPROCESS_OPERATION.** Indicates whether the post-process operation is to be run (**true**) or not (**false**).
End User Summary	Moves to the End User Summary Report in End User Management. The End User Summary report displays data for specific end-users that were configured for the Real User Monitor in System Availability Management. For details, see "End User Summary Report" in *Using End User Management*.	
	Pre-Processor Class:	**Post-Processor Class:**
	None	"Goto RUM Reports" on page 794
	Parameters:	**Parameters:**
	None	➤ menu_item_url
		➤ autoGenerate
		➤ application_id
		➤ filter.selectedcmdbidsfromOuter Application
		➤ menu_item_id
		➤ time_view
		➤ reportID
		➤ isContainer
		➤ filter.vttTree Type4Thecmdbidsfrom OuterApplication

Context Menu Item	Description, Pre-Processor Class and Its Parameters, and Post-Processor Class and Its Parameters	
Event Analysis (Event Monitor)	Opens the "Event Analysis Report" in *Using End User Management*.	
	Pre-Processor Class:	**Post-Processor Class:**
	None	"Goto RUM Reports" on page 794
	Parameters:	**Parameters:**
	None	➤ menu_item_url
		➤ autoGenerate
		➤ application_id
		➤ filter.selectedcmdbidsfromOuter Application
		➤ menu_item_id
		➤ time_view
		➤ reportID
		➤ isContainer
		➤ filter.vttTree Type4Thecmdbidsfrom OuterApplication
Event Count Over Time	Moves to the Event Count Over Time Report in End User Management. The Event Count Over Time report displays data for all events, or sessions with events, in monitored applications that you configured in System Availability Management, broken down by time intervals. For details, see "Event Count Over Time Report" in *Using End User Management*.	
	Pre-Processor Class:	**Post-Processor Class:**
	None	"Goto RUM Reports" on page 794
	Parameters:	**Parameters:**
	None	➤ menu_item_url
		➤ application_id
		➤ autoGenerate
		➤ filter.selectedApplication
		➤ menu_item_id
		➤ time_view
		➤ reportID

Context Menu Item	Description, Pre-Processor Class and Its Parameters, and Post-Processor Class and Its Parameters	
Event Count Over Time (Application Error Monitor)	Moves to the Event Count Over Time Report in End User Management. The Event Count Over Time report displays data for all events, or sessions with events, in monitored applications that you configured in System Availability Management, broken down by time intervals. For details, see "Event Count Over Time Report" in *Using End User Management*.	
	Pre-Processor Class: None **Parameters:** None	**Post-Processor Class:** "Goto RUM Reports" on page 794 **Parameters:** ➤ menu_item_url ➤ application_id ➤ autoGenerate ➤ filter.selectedApplicationErrors ➤ filter.selectedcmdbidsfromOuter Application ➤ menu_item_id ➤ time_view ➤ reportID ➤ filter.vttTree Type4Thecmdbidsfrom OuterApplication

Context Menu Item	Description, Pre-Processor Class and Its Parameters, and Post-Processor Class and Its Parameters	
Event Count Over Time (HTTP Error Monitor)	Moves to the Event Count Over Time Report in End User Management. The Event Count Over Time report displays data for all events, or sessions with events, in monitored applications that you configured in System Availability Management, broken down by time intervals. For details, see "Event Count Over Time Report" in *Using End User Management*.	
	Pre-Processor Class:	**Post-Processor Class:**
	None	"Goto RUM Reports" on page 794
	Parameters:	**Parameters:**
	None	➤ menu_item_url
		➤ application_id
		➤ autoGenerate
		➤ filter.selectedcmdbidsfromOuter Application
		➤ filter.selectedApplication
		➤ menu_item_id
		➤ time_view
		➤ reportID
		➤ filter.vttTree Type4Thecmdbidsfrom OuterApplication

Context Menu Item	Description, Pre-Processor Class and Its Parameters, and Post-Processor Class and Its Parameters	
Event Count Over Time (Information Event Monitor)	Moves to the Event Count Over Time Report in End User Management. The Event Count Over Time report displays data for all events, or sessions with events, in monitored applications that you configured in System Availability Management, broken down by time intervals. For details, see "Event Count Over Time Report" in *Using End User Management*.	
	Pre-Processor Class: None **Parameters:** None	**Post-Processor Class:** "Goto RUM Reports" on page 794 **Parameters:** ➤ menu_item_url ➤ application_id ➤ autoGenerate ➤ filter.selectedcmdbidsfromOuter Application ➤ filter.selectedApplication ➤ menu_item_id ➤ time_view ➤ reportID ➤ filter.vttTree Type4Thecmdbidsfrom OuterApplication

Context Menu Item	Description, Pre-Processor Class and Its Parameters, and Post-Processor Class and Its Parameters	
Event Log Report	Moves to the Event Log report in End User Management. The Event Log report displays a log of the occurrences of a specific event type for a selected time frame. For details, see "Event Log" in *Using End User Management*.	
	Pre-Processor Class: None **Parameters:** ➤ **autoGenerate.** This parameter must not be modified. ➤ **TARGET_LOGIC_APPLICATION.** This parameter must not be modified. ➤ **__UIF_FORM.** Internal. This parameter must not be modified. ➤ **TARGET_HOST.** Where the properties of the target host are located. ➤ **__UIF_APPLICATION.** Internal. This parameter must not be modified. ➤ **CI_TYPE.** This parameter must not be modified. ➤ **URL.** The URL of the new window. ➤ **_UIF_ACTION.** This parameter must not be modified. ➤ **_UIF_SOURCE.** This parameter must not be modified.	**Post-Processor Class:** "Open Window" on page 798 **Parameters:** ➤ SCROLL ➤ HEIGHT ➤ SLAVE_WIN ➤ WIDTH ➤ WIN_NAME ➤ RESIZE

Context Menu Item	Description, Pre-Processor Class and Its Parameters, and Post-Processor Class and Its Parameters	
Event Summary	Moves to the Event Summary report in End User Management. The Event Summary report displays a summary of events in monitored applications that you configured in System Availability Management. For details, see "Event Summary Report" in *Using End User Management*.	
	Pre-Processor Class:	**Post-Processor Class:**
	None	"Goto RUM Reports" on page 794
	Parameters:	**Parameters:**
	None	➤ menu_item_url
		➤ application_id
		➤ filter.performance
		➤ autoGenerate
		➤ filter.selectedApplication
		➤ menu_item_id
		➤ reportID
		➤ time_view
		➤ filter.applicationErrors

Context Menu Item	Description, Pre-Processor Class and Its Parameters, and Post-Processor Class and Its Parameters	
Event Summary (Errors Monitor)	Moves to the Event Summary report in End User Management. The Event Summary report displays a summary of events in monitored applications that you configured in System Availability Management. For details, see "Event Summary Report" in *Using End User Management.*	
	Pre-Processor Class: None **Parameters:** None	**Post-Processor Class:** "Goto RUM Reports" on page 794 **Parameters:** ➤ menu_item_url ➤ application_id ➤ filter.selectedcmdbidsfromOuter Application ➤ autoGenerate ➤ filter.vttTree Type4Thecmdbidsfrom OuterApplication ➤ filter.selectedApplication ➤ menu_item_id ➤ time_view ➤ reportID

Context Menu Item	Description, Pre-Processor Class and Its Parameters, and Post-Processor Class and Its Parameters	
Event Summary (Events Monitor)	Moves to the Event Summary report in End User Management. The Event Summary report displays a summary of events in monitored applications that you configured in System Availability Management. For details, see "Event Summary Report" in *Using End User Management*.	
	Pre-Processor Class:	**Post-Processor Class:**
	None	"Goto RUM Reports" on page 794
	Parameters:	**Parameters:**
	None	➤ menu_item_url
		➤ application_id
		➤ filter.selectedcmdbidsfromOuter Application
		➤ autoGenerate
		➤ filter.events
		➤ filter.selectedApplication
		➤ menu_item_id
		➤ time_view
		➤ reportID
		➤ filter.vttTree Type4Thecmdbidsfrom OuterApplication
Expand More Levels	Expands the Top View display to show the default maximum number of hierarchy levels for the CI.	
	Pre-Processor Class:	**Post-Processor Class:**
	None	"CallJSOnPagePostProcessor" on page 792
	Parameters:	**Parameters:**
	None	➤ JS_CALL_PARAMS
		➤ JS_METHOD_NAME

Context Menu Item	Description, Pre-Processor Class and Its Parameters, and Post-Processor Class and Its Parameters	
Expand to Problem	Expands the Top View display to show the source of a problematic CI.	
	Pre-Processor Class: None **Parameters:** None	**Post-Processor Class:** "CallJSOnPagePostProcessor" on page 792 **Parameters:** ➤ JS_CALL_PARAMS ➤ JS_METHOD_NAME
Filter Subtree	Filters the subtree of the selected element according to the previously defined filter. For details about the Filters tab, see "Filters Page" on page 187. By default, appears under the Events shortcut menu.	
	Pre-Processor Class: "Prepare Parameters (Dashboard)" on page 789 **Parameters:** ➤ NODE_ID ➤ strutsAction ➤ viewType	**Post-Processor Class:** "Switch Dashboard Tabs with Parameters" on page 801 **Parameters:** ➤ TAB_ID
Filter Subtree Monitors	Displays only the CIs that have the monitor type – like the Show Monitors Only filter. For details about the Filters tab, see "Filters Page" on page 187.	
	Pre-Processor Class: "Prepare Parameters (Dashboard)" on page 789 **Parameters:** ➤ nodeType ➤ NODE_ID ➤ strutsAction ➤ viewType	**Post-Processor Class:** "Switch Dashboard Tabs with Parameters" on page 801 **Parameters:** ➤ TAB_ID

Context Menu Item	Description, Pre-Processor Class and Its Parameters, and Post-Processor Class and Its Parameters	
Filters	Opens the Filters tab in Dashboard or is used as a parent menu for other filter context menu items; for example, Filter Subtree Monitors. For details about the Filters tab, see "Filters Page" on page 187.	
	Pre-Processor Class: None **Parameters:** None	**Post-Processor Class:** "Switch Dashboard Tabs" on page 800 **Parameters:** ➤ TAB_ID
Find Visible and Hidden Child CIs	Returns all of the visible and hidden child CIs of the selected CI that appear in the CMDB. For details, see "Find Visible and Hidden Child CIs Dialog Box" on page 73.	
	Pre-Processor Class: "Dashboard Generic URL" on page 785 **Parameters:** ➤ parentCmdbId ➤ URL ➤ NODE_ID	**Post-Processor Class:** "Open Window" on page 798 **Parameters:** ➤ SCROLL ➤ HEIGHT ➤ SLAVE_WIN ➤ WIDTH ➤ WIN_NAME ➤ RESIZE
Geographical Map	Opens the Geographical Map tab in Dashboard. For details about the Geographical Map tab, see "Geographical Map Page" on page 212.	
	Pre-Processor Class: None **Parameters:** None	**Post-Processor Class:** "Switch Dashboard Tabs" on page 800 **Parameters:** ➤ TAB_ID

Context Menu Item	Description, Pre-Processor Class and Its Parameters, and Post-Processor Class and Its Parameters	
Go to BPI Application Health Tab	Opens the Health page tab within the HP Business Process Insight application. For details, see BPI Application Health in *Using Business Process Insight*.	
	Pre-Processor Class: None **Parameters:** None	**Post-Processor Class:** DashboardMultiSelectURLPreprocessor **Parameters:** ➤ **menu_item_url.** Internal use. ➤ **application_id.** Internal use. ➤ **menu_item_id.** Internal use.
Go to Console	Opens the Dashboard Console tab.	
	Pre-Processor Class: None **Parameters:** None	**Post-Processor Class:** "Switch Dashboard Tabs" on page 800 **Parameters:** ➤ TAB_ID
Go To Problem Isolation	Parent menu for redirections to other applications.	
	Pre-Processor Class: None **Parameters:** None	**Post-Processor Class:** None **Parameters:** ➤ menu_item_url ➤ application_id ➤ IS_POPUP ➤ problematicCI ➤ menu_item_id ➤ selectedActionId

Context Menu Item	Description, Pre-Processor Class and Its Parameters, and Post-Processor Class and Its Parameters	
Go To Report	Parent menu for redirections to other applications.	
	Pre-Processor Class:	**Post-Processor Class:**
	None	None
	Parameters:	**Parameters:**
	None	None
Go To Siebel Diagnostics	Opens the options that enable you to open specific pages in the Business Availability Center for Siebel filtered by the selected CI. For details, see "Go to Siebel Diagnostics" on page 87.	
	Pre-Processor Class:	**Post-Processor Class:**
	None	None
	Parameters:	**Parameters:**
	None	None
Go to SiteScope	Displays the relevant SiteScope Web page for this CI in a new SiteScope browser window, enabling you to view more detailed SiteScope parameters and measurements. See the SiteScope documentation for directions on using SiteScope. **Note:** By default, Dashboard accesses the SiteScope machine using the machine host name. If you want access through IP, edit the **SiteScope** context menu item, by changing the value for the pre-processor parameter **HOST_BY** from **NAME** to **IP**.	
	Pre-Processor Class:	**Post-Processor Class:**
	"Goto SiteScope" on page 788	"Open Window" on page 798
	Parameters:	**Parameters:**
	➤ ROOT_PATH ➤ PROFILE_ID ➤ POST_FIX ➤ GROUP_NODE_NAME ➤ HOST_BY ➤ ROOT_POSTFIX ➤ PATH	➤ SCROLL ➤ HEIGHT ➤ SLAVE_WIN ➤ WIDTH ➤ WIN_NAME ➤ RESIZE

Context Menu Item	Description, Pre-Processor Class and Its Parameters, and Post-Processor Class and Its Parameters	
Go to Top View	Opens the Dashboard Top View tab, with the view's tree centered on the selected CI.	
	Pre-Processor Class:	**Post-Processor Class:**
	"Prepare Parameters (Dashboard)" on page 789	"Switch Dashboard Tabs with Parameters" on page 801
	Parameters:	**Parameters:**
	➤ NODE_ID	➤ TAB_ID
Go to TransactionVision	Opens a window in the TransactionVision application to display reports that provide you with breakdown information for the transaction at component level. This context menu item is available only if TransactionVision has been installed.	
	Pre-Processor Class:	**Post-Processor Class:**
	None	"Open Window" on page 798
	Parameters:	**Parameters:**
	None	➤ SCROLL
		➤ HEIGHT
		➤ SLAVE_WIN
		➤ WIDTH
		➤ WIN_NAME
		➤ RESIZE

Context Menu Item	Description, Pre-Processor Class and Its Parameters, and Post-Processor Class and Its Parameters	
HP Service Manager	A context menu option available from Business Service CIs or EMS Monitor CIs under Business Service CIs, to open the HP Service Manager application.	
	Pre-Processor Class: None **Parameters:** None	**Post-Processor Class:** "Open Window" on page 798 **Parameters:** ➤ SCROLL ➤ HEIGHT ➤ SLAVE_WIN ➤ WIDTH ➤ WIN_NAME ➤ RESIZE
Invoke Run Books	For CIs whose CI type is mapped to an HP Operations Orchestration (OO) run book, opens the **Related Run Books** page in a new window. You can then view the mapped run books and invoke them in OO. For details, see "Invoke Run Book Page" in *Using Problem Isolation*.	
	Pre-Processor Class: "RunBookPreprocessor" on page 789 **Parameters:** ➤ FROM_DASHBOARD ➤ CMDB_NODE_ID ➤ SUSPECT_NAME ➤ CI_TYPE ➤ URL	**Post-Processor Class:** "Open Window" on page 798 **Parameters:** ➤ SCROLL ➤ HEIGHT ➤ SLAVE_WIN ➤ WIDTH ➤ WIN_NAME ➤ RESIZE

Context Menu Item	Description, Pre-Processor Class and Its Parameters, and Post-Processor Class and Its Parameters	
KPI Data Over Time	The main menu option that lists the Enable/Disable options for a KPI attached to a CI in the KPI tab in Dashboard Administration. For details, see "Change the No Data Timeout Value for Transaction CIs – Optional" on page 369.	
	Pre-Processor Class:	**Post-Processor Class:**
	None	None
	Parameters:	**Parameters:**
	None	None
KPIs Over Time	Opens the KPI over Time report relevant to the CI. For details, see "KPIs Over Time Report" on page 277.	
	Pre-Processor Class:	**Post-Processor Class:**
	None	None
	Parameters:	**Parameters:**
	None	None

Context Menu Item	Description, Pre-Processor Class and Its Parameters, and Post-Processor Class and Its Parameters	
Load View	Internal.	
	Pre-Processor Class:	**Post-Processor Class:**
	None	None
	Parameters:	**Parameters:**
	None	➤ **application_id.** The ID of the application to be used when opening Diagnostics. ➤ **drill_to.** Internal. This parameter must not be modified. ➤ **drill_from.** The ID of the application you are drilling from. ➤ **probe_group_name.** The name of the probe to be used when opening Diagnostics. ➤ **server_name.** The name of the server to be used when opening Diagnostics.
Locate CI in SLA	Displays the Search pane where you can specify the CI you want to locate in SLA. For details about the search feature, see "Search for CIs in Search Mode" in *Model Management*.	
	Pre-Processor Class:	**Post-Processor Class:**
	None	None
	Parameters:	**Parameters:**
	None	None

Context Menu Item	Description, Pre-Processor Class and Its Parameters, and Post-Processor Class and Its Parameters	
Locate CI in View	Displays the Search pane where you can specify the CI you want to locate. For details about the search feature, see "Search for CIs in Search Mode" in *Model Management*.	
	Pre-Processor Class:	**Post-Processor Class:**
	None	None
	Parameters:	**Parameters:**
	None	None
New Folder	Opens the Create Folder dialog box to enable you to create a new folder. For details, see "View Manager Window" in *Model Management*.	
	Pre-Processor Class:	**Post-Processor Class:**
	"View Manager (New Folder) Processor" on page 790	"General View-manager Context Menu" on page 792
	Parameters:	**Parameters:**
	➤ URL	➤ SCROLL
		➤ HEIGHT
		➤ WIDTH
		➤ RESIZE
Open in New Window	Opens an external application from Top View. For details on configuring this menu item, see "Access an External Application from Top View" on page 132.	
	Pre-Processor Class:	**Post-Processor Class:**
	None	"CallJSOnPagePostProcessor" on page 792
	Parameters:	**Parameters:**
	None	➤ JS_CALL_PARAMS
		➤ JS_METHOD_NAME

Context Menu Item	Description, Pre-Processor Class and Its Parameters, and Post-Processor Class and Its Parameters	
Operations Health	Moves to the Operations Health report in HP Business Availability Center for SOA application. For details, see "Health Report" in *Solutions and Integrations*.	
	Pre-Processor Class:	**Post-Processor Class:**
	None	None
	Parameters:	**Parameters:**
	None	➤ menu_item_url
		➤ application_id
		➤ autoGenerate
		➤ menu_item_id
		➤ reportID
		➤ filter.fromDashboard
		➤ filter.selectedCIsType

Context Menu Item	Description, Pre-Processor Class and Its Parameters, and Post-Processor Class and Its Parameters	
OVO Drill Down	Enables you to access the HP Operations Manager application. For limitations, see "OVO Drill Down Event" on page 702.	
	Pre-Processor Class:	**Post-Processor Class:**
	None	None
	Parameters:	**Parameters:**
	None	➤ **OVO Server.** The name of the OVO Server.
		➤ **SCROLL.** If set to **1**, a scrolling tab is added to the opened window, if required. If set to 0, no scrolling tab is added to the open window.
		➤ **HEIGHT.** The opened window height, in pixels.
		➤ **SLAVE_WIN.** If set to **1** it checks that the window closes when the application is closed.
		➤ **OVO User.** The user name used to access the Operations Manager application.
		➤ **WIDTH.** The opened window width, in pixels.
		➤ **WIN_NAME.** Specifies the window name
		➤ **RESIZE.** If set to 1, the window can be resized. If set to 0, the window cannot be resized.

Context Menu Item	Description, Pre-Processor Class and Its Parameters, and Post-Processor Class and Its Parameters	
Page Summary	Moves to the Page Summary report in End User Management. The Page Summary report displays data for specific Web pages that were configured for the Real User Monitor in System Availability Management. For details, see "Page Summary Report" in *Using End User Management*.	
	Pre-Processor Class:	**Post-Processor Class:**
	None	"Goto RUM Reports" on page 794
	Parameters:	**Parameters:**
	None	➤ menu_item_url
		➤ autoGenerate
		➤ application_id
		➤ filter.selectedcmdbidsfromOuter Application
		➤ selectedApplication
		➤ menu_item_id
		➤ time_view
		➤ reportID
		➤ filter.vttTree Type4Thecmdbidsfrom OuterApplication

Context Menu Item	Description, Pre-Processor Class and Its Parameters, and Post-Processor Class and Its Parameters	
Pages Layers View	Moves to the Page Layers View report in the HP Diagnostics application. For details, see *HP Diagnostics User's Guide*.	
	Pre-Processor Class:	**Post-Processor Class:**
	None	None
	Parameters:	**Parameters:**
	None	➤ **actionProcessorClass.** The process to run to gather the parameters. This parameter must not be modified.
		➤ **application_id.** The ID of the application to be used when opening Diagnostics.
		➤ **drill_to.** Internal. This parameter must not be modified.
		➤ **action.** Internal.
		➤ **app_url.** Internal.
		➤ **drill_from.** The ID of the application you are drilling from.
		➤ **type.** Defines the type.
		➤ **app_context.** Internal.
		➤ **actionForward.** The name of the menu to go to. This parameter must not be modified.

Context Menu Item	Description, Pre-Processor Class and Its Parameters, and Post-Processor Class and Its Parameters	
Probe Group Summary	Moves to HP Diagnostics reports. For details, see *HP Diagnostics User's Guide*.	
	Pre-Processor Class:	**Post-Processor Class:**
	None	None
	Parameters:	**Parameters:**
	None	➤ **application_id.** The ID of the application to be used when opening Diagnostics.
		➤ **drill_to.** Internal. This parameter must not be modified.
		➤ **drill_from.** The ID of the application you are drilling from.
		➤ **probe_group_name.** The name of the probe group to be used when opening Diagnostics.

Context Menu Item	Description, Pre-Processor Class and Its Parameters, and Post-Processor Class and Its Parameters	
Probe Summary	Moves to HP Diagnostics reports. For details, see *HP Diagnostics User's Guide*.	
	Pre-Processor Class:	**Post-Processor Class:**
	None	None
	Parameters:	**Parameters:**
	None	➤ **application_id.** The ID of the application to be used when opening Diagnostics. ➤ **drill_to.** Internal. This parameter must not be modified. ➤ **drill_from.** The ID of the application you are drilling from. ➤ **probe_name.** The name of the probe to be used when opening Diagnostics. ➤ **server_name.** The name of the server to be used when opening Diagnostics.
Properties	Opens the Properties dialog box relevant to the CI. For details, see "Working with CIs" in *Model Management*.	
	Pre-Processor Class:	**Post-Processor Class:**
	"Show Properties in VT" on page 790	"Open the Properties Page From the View Traverse" on page 797
	Parameters:	**Parameters:**
	➤ URL	➤ SCROLL ➤ HEIGHT ➤ SLAVE_WIN ➤ WIDTH ➤ RESIZE

Context Menu Item	Description, Pre-Processor Class and Its Parameters, and Post-Processor Class and Its Parameters	
Provider	This context menu option is available in the Service Level Management application. It displays the provider of the selected service.	
	Pre-Processor Class: None	**Post-Processor Class:** None
	Parameters: None	**Parameters:** None
Rename Folder	Opens the Rename Folder dialog box to enable you to rename the folder.	
	Pre-Processor Class: "View Manager (New Folder) Processor" on page 790	**Post-Processor Class:** "General View-manager Context Menu" on page 792
	Parameters: ➤ URL	**Parameters:** ➤ SCROLL ➤ HEIGHT ➤ WIDTH ➤ RESIZE

Context Menu Item	Description, Pre-Processor Class and Its Parameters, and Post-Processor Class and Its Parameters	
SAP Transaction Changes Report	Opens the SAP Transaction Changes report that tracks changes made to a SAP Transaction CI when a transport was modified. For details, see "SAP Transaction Changes Report" in *Solutions and Integrations*.	
	Pre-Processor Class: None **Parameters:** ➤ **reportName.** Internal. Do not modify. ➤ **PASSWORD.** Password of the HP Universal CMDB server administrator. By default, it is the password to the HP Business Availability Center DPS machine. When using an external Universal CMDB, this defines the password used to access the URL of the machine on which the external Universal CMDB is installed. ➤ **USERNAME.** The user used by HP Universal CMDB server administrator. ➤ **PROTOCOL.** Defines the URL of the HP Universal CMDB server. ➤ **PORT.** Defines the port of the HP Universal CMDB server. ➤ **URL_SUFFIX.** URL suffix of the HP Universal CMDB server. By default, it is the suffix of the URL used to access the HP Business Availability Center DPS machine. When using an external Universal CMDB, this defines the suffix of the URL used to access the machine on which the external Universal CMDB is installed.	**Post-Processor Class:** "Open Window" on page 798 **Parameters:** ➤ SCROLL ➤ HEIGHT ➤ SLAVE_WIN ➤ WIDTH ➤ WIN_NAME ➤ RESIZE

Context Menu Item	Description, Pre-Processor Class and Its Parameters, and Post-Processor Class and Its Parameters	
SAP Transport Changes	Opens the SAP Transport Changes report that track changes made to the properties of a SAP Transport CI. For details, see "SAP Transport Changes Report" in *Solutions and Integrations*.	
	Pre-Processor Class:	**Post-Processor Class:**
	None	"Open Window" on page 798
	Parameters:	**Parameters:**
	➤ **reportName.** Internal. Do not modify.	➤ SCROLL
	➤ **PASSWORD.** Password of the HP Universal CMDB server administrator. By default, it is the password to the HP Business Availability Center DPS machine. When using an external Universal CMDB, this defines the password used to access the URL of the machine on which the external Universal CMDB is installed.	➤ HEIGHT ➤ SLAVE_WIN ➤ WIDTH ➤ WIN_NAME ➤ RESIZE
	➤ **USERNAME.** The user used by HP Universal CMDB server administrator.	
	➤ **PROTOCOL.** Defines the URL of the HP Universal CMDB server.	
	➤ **PORT.** Defines the port of the HP Universal CMDB server.	
	➤ **URL_SUFFIX.** URL suffix of the HP Universal CMDB server. By default, it is the suffix of the URL used to access the HP Business Availability Center DPS machine. When using an external Universal CMDB, this defines the suffix of the URL used to access the machine on which the external Universal CMDB is installed.	

Context Menu Item	Description, Pre-Processor Class and Its Parameters, and Post-Processor Class and Its Parameters	
SAR Compliancy Report	Opens the SAR Compliancy report for a Host CI. For details, see "View the SAR Compliancy Report" on page 63.	
	Pre-Processor Class: "SARCompliancyReportPreprocessor" on page 790. **Parameters:** ➤ ALLOWED_CI_TYPES ➤ URL_SUFFIX	**Post-Processor Class:** "Open Window" on page 798 **Parameters:** ➤ SCROLL ➤ HEIGHT ➤ SLAVE_WIN ➤ WIDTH ➤ WIN_NAME ➤ RESIZE

Context Menu Item	Description, Pre-Processor Class and Its Parameters, and Post-Processor Class and Its Parameters	
Server Requests	The option opens the Server Requests View in the HP Diagnostics application with the URL(s) that correspond to the Real User Monitor Business Process Step CIs selected.	
	Pre-Processor Class:	**Post-Processor Class:**
	None	None
	Parameters:	**Parameters:**
	None	➤ **actionProcessorClass.** Internal. This parameter must not be modified.
		➤ **application_id.** The ID of the application to be used when opening Diagnostics.
		➤ **drill_to.** Internal. This parameter must not be modified.
		➤ **action.** Internal. This parameter must not be modified.
		➤ **app_url.** Internal.
		➤ **drill_from.** The ID of the application you are drilling from.
		➤ **type.** Defines the type.
		➤ **app_context.** Internal.
		➤ **actionForward.** The name of the menu to go to. This parameter must not be modified.

Context Menu Item	Description, Pre-Processor Class and Its Parameters, and Post-Processor Class and Its Parameters	
Server Summary	Moves to the Server Summary report in End User Management. The Server Summary report displays data for the servers that are monitored by the Real User Monitor probe. For details, see "Server Summary Report" in *Using End User Management*.	
	Pre-Processor Class:	**Post-Processor Class:**
	None	"Goto RUM Reports" on page 794
	Parameters:	**Parameters:**
	None	➤ menu_item_url
		➤ autoGenerate
		➤ application_id
		➤ filter.server FilterBean.serverName WildCard
		➤ time_view
		➤ reportID
		➤ menu_item_id
		➤ reportID
Session Analyzer	Moves to the Session Analyzer report in End User Management filtered on the selected transaction (or child transactions in the case of a transaction group entity) and the **Past Hour** time period. The Session Analyzer report displays session data for specific applications that were configured for the Real User Monitor in System Availability Management. For details, see "Session Analyzer Report" in *Using End User Management*.	
	Pre-Processor Class:	**Post-Processor Class:**
	None	"Goto RUM Reports" on page 794
	Parameters:	**Parameters:**
	None	➤ menu_item_url
		➤ application_id
		➤ autoGenerate
		➤ filter.selectedApplication
		➤ menu_item_id
		➤ time_view
		➤ reportID

Context Menu Item	Description, Pre-Processor Class and Its Parameters, and Post-Processor Class and Its Parameters	
Set/Unset Acknowledgement	Moves to the Top View tab with the Set/Unset Acknowledgment option selected for the CI in the Dashboard application. For details, see "Acknowledgments Details Dialog Box" on page 109.	
	Pre-Processor Class: "Dashboard Generic URL" on page 785 **Parameters:** ➤ ack.cmdbObjectID ➤ ack.ackID ➤ ack.closeDialog ➤ URL	**Post-Processor Class:** "Open Window" on page 798 **Parameters:** ➤ SCROLL ➤ HEIGHT ➤ SLAVE_WIN ➤ WIDTH ➤ WIN_NAME ➤ RESIZE
Show Business Impact	Display information about the Business CIs impacted by the selected CI, in a separate window.	
	Pre-Processor Class: "Dashboard Generic URL" on page 785 **Parameters:** ➤ CiID ➤ URL	**Post-Processor Class:** "Open Window" on page 798 **Parameters:** ➤ SCROLL ➤ HEIGHT ➤ SLAVE_WIN ➤ WIDTH ➤ WIN_NAME ➤ RESIZE

Context Menu Item	Description, Pre-Processor Class and Its Parameters, and Post-Processor Class and Its Parameters	
Show Business Process Over Time	Opens the BPI Business Process Over Time report in a popup window. For details, see BPI Application Reports in *Using Business Process Insight*.	
	Pre-Processor Class: BPIBusinessProcessOTReportPreprocessor. **Parameters:** None	**Post-Processor Class:** "Open Window" on page 798 **Parameters:** ➤ SCROLL ➤ HEIGHT ➤ SLAVE_WIN ➤ WIDTH ➤ WIN_NAME ➤ RESIZE
Show Business Process Step Summary	Opens the BPI Business Process Step Summary in a popup window. For details, see BPI Application Reports in *Using Business Process Insight*.	
	Pre-Processor Class: BPIBusinessStepOTReportPreprocessor. **Parameters:** None	**Post-Processor Class:** "Open Window" on page 798 **Parameters:** ➤ SCROLL ➤ HEIGHT ➤ SLAVE_WIN ➤ WIDTH ➤ WIN_NAME ➤ RESIZE

Context Menu Item	Description, Pre-Processor Class and Its Parameters, and Post-Processor Class and Its Parameters	
Show Complete Subtree	Moves to the Events tab and displays all CIs (subgroups and monitor CIs) that fall in the branches under this CI.	
	Pre-Processor Class: "Prepare Parameters (Dashboard)" on page 789 **Parameters:** ➤ NODE_ID ➤ strutsAction ➤ selectFilterID ➤ viewType	**Post-Processor Class:** "Switch Dashboard Tabs with Parameters" on page 801 **Parameters:** ➤ TAB_ID

Context Menu Item	Description, Pre-Processor Class and Its Parameters, and Post-Processor Class and Its Parameters	
Show Events	Activates a popup window that lists the events. Select the appropriate event and click the **Show events** button to clear the event from the Dashboard of HP Business Availability Center. A **clear event** is then published on the bus.	
	Pre-Processor Class:	**Post-Processor Class:**
	None	None
	Parameters:	**Parameters:**
	None	➤ **SCROLL.** If set to **1**, a scrolling tab is added to the opened window, if required. If set to **0**, no scrolling tab is added to the open window.
		➤ **HEIGHT.** The opened window height, in pixels.
		➤ **SLAVE_WIN.** If set to **1** it checks that the window closes when the application is closed.
		➤ **Base URL.** The location of file: **/<HP_BAC_web_application_context_name (usually topaz)>/jsps/dash/ClearEventContextMenu.jsp**
		➤ **WIDTH.** The opened window width, in pixels.
		➤ **WIN_NAME.** Specifies the window name.
		➤ **RESIZE.** If set to 1, the window can be resized. If set to 0, the window cannot be resized.

Context Menu Item	Description, Pre-Processor Class and Its Parameters, and Post-Processor Class and Its Parameters	
Show Impacting SAP Transports	Available for SAP-related Transaction CIs and for group CIs. For Transaction CIs, enables you to display the transports that are impacting the selected Transaction CI, with no historical limit to the information. Groups CIs represent the following CIs: SAP Site, SAP Business Process, SAP Business Scenario, SAP J2EE Dispatcher, SAP J2EE Server Process, SAP Process Step, SAP Project, SAP Transaction, SAP Transport Change, Application Component, SAP R/3 Application Server, SAP System, SAP Application Server, SAP J2EE Application Server, SAP R/3 Application Server, and SAP Gateway.	
	Pre-Processor Class: None **Parameters:** None	**Post-Processor Class:** "SapProblemIsolationPostProcessor" on page 799 **Parameters:** ➤ Base URL ➤ timeInterval ➤ HEIGHT ➤ RESIZE ➤ SCROLL ➤ SLAVE_WIN ➤ WIDTH

Context Menu Item	Description, Pre-Processor Class and Its Parameters, and Post-Processor Class and Its Parameters	
Show Path to Root	Moves to the Top View tab with the Show Path to Root option selected for the CI in the Dashboard application. For details, see "Menu Options" on page 75.	
	Pre-Processor Class:	**Post-Processor Class:**
	"Dashboard Generic URL" on page 785	"Open Window" on page 798
	Parameters:	**Parameters:**
	➤ targetNodeIds	➤ SCROLL
	➤ URL	➤ HEIGHT
	➤ isFullScreen	➤ SLAVE_WIN
	➤ filterId	➤ WIDTH
		➤ WIN_NAME
		➤ RESIZE
Show Problematic Subtree	Moves to the Top View tab with the Expand to Problem option selected for the CI in the Dashboard application. For details, see "Menu Options" on page 75.	
	Pre-Processor Class:	**Post-Processor Class:**
	None	"Open Window" on page 798
	Parameters:	**Parameters:**
	➤ **targetNodeIds.** The ID of the target node.	➤ SCROLL
	➤ **URL.** The URL of the new window.	➤ HEIGHT
	➤ **isFullScreen.** Opens a popup window with the path to root. This parameter must not be modified.	➤ SLAVE_WIN
		➤ WIDTH
	➤ **filterId.** The ID of the filter. Internal. This parameter must not be modified.	➤ WIN_NAME
		➤ RESIZE

Context Menu Item	Description, Pre-Processor Class and Its Parameters, and Post-Processor Class and Its Parameters	
Show Processes	Opens the Siebel Process Diagnostics Tool. For details, see "Processes Tool - Advanced Filter Dialog Box" in *Solutions and Integrations*.	
	Pre-Processor Class: "Dashboard Generic URL" on page 785 **Parameters:** ➤ CMDB_NODE_ID ➤ URL ➤ COMMAND	**Post-Processor Class:** "Open Window" on page 798 **Parameters:** ➤ SCROLL ➤ HEIGHT ➤ SLAVE_WIN ➤ WIDTH ➤ WIN_NAME ➤ RESIZE
Show Related CIs	Opens the Related CIs tab, in IT Universe Manager. For details, see "Browse Mode" in *Model Management*.	
	Pre-Processor Class: None **Parameters:** None	**Post-Processor Class:** None **Parameters:** None
Show Running Tasks	Opens the Task Diagnostics Tool view. For details, see "Tasks Diagnostics Tool Report" in *Solutions and Integrations*.	
	Pre-Processor Class: "Dashboard Generic URL" on page 785 **Parameters:** ➤ CMDB_NODE_ID ➤ URL ➤ COMMAND	**Post-Processor Class:** "Open Window" on page 798 **Parameters:** ➤ SCROLL ➤ HEIGHT ➤ SLAVE_WIN ➤ WIDTH ➤ WIN_NAME ➤ RESIZE

Context Menu Item	Description, Pre-Processor Class and Its Parameters, and Post-Processor Class and Its Parameters	
Show SAP Transport Impact	Available for SAP-related Transport CIs. Enables you to display information for all the transactions in the system that impact the selected transport, with no historical limit to the information.	
	Pre-Processor Class: None **Parameters:** None	**Post-Processor Class:** "Open Window" on page 798 **Parameters:** ➤ SCROLL ➤ HEIGHT ➤ SLAVE_WIN ➤ WIDTH ➤ WIN_NAME ➤ RESIZE
Show Subtree Monitors	Opens the Events tab and displays only the CIs with the monitor type, their children CIs and the KPIs attached to those CIs, filtered using the Show Monitors Only filter. For details, see "Filters Page" on page 187.	
	Pre-Processor Class: "Prepare Parameters (Dashboard)" on page 789 **Parameters:** ➤ NODE_ID ➤ strutsAction ➤ selectFilterID ➤ viewType	**Post-Processor Class:** "Switch Dashboard Tabs with Parameters" on page 801 **Parameters:** ➤ TAB_ID

Context Menu Item	Description, Pre-Processor Class and Its Parameters, and Post-Processor Class and Its Parameters	
Show Tasks in Error	Opens the Siebel Task Diagnostics Tool view. For details, see "Tasks Diagnostics Tool Report" in *Solutions and Integrations*.	
	Pre-Processor Class: "Dashboard Generic URL" on page 785 **Parameters:** ➤ CMDB_NODE_ID ➤ URL ➤ COMMAND	**Post-Processor Class:** "Open Window" on page 798 **Parameters:** ➤ SCROLL ➤ HEIGHT ➤ SLAVE_WIN ➤ WIDTH ➤ WIN_NAME ➤ RESIZE
Show Top View	Opens the Dashboard Top View in a popup window, with the view's tree centered on the selected CI.	
	Pre-Processor Class: "Dashboard Generic URL" on page 785 **Parameters:** ➤ targetNodeIds ➤ URL ➤ isFullScreen ➤ filterId	**Post-Processor Class:** "Open Window" on page 798 **Parameters:** ➤ SCROLL ➤ HEIGHT ➤ SLAVE_WIN ➤ WIDTH ➤ WIN_NAME ➤ RESIZE

Context Menu Item	Description, Pre-Processor Class and Its Parameters, and Post-Processor Class and Its Parameters	
Siebel Cross-Performance	Opens the SiteScope Cross-Performance report for Siebel-specific entities. For details, see "Group Performance Report" in *Using System Availability Management*.	
	Pre-Processor Class:	**Post-Processor Class:**
	None	"Open Window" on page 798
	Parameters:	**Parameters:**
	➤ **actionProcessorClass.** The process to run to gather the parameters. This parameter must not be modified.	➤ SCROLL
		➤ HEIGHT
		➤ SLAVE_WIN
	➤ **stepValue.** The time period used to calculate reports (every 5 minutes).	➤ WIDTH
		➤ WIN_NAME
	➤ **TARGET_HOST.** Where the properties of the target host are located.	➤ RESIZE
	➤ **PROFILE_ID.** The SiteScope profile to be used when opening SiteScope.	
	➤ **MONITOR_TYPE.** The type of monitor.	
	➤ **PROFILE_NAME.** The name of the profile.	
	➤ **timeFrame.** The time frame during which the report runs.	
	➤ **URL.** The URL of the new window.	
	➤ **MONITOR_ID.**The ID of the monitor.	
	➤ **NODE_ID.** Converts to **nodeId**.	
	➤ **actionForward.** The name of the menu to go to. This parameter must not be modified.	
	➤ **stepUnit.** The unit of **stepValue**.	

Context Menu Item	Description, Pre-Processor Class and Its Parameters, and Post-Processor Class and Its Parameters	
Siebel Database Breakdown	Opens the Database Breakdown tab in the Business Availability Center for Siebel application. For details, see "Siebel Database Breakdown Configuration Report" in *Solutions and Integrations*.	
	Pre-Processor Class:	**Post-Processor Class:**
	None	None
	Parameters:	**Parameters:**
	None	➤ **menu_item_url.** The location where the parameters are calculated. This parameter must not be modified.
		➤ **actionProcessorClass.** The process to run to gather the parameters. This parameter must not be modified.
		➤ **application_id.** The ID of the application to be used when opening Diagnostics.
		➤ **CMDB_NODE_ID.** Internal. This parameter must not be modified.
		➤ **menu_item_id.** The ID of the menu item.
		➤ **__sieb_mode.** The Siebel mode.
		➤ **actionForward.** Internal.

Context Menu Item	Description, Pre-Processor Class and Its Parameters, and Post-Processor Class and Its Parameters	
Siebel SARM	Opens the SARM - User Trace Breakdown tab in the Business Availability Center for Siebel application. For details, see "Siebel Views" in *Solutions and Integrations*.	
	Pre-Processor Class:	**Post-Processor Class:**
	None	None
	Parameters:	**Parameters:**
	None	➤ **menu_item_url.** The location where the parameters are calculated. This parameter must not be modified.
		➤ **actionProcessorClass.** The process to run to gather the parameters. This parameter must not be modified.
		➤ **application_id.** The ID of the application to be used when opening Diagnostics.
		➤ **CMDB_NODE_ID.** Internal. This parameter must not be modified.
		➤ **menu_item_id.** The ID of the menu item.
		➤ **__sieb_mode.** The Siebel mode.
		➤ **actionForward.** Internal.

Context Menu Item	Description, Pre-Processor Class and Its Parameters, and Post-Processor Class and Its Parameters	
SiteScope Cross-Performance	Opens the SiteScope Cross-Performance report relevant to the CI. For details, see "Cross-Performance Report" in *Using System Availability Management*.	
	Pre-Processor Class: None **Parameters:** ➤ **actionProcessorClass.** The process to run to gather the parameters. This parameter must not be modified. ➤ **stepValue.** The time period used to calculate reports (every 5 minutes). ➤ **TARGET_HOST.** Where the properties of the target host are located. ➤ **PROFILE_ID.** The SiteScope profile to be used when opening SiteScope. ➤ **MONITOR_TYPE.** The type of monitor. ➤ **PROFILE_NAME.** The name of the profile. ➤ **timeFrame.** The time frame during which the report runs. ➤ **URL.** The URL of the new window. ➤ **NODE_ID.** Converts to **nodeId**. ➤ **MONITOR_ID.** The ID of the monitor. ➤ **actionForward.** The name of the menu to go to. This parameter must not be modified. ➤ **stepUnit.** The unit of **stepValue**.	**Post-Processor Class:** "Open Window" on page 798 **Parameters:** ➤ SCROLL ➤ HEIGHT ➤ SLAVE_WIN ➤ WIDTH ➤ WIN_NAME ➤ RESIZE

Context Menu Item	Description, Pre-Processor Class and Its Parameters, and Post-Processor Class and Its Parameters	
SiteScope Quick Report	Available for SiteScope Group and SiteScope Monitor CIs. Opens the SiteScope Quick Report. For details, see "Quick Report" in *Using System Availability Management*.	
	Pre-Processor Class: None	**Post-Processor Class:** "Open Window" on page 798
	Parameters: ➤ **ROOT_PATH.** The root path to SiteScope. ➤ **PROFILE_ID.** The SiteScope profile to be used when opening SiteScope. ➤ **POST_FIX.** The post fix expression to be added to the all URLs. ➤ **ROOT_CLASS.** The name of the root class. ➤ **GROUP_NODE_NAME.** The CIs group in SiteScope. ➤ **HOST_BY.** The SiteScope host. ➤ **MONITOR_ID.** The ID of the monitor. ➤ **ROOT_POSTFIX.** The SiteScope root.html document. ➤ **PATH.** The path that includes all of the SiteScope groups.	**Parameters:** ➤ SCROLL ➤ HEIGHT ➤ SLAVE_WIN ➤ WIDTH ➤ WIN_NAME ➤ RESIZE

Context Menu Item	Description, Pre-Processor Class and Its Parameters, and Post-Processor Class and Its Parameters	
SiteScope Server Centric Report	Available for Windows Resource Monitor and Unix Resource Monitor CIs under specific conditions described in the report description.	
	Opens the Server Centric Report. For details, see "Server-Centric Report" in *Using System Availability Management*.	
	Pre-Processor Class:	**Post-Processor Class:**
	None	"Open Window" on page 798
	Parameters:	**Parameters:**
	➤ **TARGET_HOST.** Where the properties of the target host are located.	➤ SCROLL
		➤ HEIGHT
	➤ **MONITOR_TYPE.** The type of monitor.	➤ SLAVE_WIN
	➤ **HOST_BY.** The SiteScope host.	➤ WIDTH
	➤ **MONITOR_ID.** The ID of the monitor.	➤ WIN_NAME
		➤ RESIZE
SLAs Summary Report	Internal.	
	Pre-Processor Class:	**Post-Processor Class:**
	None	None
	Parameters:	**Parameters:**
	None	None
Systinet Web Service Data	Opens the HP SOA Systinet application for the Web Service. For details, see HP SOA Systinet documentation.	
	Pre-Processor Class:	**Post-Processor Class:**
	None	None

Context Menu Item	Description, Pre-Processor Class and Its Parameters, and Post-Processor Class and Its Parameters	
TCP Application Summary	Opens the TCP Application Summary report and displays data about TCP Applications. For details about the report, see "TCP Application Summary Report" in *Using End User Management*.	
	Pre-Processor Class:	**Post-Processor Class:**
	None	None
	Parameters:	**Parameters:**
	None	➤ **menu_item_url.** The location where the parameters are calculated. This parameter must not be modified.
		➤ **application_id.** The ID of the application to be used when opening Diagnostics.
		➤ **filter.selectedApplications.** The application the CI belongs to.
		➤ **autoGenerate.** Internal. This parameter must not be modified.
		➤ **enabled_when.** Use:
		➤ **tcp_app** to enable the context menu itemonly in the TCP application.
		➤ **web_app** to enable the context menu item only for Web applications.
		➤ **menu_item_id.** The ID of the menu item.
		➤ **time_view.** Internal. This parameter must not be modified.
		➤ **reportID.** The ID number of the report.

Context Menu Item	Description, Pre-Processor Class and Its Parameters, and Post-Processor Class and Its Parameters	
Top View	Moves to the Top View tab for the CI in the Dashboard application. For details, see "Top View Page" on page 136.	
	Pre-Processor Class:	**Post-Processor Class:**
	None	None
	Parameters:	**Parameters:**
	None	None

Context Menu Item	Description, Pre-Processor Class and Its Parameters, and Post-Processor Class and Its Parameters
Transaction Analysis	Moves to the Transaction Analysis report in End User Management filtered on the selected transaction (or child transactions in the case of a transaction group entity) and the **Past Hour** time period. The Transaction Analysis report provides an in-depth picture of the performance of transactions. For details, see "Transaction Analysis Report" in *Using End User Management*.
	By default, appears under the **Go to Report** shortcut menu.

	Pre-Processor Class:	**Post-Processor Class:**
	None	None
	Parameters:	**Parameters:**
	None	➤ **menu_item_url.** The location where the parameters are calculated. This parameter must not be modified.
		➤ **application_id.** The ID of the application to be used when opening Diagnostics.
		➤ **stepValue.** The time period used to calculate reports (every 5 minutes).
		➤ **timeFrame.** The time frame during which the report runs.
		➤ **REQUEST_TYPE.** Internal. This parameter must not be modified.
		➤ **menu_item_id.** The ID of the menu item.
		➤ **MEASUREMENT_1_ID_PREFIX.** Internal. Used to control if the report is filtered by location or by transaction for Business Process Monitor CIs.
		➤ **actionForward.** The name of the menu to go to. This parameter must not be modified.
		➤ **stepUnit.** The unit of **stepValue**.

Context Menu Item	Description, Pre-Processor Class and Its Parameters, and Post-Processor Class and Its Parameters	
Transaction Analysis (continued)		➤ **MEASUREMENT_0_ID_PREFIX.** Internal. Used to control if the report is filtered by location or by transaction for SiteScope CIs
		➤ **actionProcessorClass.** The process to run to gather the parameters. This parameter must not be modified.
		➤ **clearFilters.** Internal.
		➤ **PROFILE_ID.** The SiteScope profile to be used when opening SiteScope.
		➤ **autoUpdatePastTime.** Internal. This parameter must not be modified.
		➤ **MAX_MEASUREMENT_NUM.** Maximum limit of measurements to filter in both SiteScope and Business Process Monitor. Since this menu can be applied also to for any CI that includes measurements in its subtree, then the filtered measurements are counted first. If the maximum has not been reached then the other CIs are counted until MAX_MEASUREMENT_NUM is reached

Context Menu Item	Description, Pre-Processor Class and Its Parameters, and Post-Processor Class and Its Parameters	
Transaction Analysis (continued)		➤ **DIMENSION_ID_PREFIX.** Internal. Controls if the report is filtered by location or by transaction (see MEASUREMENT_1_ID_PREFIX). ➤ **REPORT_NAME.** Specifies to which report to drill down from End User Management (not just from Transaction Analysis). This is the internal name of the EUM reports. It is supported only for legacy reports. For details, see for details, see "Customizing Reports" in *Reports*. ➤ **REPORT_NAME.** The name of the report.
Transaction Over Time	Opens the Transaction Over Time report relevant for the CI.	
	Pre-Processor Class: "Dashboard Generic URL" on page 785 **Parameters:** ➤ FROM_DASHBOARD ➤ SELECTED_MEASUREMENTS1 ➤ CMDB_NODE_ID ➤ URL ➤ REPORT_ID ➤ SELECTED_MEASUREMENTS2 ➤ DATA_MODEL_SET_ TO_VALUE	**Post-Processor Class:** "Open Window" on page 798 **Parameters:** ➤ SCROLL ➤ HEIGHT ➤ SLAVE_WIN ➤ WIDTH ➤ WIN_NAME ➤ RESIZE

Context Menu Item	Description, Pre-Processor Class and Its Parameters, and Post-Processor Class and Its Parameters	
Transaction Summary	Opens the Transaction Summary report relevant for the CI.	
	Pre-Processor Class: DashboardMultiSelectURLPreprocessor **Parameters:** ➤ **FROM_DASHBOARD.** Internal use. ➤ **MULTI_SELECTION_PARAM_KEYS.** Internal use. ➤ **MULTI_SELECTION_TYPES_FILTER.** Internal use. ➤ **DATA_MODEL_SET_TO_BOTH.** Internal use. ➤ **CMDB_NODE_ID.** Internal use. ➤ **URL.** Internal use. ➤ **REPORT_ID.** Internal use.	**Post-Processor Class:** "Open Window" on page 798 **Parameters:** ➤ SCROLL ➤ HEIGHT ➤ SLAVE_WIN ➤ WIDTH ➤ WIN_NAME ➤ RESIZE

Context Menu Item	Description, Pre-Processor Class and Its Parameters, and Post-Processor Class and Its Parameters	
Transaction Summary	Moves to the Transaction Summary Reports area for that CI in the End User Management User Reports application. The Transaction Summary report displays data for specific transactions that were configured for the Real User Monitor in System Availability Management. For details, see "Transaction Summary Report" in *Using End User Management*. By default, appears under the **Go to Report** shortcut menu.	
	Pre-Processor Class: None **Parameters:** None	**Post-Processor Class:** "Goto RUM Reports" on page 794 **Parameters:** ➤ menu_item_url ➤ autoGenerate ➤ monitorName ➤ application_id ➤ filter.selectedcmdbidsfromOuter Application ➤ filter.selectedApplication ➤ time_view ➤ menu_item_id ➤ reportID ➤ filter.vttTree Type4Thecmdbidsfrom OuterApplication

Context Menu Item	Description, Pre-Processor Class and Its Parameters, and Post-Processor Class and Its Parameters	
Transactions Layers View	Opens the Transactions view that displays performance metrics for the transactions that are being executed by your applications. The transaction that corresponds to the selected Business Process Step CI is highlighted. For more information about Diagnostics, see *HP Diagnostics User's Guide*.	
	Pre-Processor Class:	**Post-Processor Class:**
	None	None
	Parameters:	**Parameters:**
	None	➤ **actionProcessorClass.** The process to run to gather the parameters. This parameter must not be modified. ➤ **application_id.** The ID of the application to be used when opening Diagnostics. ➤ **drill_to.** Internal. This parameter must not be modified. ➤ **action.** Internal. This parameter must not be modified. ➤ **app_url.** Internal. ➤ **drill_from.** The ID of the application you are drilling from. ➤ **type.** Defines the type. ➤ **app_context.** Internal. ➤ **actionForward.** The name of the menu to go to. This parameter must not be modified.

Context Menu Item	Description, Pre-Processor Class and Its Parameters, and Post-Processor Class and Its Parameters	
Transactions View	Opens the Transactions view that displays performance metrics for the transactions that are being executed by your applications. The transaction that corresponds to the selected Business Process Step CI is highlighted. For more information about Diagnostics, see *HP Diagnostics User's Guide*.	
	Pre-Processor Class: None **Parameters:** None	**Post-Processor Class:** None **Parameters:** ➤ **actionProcessorClass.** The process to run to gather the parameters. This parameter must not be modified. ➤ **application_id.** The ID of the application to be used when opening Diagnostics. ➤ **drill_to.** Internal. This parameter must not be modified. ➤ **action.** Internal. This parameter must not be modified. ➤ **app_url.** Internal. ➤ **drill_from.** The ID of the application you are drilling from. ➤ **type.** Defines the type. ➤ **app_context.** Internal. ➤ **actionForward.** The name of the menu to go to. This parameter must not be modified.

Context Menu Item	Description, Pre-Processor Class and Its Parameters, and Post-Processor Class and Its Parameters	
Trend	Moves to the Trend Reports area for that CI in the End User Management User Reports application. The Trend Report Wizard generates a trend report that provides a graphical representation of measurement data over a specific time period. For details, see "Trend Reports" in *Reports*. By default, appears under the **Go to Report** shortcut menu.	
	Pre-Processor Class: "Goto Trend Report" on page 787 **Parameters:** ➤ actionProcessorClass ➤ PROFILE_ID ➤ URL ➤ REQUEST_TYPE ➤ NODE_ID ➤ MEASUREMENT_1_ID_ PREFIX ➤ MAX_MEASUREMENT_NUM ➤ actionForward ➤ REPORT_NAME ➤ DIMENSION_ID_PREFIX ➤ MEASUREMENT_0_ID_ PREFIX	**Post-Processor Class:** "Open Window" on page 798 **Parameters:** ➤ SCROLL ➤ HEIGHT ➤ SLAVE_WIN ➤ WIDTH ➤ WIN_NAME ➤ RESIZE

Context Menu Item	Description, Pre-Processor Class and Its Parameters, and Post-Processor Class and Its Parameters	
Triage	Moves to the Triage Reports area for that CI in the End User Management User Reports application. The Triage report displays transaction data for Business Process Monitor, and Real User Monitor profiles for the past day. The data is organized by location. For details, see "Triage Report" in *Using End User Management*. By default, appears under the **Go to Report** shortcut menu.	
	Pre-Processor Class: None **Parameters:** None	**Post-Processor Class:** "Goto Triage Reports" on page 793 **Parameters:** ➤ menu_item_url ➤ application_id ➤ menu_item_id ➤ reportID
Triage Raw Data	Opens the Triage Raw Data report. For details about the report, see "Triage Raw Data Report" in *Using End User Management*.	
	Pre-Processor Class: None **Parameters:** None	**Post-Processor Class:** "Goto Triage Reports" on page 793 **Parameters:** ➤ menu_item_url ➤ application_id ➤ menu_item_id ➤ reportID

Context Menu Item	Description, Pre-Processor Class and Its Parameters, and Post-Processor Class and Its Parameters	
Web Service Health	Moves to the Health Report of the CI in the Business Availability Center for SOA application. For details, see "Health Report" in *Solutions and Integrations*. By default, appears under the **Go to Report** shortcut menu.	
	Pre-Processor Class:	**Post-Processor Class:**
	None	None
	Parameters:	**Parameters:**
	None	➤ **menu_item_url.** The location where the parameters are calculated. This parameter must not be modified. ➤ **application_id.** The ID of the application to be used when opening Diagnostics. ➤ **autoGenerate.** Internal. This parameter must not be modified. ➤ **VT_NODES_SYMBOL_IDS_KEY.** The symbol ID of the CI, to which the context menu item is attached, in the view. ➤ **menu_item_id.** The ID of the menu item. ➤ **report_ID.** The ID of the report that is opened by the context menu item. ➤ **filter.fromDashboard.** Used to add a dynamic value to the URL. ➤ **filter.selectedCIsType.** Internal. This parameter must not be modified.

🔍 List of Pre-Processor Classes

Pre-processor classes correspond to specific menus. In addition, a pre-processor class specifies the actions performed before accessing the database.

This section includes the following topics:

Dashboard Generic URL

Builds a generic URL using the following parameters (context menu items might use a subset of the listed parameters):

Parameter	Definition
ack.ackID	The location of the acknowledgment ID.
ack.closeDialog	Internal. This parameter must not be modified.
ack.cmdbObjectID	The location of the CMDB object ID.
autoGenerate	Internal parameter.
COMMAND	Internal parameter.
CMDB_NODE_ID	Internal. This parameter must not be modified.
CiID	Internal. This parameter must not be modified.

Parameter	Definition
DATA_MODEL_SET_ TO_VALUE	Internal parameter.
filter.fromDashboard	Used to add a dynamic value to the URL.
filterId	The ID of the filter. Internal. This parameter must not be modified.
filter.selectedVTIds	Used to add a dynamic value to the URL.
filter.timeBarBean.view	Internal.
FROM_DASHBOARD	Internal parameter.
GRAPH_PROVIDER	Internal.
isFullScreen	Opens a popup window with the path to root. This parameter must not be modified.
LoginBtn	Internal. This parameter must not be modified.
LoginName	The name of the user used to login the Deep Transaction Tracking application.
loginURL	The URL of the Deep Transaction Tracking application.
NODE_ID	Converts to **nodeId**.
parentCmdbId	Internal.
Password	The password used to login to the Deep Transaction Tracking application.
pm.CMDBObjectID	Internal.
pm.VTObjectID	Internal.
popUp	Internal. This parameter must not be modified.
reportID	The ID number of the report.
REPORT_ID	Internal parameter.
selectedTxnClasses	Internal.

Parameter	Definition
SELECTED_MEASUREMENTS1	Internal parameter.
SELECTED_MEASUREMENTS2	Internal parameter.
TX_NAME	Internal.
targetNodeIds	The ID of the target node.
URL	The URL of the new window.

Goto Trend Report

Context menu processor that deals with the Trend report drill down functions. It uses the following parameters (context menu items might use a subset of the listed parameters).

Parameter	Description
actionProcessorClass	Internal. This parameter must not be modified.
PROFILE_ID	Internal. This parameter must not be modified.
URL	The URL of the new window.
REQUEST_TYPE	Internal. This parameter must not be modified.
NODE_ID	Converts to **nodeId**.
MEASUREMENT_1_ID_PREFIX	Internal. Used to control if the report is filtered by location or by transaction for Business Process Monitor CIs.
MAX_MEASUREMENT_NUM	Maximum limit of measurements to filter in both SiteScope and Business Process Monitor.
actionForward	Internal. This parameter must not be modified.
REPORT_NAME	Internal. This parameter must not be modified.

Parameter	Description
DIMENSION_ID_PREFIX	Internal. Specifies to which report to drill down in the Trend report not from the Availability and Response Time of Business Process Monitor but for other KPIs, such as Download Time or DNS Time.
MEASUREMENT_0_ID_PREFIX	Internal. Specifies to which report to drill down in the Trend report not from the Availability and Response Time of Business Process Monitor but for other KPIs, such as Download Time or DNS Time.

Goto SiteScope

Opens the SiteScope Application using the following parameters (context menu items might use a subset of the listed parameters):

Parameter	Description
GROUP_NODE_NAME	The CIs group in SiteScope.
HOST_BY	The SiteScope host.
PATH	The path that includes all of the SiteScope groups.
POST_FIX	The post fix expression to be added to the all URLs.
PROFILE_ID	The SiteScope profile to be used when opening SiteScope.
ROOT_PATH	The root path to SiteScope.
ROOT_POSTFIX	The SiteScope root.html document.

ITU Internal (Open Modal Window)

ITU represents the View manager tab in the CMDB application. The class deals with the View Manager tab. The parameter is:

Parameter	Description
IURL	The URL of the HP Business Availability Center machine.

Netscout URL

Deals with Netscout URL. The class does not use parameters.

Prepare Parameters (Dashboard)

Prepares parameters, in JavaScript. Those parameters are used by Dashboard. Context menu items might use a subset of the listed parameters. The parameters are:

Parameter	Description
NODE_ID	Converts to **nodeId**.
nodeType	This parameter must not be modified.
selectFilterID	Dynamic parameter used by the class.
strutsAction	Dynamic parameter used by the class.
viewType	Dynamic parameter used by the class.

RunBookPreprocessor

For CIs whose CI type is mapped to an HP Operations Orchestration (OO) run book, opens the Related Run Books page in a new window using the following parameters:

Parameter	Description
FROM_DASHBOARD	Internal. This parameter must not be modified.
CMDB_NODE_ID	Internal. This parameter must not be modified.

Parameter	Description
SUSPECT_NAME	Internal. This parameter must not be modified.
CI_TYPE	Internal. This parameter must not be modified.
URL	The URL of the new window.

SARCompliancyReportPreprocessor

Opens the SAR Compliancy report for a Host CI using the following parameters:

Parameter	Description
ALLOWED_CI_TYPES	CI types for which the report is enabled.
URL_SUFFIX	The relative URL of the report.

Show Properties in VT

When you select the Properties option in the View Explorer context menu, the Properties dialog box of the selected CI is displayed. The parameter is:

Parameter	Description
URL	The URL of the new window.

View Manager (New Folder) Processor

Deals with the View Manager tab. The parameter is:

Parameter	Description
URL	The URL of the new window.

🔍 List of Post-Processor Classes

Post-processor classes are build to correspond to specific menus. In addition, a post-processor class specifies the actions that are performed after accessing the database.

This section includes the following topics:

CallJSOnPagePostProcessor

Context menu processor to expand Top View levels. The parameters are:

Parameter	Description
JS_CALL_PARAMS	Internal. This parameter must not be modified.
JS_METHOD_NAME	Internal. This parameter must not be modified.

Edit View (ITU)

Context menu processor that deals with the View Manager tab in the CMDB application. The parameter is:

Parameter	Description
PERMISSION_TYPE	Internal. This parameter must not be modified.

General View-manager Context Menu

Context menu processor that deals with the View Manager tab in the CMDB application. Context menu items might use a subset of the listed parameters. The parameters are:

Parameter	Description
HEIGHT	The opened window height, in pixels.
RESIZE	If set to 1, the window can be resized. If set to 0, the window cannot be resized.
SCROLL	If set to **1**, a scrolling tab is added to the opened window, if required. If set to 0, no scrolling tab is added to the open window.
WIDTH	The opened window width, in pixels.

Goto KPIs Over Time Report

Context menu processor that deals with opening the KPIs Over Time report.

Goto Trend Report

Context menu processor that deals with the Trend report drill down functions. This class does not have parameters.

Goto Triage Reports

Context menu processor that deals with opening the Triage report. Context menu items might use a subset of the listed parameters. The parameters are:

Parameter	Description
application_id	The ID of the application to be used when opening Diagnostics.
filter.selectedProfileId	Internal. This parameter must not be modified.
menu_item_id	The ID of the menu item.
menu_item_url	The location where the parameters are calculated. This parameter must not be modified.
reportID	The ID number of the report.

Goto RUM Event Analysis Reports

Context menu processor that deals with opening the RUM Event Analysis report. Context menu items might use a subset of the listed parameters. The parameters are:

Parameter	Description
autoGenerate	Internal parameter of the RUM Event Analysis report.
filter.performance	Internal. This parameter must not be modified.
filter.selectedApplication	Internal. This parameter must not be modified.
filter.timeBarBean.view	Internal. This parameter must not be modified.
popUp	Internal. This parameter must not be modified.

Parameter	Description
reportID	The ID number of the report.
selectedEventId	Internal. This parameter must not be modified.
URL	Internal. This parameter must not be modified.

Goto RUM Reports

Context menu processor that deals with opening the Real User Monitor report. Context menu items might use a subset of the listed parameters. The parameters are:

Parameter	Description
application_id	The ID of the application to be used when opening Diagnostics.
autoGenerate	Internal parameter of the Raw Data Over Time report.
filter.applicationErrors	Internal. This parameter must not be modified.
filter.events	Internal. This parameter must not be modified.
filter.httpErrors	Internal. This parameter must not be modified.
filter.performance	Internal. This parameter must not be modified.
filter.httpErrors	Internal. This parameter must not be modified.
filter.selectedApplication	Internal. This parameter must not be modified.
filter.selectedApplication Errors	Internal. This parameter must not be modified.
filter.selectedcmdbidsfro mOuter Application	Internal. This parameter must not be modified.
filter.server FilterBean.serverName WildCard	Internal. This parameter must not be modified.

Parameter	Description
filter.vttTree Type4Thecmdbidsfrom OuterApplication	Internal. This parameter must not be modified.
filter.selectedEvents	Internal. This parameter must not be modified.
filter.selectedHttpErrors	Internal. This parameter must not be modified.
isContainer	Internal. This parameter must not be modified.
IS_POPUP	Internal. This parameter must not be modified.
menu_item_id	The ID of the menu item.
menu_item_url	The location where the parameters are calculated. This parameter must not be modified.
monitorName	Internal. This parameter must not be modified.
problematicCI	Internal.
reportID	The ID number of the report.
reportType	Defines which of the results to take from the PNR KPI that relays in the SLM tab.
selectedApplication	Internal. This parameter must not be modified.
selectedActionId	Internal. This parameter must not be modified.
selectedTab	Internal. This parameter must not be modified.
time_view	Internal. This parameter must not be modified.
__UIF_FORM	Internal. This parameter must not be modified.
__UIF_APPLICATION	Internal. This parameter must not be modified.

Goto SOA Health Reports

Context menu processor that deals with opening the HP Business Availability Center for SOA reports. Context menu items might use a subset of the listed parameters. The parameters are:

Parameter	Description
application_id	The ID of the application to be used when opening Diagnostics.
autoGenerate	Internal parameter of the Raw Data Over Time report.
filter.fromDashboard	Internal. This parameter must not be modified.
menu_item_id	The ID of the menu item.
menu_item_url	The location where the parameters are calculated. This parameter must not be modified.
reportID	The ID number of the report.
VT_NODES_ SYMBOL_IDS_KEY	Internal. The symbol ID of the CI, to which the context menu item is attached, in the view.
filter.selectedCIsType	Internal.

ITU Internal (Open Modal Window)

Context menu processor that deals with the View Manager tab in the CMDB application. Context menu items might use a subset of the listed parameters. The parameters are:

Parameter	Description
HEIGHT	The opened window height, in pixels.
PARAM0	This parameter is for internal use only. This parameter must not be modified.

Parameter	Description
PARAM1	This parameter is for internal use only. This parameter must not be modified.
PARAM2	This parameter is for internal use only. This parameter must not be modified.
PARAM3	This parameter is for internal use only. This parameter must not be modified.
PARAM4	This parameter is for internal use only. This parameter must not be modified.
PERMISSION_TYPE	Internal. This parameter must not be modified.
RESIZE	If set to 1, the window can be resized. If set to 0, the window cannot be resized.
SCROLL	If set to **1**, a scrolling tab is added to the opened window, if required. If set to 0, no scrolling tab is added to the open window.
WIDTH	The opened window width, in pixels.

Locate Search Result Elements in the View Traverse

Context menu processor that deals with the search capability in View Explorer. This class does not have parameters.

Open the Properties Page From the View Traverse

When you select the Properties option in the View Explorer context menu, the Properties dialog box of the selected CI is displayed. Context menu items might use a subset of the listed parameters. The parameters are:

Parameter	Description
HEIGHT	The opened window height, in pixels.
RESIZE	If set to **1**, the window can be resized. If set to **0**, the window cannot be resized.

Parameter	Description
SCROLL	If set to **1**, a scrolling tab is added to the opened window, if required. If set to **0**, no scrolling tab is added to the open window.
SLAVE_WIN	If set to **1**, it checks that the window closes when the application is closed.
WIDTH	The opened window width, in pixels.

Open Window

General post processor to open a request in a new window, rather than in the application frame. Context menu items might use a subset of the listed parameters. The parameters are:

Parameter	Description
ALERTDATE	The date when the selected SAP alert occurred.
ALERTTIME	The time of the selected SAP alert.
ALINDEX	The internal handle for the SAP alert.
ALSYSID	The SAP system which the alert came from.
ALUNIQNUM	The ID number of the SAP alert, as appears on the SAP system.
HEIGHT	The opened window height, in pixels.
MSEGNAME	Contains the type of the monitor and connection parameters (for example: SAP_CCMS_calderone_MI6_00).
MSG	The name of the SAP alert.
RESIZE	If set to 1, the window can be resized. If set to 0, the window cannot be resized.

Parameter	Description
SapConnId	Uses the following syntax: <host name>:<user name> to connect to a specific SiteScope monitor to retrieve the SAP alert. host name is the name of the host that contains the R3 server where the SAP alert originated. user name is the name of the user used to access the server to which the SiteScope monitor is connected.
SCROLL	If set to **1**, a scrolling tab is added to the opened window, if required. If set to 0, no scrolling tab is added to the open window.
SLAVE_WIN	If set to **1** it checks that the window closes when the application is closed.
szTargetHostIP	The IP of the SiteScope that sent the sample.
szTargetHostName	The name of the SiteScope host that sent the sample.
WIDTH	The opened window width, in pixels.
WIN_NAME	Specifies the window name.

SapProblemIsolationPostProcessor

Context menu processor that deals with Problem Isolation in HP Business Availability Center for SAP Applications. The parameters are:

Parameter	Description
Base URL	The location of file: **/<HP_BAC_web_application_context_name (usually topaz)>/jsps/dash/ClearEventContextMenu.jsp**
timeInterval	The period of time for which the historical information is kept for group CIs. **Default:** 1 week

Parameter	Description
HEIGHT	The opened window height, in pixels.
RESIZE	If set to 1, the window can be resized. If set to 0, the window cannot be resized.
SCROLL	If set to **1**, a scrolling tab is added to the opened window, if required. If set to 0, no scrolling tab is added to the open window.
SLAVE_WIN	If set to **1** it checks that the window closes when the application is closed.
WIDTH	The opened window width, in pixels.

Show All the Element Neighbors

Context menu processor that deals with View Explorer. This class does not have parameters.

Switch Application in BAC

Context menu processor for drilling down from one application to another. This class does not have parameters.

Switch Dashboard Tabs

Context menu processor that switches tabs in the Dashboard application. For examples, opening the appropriate Filters tab from the Console tab. The parameter is:

Parameter	Description
TAB_ID	The ID of the tab. The tab ID is available in the application framework. If you change the tab ID, it is recommended to change the name of the context menu item to match the name of the tab that is opened by this option.

Switch Dashboard Tabs with Parameters

Context menu processor that passes internal parameters when switching from one tab to another in Dashboard. The parameter is:

Parameter	Description
TAB_ID	The ID of the tab. The tab ID is available in the application framework. If you change the tab ID, it is recommended to change the name of the context menu item to match the name of the tab that is opened by this option.

Window

Context menu processor that deals with opening new windows. Context menu items might use a subset of the listed parameters. The parameters are:

Parameter	Description
HEIGHT	The opened window height, in pixels.
RESIZE	If set to **1**, the window can be resized. If set to **0**, the window cannot be resized.
SCROLL	If set to **1**, a scrolling tab is added to the opened window, if required. If set to 0, no scrolling tab is added to the open window.
SLAVE_WIN	If set to **1** it checks that the window closes when the application is closed.
WIDTH	The opened window width, in pixels.
WIN_NAME	Specifies the window name.

🔖 Context Menu Items User Interface

This section describes:

➤ Context Menu Item Details Dialog Box on page 802

➤ Context Menu Item Repository page on page 806

➤ Pre-Processor Parameter Details Dialog Box on page 809

➤ Post-Processor Parameter Details Dialog Box on page 810

🔖 Context Menu Item Details Dialog Box

Description	Enables you to modify the information or enter new information for the context menu item. You can also modify existing information or add new information about the pre-processor and post-processor parameters.
	To Access: In the Context Menu Item Repository page, click the **New** button, or click the relevant **Edit** button for a cloned or overridden context menu item.
Important Information	It is not recommended to: ➤ Add new parameters to the pre-processor or post-processor class. ➤ Make changes to a pre-processor or post-processor class as it might change its behavior. Classes are built for specific context menus.
Included in Tasks	"Customize a Context Menu Item" on page 719

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
Display Name	The name of the context menu item.
New	Click the **New** button to enter new menu entity details. For more details, go to "Menu Entity Details Dialog Box" on page 715.
Post-processor Class	The name of the post-processor class to be used to perform the corresponding action **after** accessing the database, when this menu option is selected from the item menu options.
	The list of parameters used by the post-processor class for the current context menu item is provided in the Post-processor Parameters area. For details, see "Post-processor Parameters Area" on page 804.
	For details about the post-processor classes and their parameters, see "List of Post-Processor Classes" on page 791.
Pre-processor Class	The name of the pre-processor class to be used to perform the corresponding action **before** accessing the database, when this menu option is selected from the item menu options.
	The list of parameters used by the pre-processor class for the current context menu item is provided in the Pre-processor Parameters area. For details, see "Pre-processor Parameters Area" on page 804.
	For details about the pre-processor classes and their parameters, see "List of Pre-Processor Classes" on page 785.

Pre-processor Parameters Area

Description	Lists the parameters for the pre-processor class.
Important Information	The parameters listed in this area belond to the class listed in the Pre-processor Class field.
	For details about the pre-processor classes and their parameters, see "List of Pre-Processor Classes" on page 785.

The area contains the following items:

GUI Element (A-Z)	Description
<Menu entity>	Click the **Delete** button ⊠ to delete an existing menu entity details.
	Click the **Edit** button ✎ to modify existing menu entity details. For more details, go to "Menu Entity Details Dialog Box" on page 715.
New	Click the **New** button to enter new parameters in the Pre-Processor Parameter Details dialog box.

Post-processor Parameters Area

Description	Lists the parameters for the post-processor class.
Important Information	The parameters listed in this area belond to the class listed in the Post-processor Class field.
	For details about the post-processor classes and their parameters, see "List of Post-Processor Classes" on page 791.

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
<Menu entity>	Click the **Delete** button ![X] to delete an existing menu entity details.
	Click the **Edit** button ![pencil] to modify existing menu entity details. For more details, go to "Menu Entity Details Dialog Box" on page 715.
New	Click to enter new parameters in the Post-Processor Parameter Details dialog box.

🔍 **Context Menu Item Repository page**

Description	Displays the list of factory (predefined) and customized context menu items. Those context menu items are available throughout HP Business Availability Center to help you navigate to other pages. Enables an advanced user to modify existing repository context menu items and create new ones. **To Access: Admin** > **Dashboard** > **Repositories** > **Context Menu Items**
Important Information	For a detailed scenario that includes creating a context menu item, see "Create a Dynamic URL – Scenario" on page 493 and view the appropriate steps. Cloning or overriding an existing context menu item, or creating a new context menu item, adds the corresponding context menu item entry to the Custom Context Menu Items list. You can then customize the context menu item to your organization's specifications. For details, see "Customize a Context Menu Item" on page 719. You can modify the information or enter new information for the context menu item. You can also modify existing information or add new information about the pre-processor and post-processor parameters. For details, see: ➤ "Context Menu Item Details Dialog Box" on page 802. ➤ "Pre-Processor Parameter Details Dialog Box" on page 809. ➤ "Post-Processor Parameter Details Dialog Box" on page 810. A list of the context menu items and their details is available in "List of Context Menu Items" on page 721.
Included in Tasks	"Customize a Context Menu Item" on page 719

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
	Click to display help on the context menu.
	Select a context menu item in the Custom Context Menu Items area, and click the button to open the **Context Menu Items Details** dialog box. For details, see "Context Menu Item Details Dialog Box" on page 802.
Clone	In the Factory Context Menu Items or in the Custom Context Menu Items areas, select a context menu item, and click the **Clone** button to create a new context menu item by cloning. You clone an existing context menu item to use it as a template. The original context menu item is still available. For details, see "Customize a Context Menu Item" on page 719.
	Note: Change the name of the context menu item you have cloned to make sure you attach the cloned context menu item and not the original context menu item to a specific KPI.
Display Name	The name of the context menu item.

GUI Element (A-Z)	Description
New Item	Click to create a new context menu item. For details, see "Customize a Context Menu Item" on page 719.
Override	In the Factory Context Menu Items or in the Custom Context Menu Items areas, select a context menu item, and click the **Override** button to edit an existing context menu item. You override an existing context menu item to replace it with a customized rule. The original context menu item is disabled. The overriding context menu item and the original context menu item have the same context menu ID. The context menu item in the Factory Context Menu Items area displays the following indication: **Note:** If you later delete the custom context menu item that overrode the factory context menu item, the original factory context menu item is automatically restored.

🔍 Pre-Processor Parameter Details Dialog Box

Description	Enables you to modify existing information or enter new information about the pre-processor parameter. **To Access:** In the Context Menu Item Details dialog box, click **New** or click the **Edit** button 🖉 for the appropriate parameter.
Important Information	For details about the pre-processor classes and their parameters, see "List of Pre-Processor Classes" on page 785.
Included in Tasks	"Customize a Context Menu Item" on page 719

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
Convert To	This key is used if the key is a parameter in the URL. In this case, the URL is added with the converted key and the value.
Key	The parameter's key. The **GenericURLPreprocess** parameter has certain predefined keys: **URL_SUFFIX** and **URL** (or a composition of **PROTOCOL**, **HOST**, and **PORT**).
Value	The parameter's value. In case of a URL key, it can be a certain URL (for example: http://www.hp.com) The value can also be retrieved from the CI using an Escaping sequence form; for example: NODE-ID to get the CI ID.

✎ Post-Processor Parameter Details Dialog Box

Description	Enables you to modify existing information or enter new information about the post-processor parameter.
	To Access: In the Context Menu Item Details dialog box, click **New** or click the **Edit** button ✎ for the appropriate parameter.
Important Information	For details about the post-processor classes and their parameters, see "List of Post-Processor Classes" on page 791.
Included in Tasks	"Customize a Context Menu Item" on page 719

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
Key	The parameter's key.
Value	The parameter's value. The value can also be retrieved from the CI using an Escaping sequence form; for example: NODE-ID to get the CI ID.

23

Tooltip Repository

This chapter provides information about theDashboard Tooltip Repository.

This chapter includes:

Concepts

➤ Tooltip Repository Overview on page 812

Tasks

➤ Customize a Tooltip on page 814

Reference

➤ List of Tooltips on page 818

➤ List of Tooltip Parameters on page 868

➤ List of Tooltip Parameter Attributes on page 878

➤ Tooltips User Interface on page 879

🎲 Tooltip Repository Overview

The Tooltip Repository page displays the list of factory (predefined) tooltips available throughout Dashboard to specify how source data is imported and handled by Dashboard Administration, and to determine appearance and functionality for the CIs in the presentation layer.

Each KPI under a CI has a Details tooltip to display additional information for the CI.

Most of the tooltips used in Dashboard correspond directly to a rule. Each tooltip class has the same ID number as the rule it is associated with. For example, for the rule ID #2, Best Child Rule, there is a corresponding tooltip with ID #2, Best Child sentence.

Tooltips are assigned to CIs according to the rule used for the KPI. Most rules have an associated tooltip (referred to as the rule sentence), that is connected to the associated rule. Note that if you add a new rule to the Business Rule Repository, a new tooltip is automatically created for it. To delete a tooltip that is connected to a rule, you must delete the rule. For more information on the Tooltip Repository or about creating or editing tooltips, see "Tooltip Repository page" on page 879.

Note:
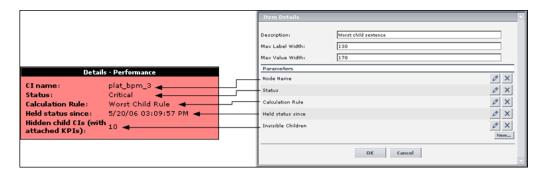
➤ To delete a customized tooltip, you must delete the corresponding rule.

➤ A tooltip and its rule have the same ID number and the same name.

➤ The order of the parameters in the Tooltip Parameters Details page reflects the order of the corresponding information in the tooltip in the application.

➤ The last sample time is not necessarily the same as the last update time because the last sampling might not have any impact on the status.

➤ If you are using HP Operations Manager *i* with Business Availability Center, then the Tooltip Repository page contains OMi-related tooltips. For more information, see *Using HP Operations Manager i*.

Tooltip Parameters

Each tooltip definition includes parameters. The parameters correspond to the type of information displayed in the tooltip in the Dashboard and Service Level Management applications. The order of the parameters in the tooltip definition corresponds to the order of the information in the displayed tooltip. For information on defining/editing tooltip parameters, see "Tooltip Repository page" on page 879.

The tooltip parameters correspond to the information displayed in the tooltip.

For example, the parameters of the Worst Child Sentence tooltip are displayed as entries in the tooltip and are listed in the same order as the order of the parameters in the tooltip definition.

Advanced Users

You can modify existing repository objects and create new ones. This may be necessary when you want to customize the way information is presented in Dashboard, to fit the needs of your organization; or you may need to create new objects when integrating data from a new external system into Dashboard.

🔧 Customize a Tooltip

When you create a rule, a tooltip is automatically created. You can override or copy an existing tooltip and then modify it.

For a detailed scenario that includes creating tooltips, see "Create a KPI, Rule, and Tooltip – Example" and view the appropriate steps.

This task includes the following steps:

➤ "Create a Custom Tooltip" on page 814

➤ "Specify the Tooltip Details" on page 815

➤ "Change the Color of the Tooltip Border and Header" on page 817

➤ "Change the KPI Status Icon" on page 817

➤ "Specify the Tooltip Parameter Details" on page 818

➤ "Set a Tooltip and its Parameters Back to Default" on page 818

1 Create a Custom Tooltip

You can:

➤ clone (copying) a factory or customized tooltip to use is as a template. To clone a tooltip, select a tooltip and click **Clone** in the Tooltip Repository page.

➤ override an existing tooltip. When you override an existing tooltip, a copy appears in the **Custom Tooltips** area and the existing tooltip is marked with (Overridden) in the **Factory Tooltips** area.

For details, see "Tooltip Repository page" on page 879.

You can then modify the tooltip to your specifications. For details, see "Tooltip Details Dialog Box" on page 881.

Note:

➤ To delete a customized tooltip, you must delete the corresponding rule.

➤ A tooltip and its rule have the same ID number and the same name.

2 Specify the Tooltip Details

In the Tooltip Details window, you can either modify the information or enter new information. For details on the possible values, see "Tooltip Details Dialog Box" on page 881.

You can also modify existing information or enter new information about the tooltips parameter details. For details, see "Tooltip Parameter Details Dialog Box" on page 882.

Example: Add a Last Sample Time Entry in a Tooltip

To display the last time the sampling was made in a tooltip, you must:

➤ keep the last sample information. For details, see "Set Up Rules to Display the Last Sample Details" on page 576.

➤ add the Last Sample Time to the tooltip of monitor rules only

Note: The last sample time is not necessarily the same as the last update time because the last sampling might not have any impact on the status.
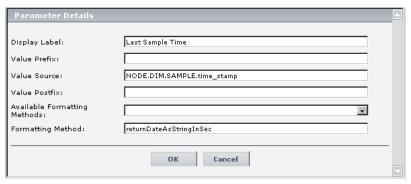
To add Last Sample Time entry in a tooltip:

a Select **Admin** > **Dashboard**.

b Click the down arrow that appears when you move the mouse pointer over the **Repositories** tab title.

c Select the **Tooltips** tab menu option to open the Tooltips page.

d Override or clone the tooltip in which you want to display the last sample time.

 e Click the relevant **Edit Entity** button , to open the Tooltip Details dialog box.

 f Click **New** to open the Parameter Details dialog box.

 g In the **Display Label** box, enter Last Sample Time.

 h In the **Value Source** box, enter NODE.DIM.SAMPLE.time_stamp.

 i In the **Available Formatting Method** list, select returnDateAsStringInSec. The value is automatically entered in the **Formatting Method** box.

 j Click **OK** to save the changes.

 The tooltip displays the following information:

3 **Change the Color of the Tooltip Border and Header**

A KPI tooltip border and header has a default color, specified in the **Color** box of the KPI's appropriate parameter, for each one of the ranges specified in the **From/To** boxes. For example: when the **Performance** KPI has the OK status, the tooltip would display the following colors C9E7B2;78B24A:

Details - Performance	
CI name:	siebel 7.7 whistle echannel
Status:	OK
Calculation Rule:	Worst Child Rule
Held status since:	5/28/06 10:50:09 PM

To modify the default color of the tooltip's header and border, open the definition of the appropriate parameter and enter different colors in the **Color** box. For details, see "Parameter Details Dialog Box (KPIs)" on page 550.

4 **Change the KPI Status Icon**

Different icons are used for the KPI status for each range specified in the **From/To** fields.

To customize the KPI status icons, create a new set of icons and, where applicable, add your icons to the appropriate directories and redirect the KPI's status parameters to those icons or replace the default icons with your customized icons using the same names.

For details, see "Change the KPI Status Icons" on page 394.

5 Specify the Tooltip Parameter Details

In the Parameter Details window, you can either modify existing information or enter new information about the tooltip parameter. For details on the possible values, see "Tooltip Parameter Details Dialog Box" on page 882.

6 Set a Tooltip and its Parameters Back to Default

If you have modified a tooltip or its parameters, you might need to return the tooltip and its parameters to their defaults.

To set a tooltip and its parameters back to default, select **Admin** > **Dashboard** > **Repositories** > **Tooltips**. In the **Custom Tooltips** area, delete the copy of the tooltip you want to return to default and click **OK**. The tooltip and its parameters are returned to their defaults.

🔖 List of Tooltips

This section includes the following topics:

➤ "List of Tooltips, Associated Rules, and Parameters" on page 819

➤ "Example of a Number of Open Incidents Sentence Tooltip" on page 867

➤ "Example of a SiteScope EMS Rule Tooltip" on page 868

For details on configuring the tooltips, see "Tooltips User Interface" on page 879.

📌 List of Tooltips, Associated Rules, and Parameters

This section lists the tooltips available in the Tooltip Repository, their associated rules, and parameters.

Tooltip (Tooltip #)	Associated Rule	Tooltip Parameters
API Duration-Based Sample Rule Sentence (501)	"API Duration-Based Sample Rule" on page 578	➤ Node Name ➤ Status ➤ Value ➤ Calculation Rule ➤ Held Status Since
API Group and Sibling Rule Sentence (500)	"API Group and Sibling Rule" on page 578	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Held Status Since
API Sample Rule Sentence (502)	"API Sample Rule" on page 579	➤ Node Name ➤ Status ➤ Value ➤ Calculation Rule ➤ Held Status Since
Average Availability of Weighted Volume (55)	"Average Availability of Weighted Volume" on page 579	➤ Node Name ➤ Availability ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Major ➤ Minor ➤ Warning ➤ Informational

Tooltip (Tooltip #)	Associated Rule	Tooltip Parameters
Average Latency of Weighted Volume (83)	"Average Latency of Weighted Volume" on page 579	➤ Node Name ➤ Latency ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Major ➤ Minor ➤ Warning ➤ Informational
Average Network of Weighted Volume (93)	"Average Network of Weighted Volume" on page 579	➤ Node Name ➤ Network Availability ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Major ➤ Minor ➤ Warning ➤ Informational
Average of Converted Performance Results in % (63)	"Average of Converted Performance Results in %" on page 580	➤ Node Name ➤ Performance ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Major ➤ Minor ➤ Warning ➤ Informational

Tooltip (Tooltip #)	Associated Rule	Tooltip Parameters
Average of Values for KPIs (31)	"Average of Values" on page 580	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Total ➤ Major ➤ Minor ➤ Warning ➤ Informational
Average Performance of Weighted Volume in % (64)	"Average Performance of Weighted Volume in %" on page 580	➤ Node Name ➤ Performance ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Major ➤ Minor ➤ Warning ➤ Informational
Average Performance of Weighted Volume in Seconds (65)	"Average Performance of Weighted Volume in Seconds" on page 580	➤ Node Name ➤ Performance ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Major ➤ Minor ➤ Warning ➤ Informational
Best Child Sentence (2)	"Best Child Rule" on page 581	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Invisible Children

Tooltip (Tooltip #)	Associated Rule	Tooltip Parameters
BPI Average Weighted Status Sentence (611)	"BPI Average Weighted Status Rule for Value KPI" on page 583	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Status for ➤ Critical samples ➤ Major samples ➤ Minor samples ➤ Warning samples ➤ OK samples
BPI BP Step Quantity Group Sentence (621)	"BPI Group Rule for BP Step CI" on page 585	➤ Node Name ➤ Status ➤ Value ➤ Count ➤ Calculation Rule ➤ Held Status Since
BPI Business Process Health Group Sentence (620)	"BPI Health Group Rule for BP CIs" on page 588	➤ Node Name ➤ Status ➤ Blocked instances ➤ At risk instances ➤ Healthy instances ➤ Calculation Rule ➤ Held Status Since
BPI Business Process Quantity Group Sentence (619)	"BPI Group Rule for BP CI" on page 585	➤ Node Name ➤ Status ➤ Value ➤ Count ➤ Calculation Rule ➤ Held Status Since

Tooltip (Tooltip #)	Associated Rule	Tooltip Parameters
BPI Duration Average Weighted Status Sentence (623)	"BPI Average Weighted Status Rule for Duration KPI" on page 582	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Status for ➤ Critical instances ➤ Major instances ➤ Minor instances ➤ Warning instances ➤ OK Instances
BPI Duration Average Status Percentage Sentence (624)	"BPI Status Percentage Rule for Duration KPI" on page 593	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Score ➤ Status for ➤ Major ➤ Minor ➤ Warning ➤ Informational ➤ Min Status
BPI Duration Worst Violated Instances Percentage Sentence (622)	"BPI Worst Violated Instances Rule for Duration KPI" on page 595	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Score ➤ Status for ➤ Critical instances ➤ Major instances ➤ Minor instances ➤ Warning instances ➤ OK Instances

Tooltip (Tooltip #)	Associated Rule	Tooltip Parameters
BPI Health Average Weighted Status Count Sentence (614)	"BPI Health Average Weighted Status Count Rule" on page 586	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Status for ➤ Held Status Since ➤ Blocked instances ➤ At risk instances ➤ Healthy instances
BPI Health Average Weighted Status Value Sentence (617)	"BPI Health Average Weighted Status Value Sentence" on page 824	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Status for ➤ Blocked instances ➤ At risk instances ➤ Healthy instances
BPI Health Status Percentage Count Sentence (615)	"BPI Health Status Percentage Count Rule" on page 588	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Score ➤ Status for ➤ Major ➤ Minor ➤ Warning ➤ OK ➤ Min Status

Tooltip (Tooltip #)	Associated Rule	Tooltip Parameters
BPI Health Status Percentage Value Sentence (618)	"BPI Health Status Percentage Value Rule" on page 589	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Score ➤ Status for ➤ Major ➤ Minor ➤ Warning ➤ OK ➤ Min Status
BPI Health Worst Process Instances Count Sentence (613)	"BPI Health Worst Process Instances Count Rule" on page 589	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Status for ➤ Blocked instances ➤ At risk instances ➤ Healthy instances
BPI Health Worst Process Instances Value Sentence (616)	"BPI Health Worst Process Instances Value Rule" on page 590	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Status for ➤ Blocked instances ➤ At risk instances ➤ Healthy instances

Tooltip (Tooltip #)	Associated Rule	Tooltip Parameters
BPI Monitor Backlog Count (604)	"BPI Monitor Backlog Count Rule" on page 590	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Status for ➤ Count ➤ Value ➤ Major ➤ Minor ➤ Warning ➤ Informational
BPI Monitor Backlog Value (605)	"BPI Monitor Backlog Value Rule" on page 591	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Status for ➤ Count ➤ Value ➤ Major ➤ Minor ➤ Warning ➤ Informational

Tooltip (Tooltip #)	Associated Rule	Tooltip Parameters
BPI Monitor Duration (608)	"BPI Duration Monitor Rule" on page 584	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Calculation Logic ➤ Held Status Since ➤ Status for ➤ Average ➤ Weighted Average ➤ Minimum ➤ Maximum ➤ Number of instances ➤ Major ➤ Minor ➤ Warning ➤ Informational
BPI Monitor Volume Count (606)	"BPI Monitor Volume Count Rule" on page 591	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Status for ➤ Count ➤ Value ➤ Major ➤ Minor ➤ Warning ➤ Informational

Tooltip (Tooltip #)	Associated Rule	Tooltip Parameters
BPI Monitor Volume Value (607)	"BPI Monitor Volume Value Rule" on page 592	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Status for ➤ Count ➤ Value ➤ Major ➤ Minor ➤ Warning ➤ Informational
BPI Operational Status (625)	"BPI Operational Status Rule" on page 592	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Held Status Since
BPI Status Percentage Sentence (612)	"BPI Status Percentage Rule for Value KPI" on page 594	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Score ➤ Status for ➤ Major ➤ Minor ➤ Warning ➤ Informational ➤ Min Status

Tooltip (Tooltip #)	Associated Rule	Tooltip Parameters
BPI Value Monitor (609)	"BPI Value Monitor Rule" on page 595	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Calculation Logic ➤ Held Status Since ➤ Status for ➤ Average ➤ Minimum ➤ Maximum ➤ Number of instances ➤ Major ➤ Minor ➤ Warning ➤ Informational
BPI Worst Violated Instances Sentence (610)	"BPI Worst Violated Instances Rule for Duration KPI" on page 595	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Status for ➤ Critical instances ➤ Major instances ➤ Minor instances ➤ Warning instances ➤ Informational instances

Tooltip (Tooltip #)	Associated Rule	Tooltip Parameters
BPM WS Operation Percentile Performance Sentence (1307)	"BPM WS Operation Percentile Performance Rule" on page 596	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Under threshold calls ➤ Average For ➤ Last Update ➤ Major ➤ Minor ➤ Warning ➤ Informational
BPM WS Operation Performance Sentence (1306)	"BPM WS Operation Performance Rule" on page 597	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Under threshold calls ➤ Avg. Response Time ➤ Average For ➤ Last Update ➤ Major ➤ Minor ➤ Warning ➤ Informational
Business Impact (626)	"BPI Business Health Status Rule" on page 584	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Held Status Since

Tooltip (Tooltip #)	Associated Rule	Tooltip Parameters
Business Transaction Group Rule (1417)	"Business Transaction Group Rule" on page 597	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Value ➤ Status for ➤ Last Update ➤ Major ➤ Minor ➤ Warning ➤ Informational
Customer Sentence (12)	"Customer Rule" on page 597	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Held Status Since

Tooltip (Tooltip #)	Associated Rule	Tooltip Parameters
Diagnostics for J2EE General Sentence (1075)	"Diagnostics for J2EE/.Net General" on page 599	➤ Node Name ➤ **Status.** Can be defined as OK, Warning or Critical. ➤ Calculation Rule ➤ **Description.** Describes the reason for the status. For example, a **Critical** status for a transaction, may be explained in the Description field as follows: 15% violation on latency. This would indicate that the average latency of the transaction exceeded the threshold that was set in Diagnostics by 15% and therefore the status of this transaction is defined as critical. ➤ Platform ➤ Server Time ➤ Server Requests Count ➤ Average Time ➤ Exceptions Count ➤ Timeout Count ➤ Max Time

Tooltip (Tooltip #)	Associated Rule	Tooltip Parameters
Diagnostics WS Operation Percentile Performance Sentence (1302)	"Diagnostics WS Operation Percentile Performance Rule" on page 599	➤ Node Name ➤ **Status.** Can be defined as OK, Warning or Critical. ➤ Calculation Rule ➤ Held Status Since ➤ Under threshold calls ➤ Average For ➤ Last Update ➤ Major ➤ Minor ➤ Warning ➤ Informational
Diagnostics WS Operation Performance Sentence (1301)	"Diagnostics WS Operation Performance Rule" on page 600	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Avg. Response Time ➤ Average For ➤ Last Update ➤ Major ➤ Minor ➤ Warning ➤ Informational

Tooltip (Tooltip #)	Associated Rule	Tooltip Parameters
Diagnostics WS Operation Throughput Sentence (1303)	"Diagnostics WS Operation Throughput Rule" on page 600	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Calls per minute ➤ Average For ➤ Last Update ➤ Major ➤ Minor ➤ Warning ➤ Informational
Dollar Impact Over Time Sentence (24)	"Impact Over Time Rule" on page 605	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Major ➤ Minor ➤ Warning ➤ Informational ➤ Description ➤ Business Loss
Dollar Impact Sentence (19)	"Real Time Impact" on page 609	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Major ➤ Minor ➤ Warning ➤ Informational ➤ Description ➤ Business Loss

Tooltip (Tooltip #)	Associated Rule	Tooltip Parameters
Downtime Sentence	No associated rule	➤ Node Name ➤ Status ➤ Held Status Since ➤ Downtime Until ➤ Location ➤ Caused By
EMS Sentence (0)	"EMS Simple Rule" on page 601	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Description ➤ Severity ➤ Severity ➤ Held Status Since ➤ Message ➤ Last Update ➤ Description ➤ Description
End User Network Performance (91)	"RUM End User Monitor Network Rule" on page 612	➤ Node Name ➤ Network Availability ➤ Status ➤ Calculation Rule (includes a description of the rule) ➤ Held Status Since ➤ Major ➤ Minor ➤ Warning ➤ Informational

Tooltip (Tooltip #)	Associated Rule	Tooltip Parameters
Generic Formula Over Time Rule (1510)	"Generic Formula Rule" on page 601	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Formula ➤ Value ➤ Average ➤ Major ➤ Minor ➤ Warning ➤ Informational
Generic Sample Rule (21)	"Generic Sample Rule" on page 602	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Value ➤ Major ➤ Minor ➤ Warning ➤ Informational
Generic Sum of Values Over Time Rule (1501)	"Generic Sum of Values Over Time Rule" on page 602	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Value ➤ Major ➤ Minor ➤ Warning ➤ Informational

Tooltip (Tooltip #)	Associated Rule	Tooltip Parameters
Generic Two Arguments Rule (1500)	"Generic Two Arguments Rule" on page 603	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Value ➤ Major ➤ Minor ➤ Warning ➤ Informational
Geo Map Sentence (172)	No associated rule. The tooltip is displayed for status indicators in geographical maps. For details, see "Geographical Map Page" on page 212.	➤ Location ➤ Status ➤ Held Status Since ➤ Caused By
History	No associated rule. The tooltip is displayed for the History KPI. For details, see "Trend and History" on page 362. **Note:** The information that is displayed depends on the value assigned to the **HistoryType** rule global parameter.	➤ Node Name ➤ History Type ➤ Historical Worst ➤ Historical Average
HP OpenView Service Navigator Sentence (22)	"HP OpenView Service Navigator Rule" on page 604	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Description ➤ Severity ➤ Held Status Since ➤ Message ➤ Last Update ➤ Description ➤ owned By

Tooltip (Tooltip #)	Associated Rule	Tooltip Parameters
HP Worst Child Sentence (23)	"HP Worst Child Rule" on page 604	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Held Status Since
Locations Grouped Parent Rule (1110)	"Locations Grouped Parent Rule" on page 606	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Message ➤ Last Update
Locations Grouped Rule (1105)	"Locations Grouped Rule" on page 607	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Message ➤ Last Update
No Update Sentence	No associated rule. Internal.	➤ Node Name ➤ Status ➤ Held Status Since ➤ Warning ➤ Last Update ➤ Location ➤ Caused By ➤ Error Message

Tooltip (Tooltip #)	Associated Rule	Tooltip Parameters
Number of Open Incidents Sentence (2600)	"Number of Open Incidents" on page 608 **Example:** For a detailed example of the tooltip, see "Example of a Number of Open Incidents Sentence Tooltip" on page 867.	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Number of tickets ➤ Grouping ➤ Last Update ➤ Major ➤ Minor ➤ Warning ➤ Informational ➤ Transaction
Number of Running Sessions Rule (1107)	"Number of Running Sessions Rule" on page 608	➤ Node Name ➤ Status ➤ Held Status Since ➤ Message ➤ Last Update ➤ Measurement ➤ Monitor ➤ Historical Worst ➤ Historical Average ➤ Trend
Number of Tasks in Error Rule (1101)	"Number of Tasks in Error Rule" on page 608	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Message ➤ Last Update ➤ Measurement ➤ Monitor ➤ Historical Worst ➤ Historical Average ➤ Trend

Tooltip (Tooltip #)	Associated Rule	Tooltip Parameters
Percent Sentence (17)	"Percentage Rule" on page 608	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Score ➤ Major ➤ Minor ➤ Warning ➤ Informational ➤ Invisible Calculated Children
RUM Application Session Statistics Monitor Availability (56)	"RUM Application Session Statistics Monitor Availability Rule" on page 610	➤ Node Name ➤ Availability ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Major ➤ Minor ➤ Warning ➤ Informational
RUM Application Session Statistics Monitor Performance (66)	"RUM Application Session Statistics Monitor Performance Rule" on page 610	➤ Node Name ➤ Performance ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Major ➤ Minor ➤ Warning ➤ Informational

Tooltip (Tooltip #)	Associated Rule	Tooltip Parameters
RUM Application Session Statistics Monitor Volume (76)	"RUM Application Session Statistics Monitor Performance Rule" on page 610	➤ Node Name ➤ Volume ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Major ➤ Minor ➤ Warning ➤ Informational
RUM Component Availability (80)	"RUM Server Monitor Component Availability Rule" on page 617	➤ Node Name ➤ Component Availability ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Major ➤ Minor ➤ Warning ➤ Informational
RUM End User Latency (92)	"RUM End User Monitor Latency Rule" on page 612	➤ Node Name ➤ Latency ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Major ➤ Minor ➤ Warning ➤ Informational

Tooltip (Tooltip #)	Associated Rule	Tooltip Parameters
RUM End User Monitor Availability (59)	"RUM End User Monitor Availability Rule" on page 611	➤ Node Name ➤ Availability ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Major ➤ Minor ➤ Warning ➤ Informational
RUM End User Monitor Performance (69)	"RUM End User Monitor Performance Rule" on page 613	➤ Node Name ➤ Performance ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Major ➤ Minor ➤ Warning ➤ Informational
RUM End User Monitor Volume (79)	"RUM End User Monitor Volume Rule" on page 613	➤ Node Name ➤ Volume ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Major ➤ Minor ➤ Warning ➤ Informational

Tooltip (Tooltip #)	Associated Rule	Tooltip Parameters
RUM End User Session Statistics Monitor Availability (57)	"RUM End User Session Statistics Monitor Availability Rule" on page 614	➤ Node Name ➤ Availability ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Major ➤ Minor ➤ Warning ➤ Informational
RUM End User Session Statistics Monitor Performance (67)	"RUM End User Session Statistics Monitor Performance Rule" on page 614	➤ Node Name ➤ Performance ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Major ➤ Minor ➤ Warning ➤ Informational
RUM End User Session Statistics Monitor Volume (77)	"RUM End User Session Statistics Monitor Volume Rule" on page 615	➤ Node Name ➤ Volume ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Major ➤ Minor ➤ Warning ➤ Informational

Tooltip (Tooltip #)	Associated Rule	Tooltip Parameters
RUM Event Monitor Volume (73)	"RUM Event Monitor Volume Rule" on page 615	➤ Node Name ➤ Volume ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Major ➤ Minor ➤ Warning ➤ Informational
RUM Location Session Statistics Monitor Availability (58)	"RUM Location Session Statistics Monitor Availability Rule" on page 615	➤ Node Name ➤ Availability ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Major ➤ Minor ➤ Warning ➤ Informational
RUM Location Session Statistics Monitor Performance (68)	"RUM Location Session Statistics Monitor Performance Rule" on page 616	➤ Node Name ➤ Performance. ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Major ➤ Minor ➤ Warning ➤ Informational

Tooltip (Tooltip #)	Associated Rule	Tooltip Parameters
RUM Location Session Statistics Monitor Volume (78)	"RUM Location Session Statistics Monitor Volume Rule" on page 616	➤ Node Name ➤ Volume ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Major ➤ Minor ➤ Warning ➤ Informational
RUM Page Monitor Availability (49)	"RUM Page Monitor Availability Rule" on page 616	➤ Node Name ➤ Availability ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Major ➤ Minor ➤ Warning ➤ Informational
RUM Page Monitor Performance (60)	"RUM Page Monitor Performance Rule" on page 617	➤ Node Name ➤ Performance ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Major ➤ Minor ➤ Warning ➤ Informational

Tooltip (Tooltip #)	Associated Rule	Tooltip Parameters
RUM Page Monitor Volume (70)	"RUM Page Monitor Volume Rule" on page 617	➤ Node Name ➤ Volume ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Major ➤ Minor ➤ Warning ➤ Informational
RUM Session Monitor Availability (52)	"RUM Session Monitor Availability Rule" on page 618	➤ Node Name ➤ Availability ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Major ➤ Minor ➤ Warning ➤ Informational
RUM Session Monitor Performance (62)	"RUM Session Monitor Performance Rule" on page 618	➤ Node Name ➤ Performance ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Major ➤ Minor ➤ Warning ➤ Informational

Tooltip (Tooltip #)	Associated Rule	Tooltip Parameters
RUM Session Monitor Volume (72)	"RUM Session Monitor Volume Rule" on page 619	➤ Node Name ➤ Volume ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Major ➤ Minor ➤ Warning ➤ Informational
RUM Transaction Monitor Availability (51)	"RUM Transaction Monitor Availability Rule" on page 619	➤ Node Name ➤ Availability ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Major ➤ Minor ➤ Warning ➤ Informational
RUM Transaction Monitor Performance (61)	"RUM Transaction Monitor Performance Rule" on page 619	➤ Node Name ➤ Performance ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Major ➤ Minor ➤ Warning ➤ Informational

Tooltip (Tooltip #)	Associated Rule	Tooltip Parameters
RUM Transaction Monitor Volume (71)	"RUM Transaction Monitor Volume Rule" on page 619	➤ Node Name ➤ Volume ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Major ➤ Minor ➤ Warning ➤ Informational
SAP Alert Status Sentence (1111)	"SAP Alerts Rule" on page 620	➤ Alert Description ➤ Short Name ➤ Status ➤ Calculation Rule ➤ **Severity.** A number indicating the severity of the alert as it appears in the SAP system. ➤ State ➤ Open Time ➤ Held Status Since ➤ Last Update
Server Bandwidth (84)	"RUM Server Monitor Bandwidth Rule" on page 617	➤ Node Name ➤ Bandwidth ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Major ➤ Minor ➤ Warning ➤ Informational

Tooltip (Tooltip #)	Associated Rule	Tooltip Parameters
Server Summarized Bandwidth (85)	"RUM Servers Summarized Bandwidth Rule" on page 618	➤ Node Name ➤ Bandwidth ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Major ➤ Minor ➤ Warning ➤ Informational
Server Network Performance (90)	"RUM Server Monitor Network Rule" on page 618	➤ Node Name ➤ Network Availability ➤ Status ➤ Calculation Rule (includes a description of the rule) ➤ Held Status Since ➤ Major ➤ Minor ➤ Warning ➤ Informational
Sessions Custom Data Rule (1106)	"Sessions Custom Data Rule" on page 620	➤ Node Name ➤ Status ➤ Held Status Since ➤ Message ➤ Last Update ➤ Measurement ➤ Monitor ➤ Historical Worst ➤ Historical Average ➤ Trend

Tooltip (Tooltip #)	Associated Rule	Tooltip Parameters
SiteScope Availability (35)	"SiteScope Profile Rule" on page 623	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Last Update
SiteScope EMS Rule (36)	"SiteScope EMS Multiple Events Rule" on page 621 **Example:** For a detailed example of the tooltip, see "Example of a SiteScope EMS Rule Tooltip" on page 868	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ EMS Events ➤ Last Update
SiteScope Measurement Sentence (3)	"SiteScope Measurement Rule" on page 621	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Message ➤ Error Message ➤ Last Update ➤ Measurement ➤ Monitor
SiteScope Measurement Siebel Processes Rule (1104)	"SiteScope Measurement Siebel Processes Rule" on page 622	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Message ➤ Last Update ➤ Measurement ➤ Monitor ➤ Historical Worst ➤ Historical Average ➤ Trend

Tooltip (Tooltip #)	Associated Rule	Tooltip Parameters
SiteScope Measurement Time-Based Sentence (33)	"SiteScope Measurement Time-Based Rule" on page 622	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Message ➤ Average For ➤ Last Update ➤ Measurement ➤ Monitor
SiteScope Measurement with Custom Data Rule (1100)	"SiteScope Measurement with Custom Data Rule" on page 622	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Message ➤ Last Update ➤ Measurement ➤ Monitor ➤ Historical Worst ➤ Historical Average ➤ Trend
SiteScope Monitor Sentence (4)	"SiteScope Monitor Rule" on page 623	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Message ➤ Last Update ➤ Monitor ➤ Host

Tooltip (Tooltip #)	Associated Rule	Tooltip Parameters
SiteScope Monitor Time-Based Sentence (34)	"SiteScope Monitor Time-Based Rule" on page 623	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Message ➤ Average For ➤ Last Update ➤ Monitor ➤ Host
SiteScope Vertical Measurement (1108 and 1102)	"SiteScope Vertical Measurement" on page 624	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Message ➤ Last Update ➤ Measurement ➤ Historical Worst ➤ Historical Average ➤ Trend ➤ Monitor
SiteScope WS Operation Percentile Performance Sentence (1305)	"SiteScope WS Operation Percentile Performance Rule" on page 624	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Under threshold calls ➤ Average For ➤ Last Update ➤ Major ➤ Minor ➤ Warning ➤ Informational

Tooltip (Tooltip #)	Associated Rule	Tooltip Parameters
SiteScope WS Operation Performance Sentence (1304)	"SiteScope WS Operation Performance Rule" on page 625	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Avg. Response Time ➤ Average For ➤ Last Update ➤ Major ➤ Minor ➤ Warning ➤ Informational
SLM PNR Rule (351)	"Dashboard PNR Rule" on page 598	➤ Node Name ➤ Status ➤ Calculation Rule ➤ SLA ➤ Tracking Period ➤ Time Interval ➤ Calculation Time ➤ PNR Time Left ➤ Max Unavailability ➤ PNR Availability ➤ Target Availability
Stopped Sentence	The tooltip does not have associated rule. Defines the tooltip used for stopped CIs.	➤ Node Name ➤ Status ➤ Held Status Since ➤ Location ➤ Caused By

Tooltip (Tooltip #)	Associated Rule	Tooltip Parameters
Sum of Values for KPI Sentence (20)	"Sum of Values Rule" on page 626	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Total ➤ Major ➤ Minor ➤ Warning ➤ Informational
Sum of Volume (74)	"Sum of Volume Rule" on page 626	➤ Node Name ➤ Volume ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Major ➤ Minor ➤ Warning ➤ Informational
Summary of Values for KPIs (30)	"Summary of Values" on page 626	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Total ➤ Major ➤ Minor ➤ Warning ➤ Informational

Tooltip (Tooltip #)	Associated Rule	Tooltip Parameters
Total Number of Open Incidents Sentence (2601)	"Transaction Availability Rule" on page 626	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Total number of incidents ➤ Last Update ➤ Major ➤ Minor ➤ Warning ➤ Informational
Transaction Availability Sentence (5)	"Transaction Availability Rule" on page 626	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Avg. Availability ➤ Average For ➤ Last Update ➤ Major ➤ Minor ➤ Warning ➤ Informational ➤ Transaction

Tooltip (Tooltip #)	Associated Rule	Tooltip Parameters
Transaction Response Sentence (13)	"Transaction Performance Rule" on page 627	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Avg. Response Time ➤ Average For ➤ Last Update ➤ Major ➤ Minor ➤ Warning ➤ Informational ➤ Transaction
Transaction Response Status Average Sentence (101)	"Transaction Performance Rule" on page 627	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Status for ➤ Last Update ➤ Critical samples ➤ Minor samples ➤ OK samples

Tooltip (Tooltip #)	Associated Rule	Tooltip Parameters
Transaction Response Status Percentage Sentence (102)	"Transaction Performance Rule" on page 627	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Score ➤ Status for ➤ Last Update ➤ Major ➤ Minor ➤ Warning ➤ Informational ➤ Min Status ➤ Critical samples ➤ Minor samples ➤ OK samples
Transaction Response Worst Status Sentence (100)	"Transaction Performance Rule" on page 627	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Status for ➤ Last Update ➤ Critical samples ➤ Minor samples ➤ OK samples
Transactions Grouped Parent Rule (1109)	"Transactions Grouped Parent Rule" on page 629	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Message ➤ Last Update

Tooltip (Tooltip #)	Associated Rule	Tooltip Parameters
Transactions Grouped Rule (1103)	"Transactions Grouped Rule" on page 630	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Message ➤ Last Update
TransactionVision Completed - Value (1415)	"TransactionVision Completed Transaction Value Rule" on page 637	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Transactions volume ➤ Status for ➤ Last Update ➤ Major ➤ Minor ➤ Warning ➤ Informational
TransactionVision Completed - Volume (1416)	"TransactionVision Transaction Volume Rule" on page 638	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Transactions volume ➤ Status for ➤ Last Update ➤ Major ➤ Minor ➤ Warning ➤ Informational

Tooltip (Tooltip #)	Associated Rule	Tooltip Parameters
TransactionVision Completed Delays Rate (1411)	"TransactionVision Delayed Rate Rule (Completed Transactions)" on page 631	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Delays Rate ➤ Number of transactions ➤ Status for ➤ Last Update ➤ Major ➤ Minor ➤ Warning ➤ Informational
TransactionVision Completed Delays Value (1412)	"TransactionVision Delayed Value Rule (Completed Transactions)" on page 632	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Delays Value ➤ Status for ➤ Last Update ➤ Major ➤ Minor ➤ Warning ➤ Informational

Tooltip (Tooltip #)	Associated Rule	Tooltip Parameters
TransactionVision Completed Straight Through Processing Rate (1414)	"TransactionVision Exceptions Rate Rule (Completed Transactions)" on page 633	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Exceptions Rate ➤ Number of transactions ➤ Status for ➤ Last Update ➤ Major ➤ Minor ➤ Warning ➤ Informational
TransactionVision Completed Straight Through Processing Value (1413)	"TransactionVision Exceptions Value Rule (Completed Transactions)" on page 634	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Exceptions Value ➤ Status for ➤ Last Update ➤ Major ➤ Minor ➤ Warning ➤ Informational

Tooltip (Tooltip #)	Associated Rule	Tooltip Parameters
TransactionVision in process - Backlog (1426)	"TransactionVision Backlog Rule (In-Process)" on page 631	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Backlog count ➤ Status for ➤ Last Update ➤ Major ➤ Minor ➤ Warning ➤ Informational
TransactionVision in process - Value (1425)	"TransactionVision Value Rule (In-Process Transaction)" on page 637	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Transactions volume ➤ Status for ➤ Last Update ➤ Major ➤ Minor ➤ Warning ➤ Informational

Tooltip (Tooltip #)	Associated Rule	Tooltip Parameters
TransactionVision in process Delays Rate (1421)	"TransactionVision Delayed Rate Rule (In-Process Transactions)" on page 631	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Delays Rate ➤ Number of transactions ➤ Status for ➤ Last Update ➤ Major ➤ Minor ➤ Warning ➤ Informational
TransactionVision in process Delays Value (1422)	"TransactionVision Delayed Value Rule (In-Process Transactions)" on page 632	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Delays Value ➤ Status for ➤ Last Update ➤ Major ➤ Minor ➤ Warning ➤ Informational

Tooltip (Tooltip #)	Associated Rule	Tooltip Parameters
TransactionVision in process Straight Through Processing Rate (1424)	"TransactionVision Exceptions Rate Rule (In-Process Transactions)" on page 634	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Exceptions Rate ➤ Number of transactions ➤ Status for ➤ Last Update ➤ Major ➤ Minor ➤ Warning ➤ Informational
TransactionVision in process Straight Through Processing Value (1423)	"TransactionVision Exceptions Value Rule (In-Process Transactions)" on page 635	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Exceptions Value ➤ Status for ➤ Last Update ➤ Major ➤ Minor ➤ Warning ➤ Informational

Tooltip (Tooltip #)	Associated Rule	Tooltip Parameters
TransactionVision Transaction Duration (1410)	"TransactionVision Duration Rule (Completed Transactions)" on page 633	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Average Duration ➤ Number of Valid Transactions ➤ Status for ➤ Last Update ➤ Major ➤ Minor ➤ Warning ➤ Informational
Trend	The tooltip does not have an associated rule. The tooltip is displayed for the Trend KPI. For details, see "Trend and History" on page 362.	➤ Node Name ➤ Trend
TV Transaction Monitor Completed Failures Rate (1418)	"TransactionVision Failures Rate Rule (Completed Transactions)" on page 635	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Failure rates ➤ Number of transactions ➤ Status for ➤ Last Update ➤ Major ➤ Minor ➤ Warning ➤ Informational
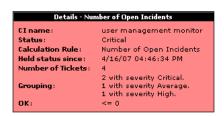
Tooltip (Tooltip #)	Associated Rule	Tooltip Parameters
TV Transaction Monitor Completed Failures Value (1419)	"TransactionVision Failures Value Rule (Completed Transactions)" on page 636	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Value ➤ Status for ➤ Last Update ➤ Major ➤ Minor ➤ Warning ➤ Informational
TV Transaction Monitor in process Failures Rate (1428)	"TransactionVision Failures Rate Rule (In-Process Transactions)" on page 636	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Delays Rate ➤ Number of transactions ➤ Status for ➤ Last Update ➤ Major ➤ Minor ➤ Warning ➤ Informational

Tooltip (Tooltip #)	Associated Rule	Tooltip Parameters
TV Transaction Monitor in process Failures Value (1429)	"TransactionVision Failures Value Rule (In-Process Transactions)" on page 637	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Value ➤ Status for ➤ Last Update ➤ Major ➤ Minor ➤ Warning ➤ Informational
Worst Child Sentence (1)	"Worst Child Rule" on page 638	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Invisible Children
WS Operation Availability Sentence (1300)	"WS Operation Availability Rule" on page 638	➤ Node Name ➤ Status ➤ Calculation Rule ➤ Held Status Since ➤ Avg. Availability ➤ Average For ➤ Last Update ➤ Major ➤ Minor ➤ Warning ➤ Informational

🔖 **Example of a Number of Open Incidents Sentence Tooltip**

The tooltip is displayed for a KPI whose associated rule is "Number of Open Incidents" on page 608.

Details - Number of Open Incidents	
CI name:	user management monitor
Status:	Critical
Calculation Rule:	Number of Open Incidents
Held status since:	4/16/07 04:46:34 PM
Number of Tickets:	4
Grouping:	2 with severity Critical. 1 with severity Average. 1 with severity High.
OK:	<= 0

The tooltip displays the following information:

➤ **CI Name.** The name of the CI.

➤ **Status.** The status of the CI.

➤ **Calculation Rule.** The name of the rule used to calculate the status of the CI.

➤ **Held Status Since.** The date and time of the last status (color) change of the CI.

➤ **Number of tickets.** The number of current ticket that have the specified initial and final state.

➤ **Grouping.** List the number of tickets with the specified status.

➤ **OK.** The threshold definition for the **OK** status.

🔖 **Example of a SiteScope EMS Rule Tooltip**

The tooltip is displayed for an Application, Network, Security, or System KPI whose associated rule is "SiteScope EMS Multiple Events Rule" on page 621.

The SiteScope EMS Rule tooltip is displayed for an Application, Network, Security, or System KPI whose associated rule is the SiteScope EMS Multiple Event rule.

The tooltip displays the following information:

➤ **CI Name.** The name of the CI.

➤ **Status.** The severity of the event.

➤ **Calculation Rules.** The name of the rule that calculates the KPI status or value.

➤ **Held status since.** The date and time of the last status (color) change of the CI.

➤ **Ems Events.** Messages sent by the HP Operations Manager server.

🔖 **List of Tooltip Parameters**

The following table lists the tooltip parameters and their descriptions:

Parameter	Description
% Available TX	The percentage of available transactions.
Alert Description	The full description of the alert.
At risk instances	The number of instances with status **At risk**.
Availability	The percentage of time the page was available, for a Real User Monitor CI.

Parameter	Description
Average	The average status of the CI.
Average Duration	The duration of the completed transactions minus the duration of the failed transactions divided by the total number of transactions.
Average For	The time period for which the average response time/average availability was calculated. This time period is defined in the file for the CI.
Average Time	(Probe tooltips only): The average latency of all of the server requests on the Virtual Machine monitored by the Probe over the last five minute period.
Avg. Availability	The percentage of successful runs for the parent transaction during a time period up to the last received update.
Avg. Response Time	The average response time for the parent transaction during a time period up to the last received update.
Backlog count	The number of backlogged (in-process) transactions.
Bandwidth	The number of megabytes that represents the traffic in and out of Real User Monitor (for a monitor CI) or the status of the monitor with the worst status (for a group CI).
Blocked instances	The number of instances with status **Blocked**.
Business Loss	The financial loss calculated for the CI.
Calculation Logic	The value of **logic** rule parameter.
Calculation Rule	The name of the rule that calculates the KPI status or value.

Parameter	Description
Calculation Time	The last calculation time on the Business Logic Engine machine.
Calls per minute	The number of calls per minute to the selected Web service(s) or Operation(s).
Caused By	The name of the KPIs that caused unavailability.
CI Name	The name of the CI.
Component Availability	The availability of the Real User Monitor (for a monitor CI) or the status of the monitor with the worst status (for a group CI).
Count	The number of instances that completed the monitored step or group of steps in the most recent collection interval for the tooltip.
Critical instances	The number of instances with status **Critical**.
Critical samples	The number of samples with **Critical** status.
Delays Rate	The percentage of failed in-process transactions out of the total completed transactions. Delays ValueThe total value of failed in-process transactions.
Delays Value	The total value of failed in-process transactions.
Description	A description of the CI (the first one represents UDX and the second one represents EMS). Only the value relevant to the context is displayed.
Downtime Until	The date and time that downtime is due to finish for a CI.
EMS Events	The samples description. The samples are separated from each other by a horizontal line.

Parameter	Description
Error Message	The error message that appears in the sample.
Exceptions Count	The amount of exceptions generated over the last five minute period.
Exceptions Rate	The percentage of transactions that did not follow the expected flow path on the target machine, out of the total in-process transactions.
Exceptions Value	The total value of transactions that did not follow the expected flow path on the target machine.
Failed TX Count	The number of transactions that failed.
Failed TX Impact	The financial loss (in $) due to transactions that failed.
Failure rates	The percentage of failed completed transactions out of the total number of completed transactions.
Formula	The formula that is used to calculate the KPI status and value.
Grouping	List the number of tickets with the specified status.
Healthy instances	The number of instances with status **Healthy**.
Held Status Since	The date and time of the last status (color) change of the CI.
Historical Average	The average status for the CI over a period of time.
Historical Worst	The worst status for the CI over a period of time.

Parameter	Description
History Type	The history calculation type to be used when calculating history status. Values can be: **Worst**, **Average**, or **None** (no history status displayed). The value of the parameter is assigned to the **HistoryType** rule global parameter. For details, see "Modify Rule Parameters or Global Rule Parameters" on page 568. If the value is **none**, the historical information is not displayed.
Host	The name of the machine associated with the monitor.
Informational	One of the thresholds used when defining status for the CI. The CI changes to Informational (green) status when the CI's score is equal to or smaller than this value.
Informational instances	The number of instances with status **Informational**.
Invisible Calculated Children	All of the child CIs belonging to other views, which are connected to this CI but do not belong to this view.
Invisible Children	The number of child CIs of the selected CI, that exist in the CMDB, are hidden in the current view, and have at least one KPI assigned to them. This parameter is displayed as: **Hidden child CIs (with attached KPIs)** in the tooltip itself. For details on Invisible Children, see "Find Visible and Hidden Child CIs" on page 64.
Last Update	The date and time that the last update for the CI was received by Dashboard.
Late TX Impact	The financial loss (in $) due to transactions that were late.

Parameter	Description
Latency	The average round trip time for a packet. (The time it takes for a packet to go from the client to the server and back from the server to the client). The latency information is provided by the Real User Monitor sample.
Location	The location of the CI if a location has been specified.
Major	One of the thresholds used when defining status for the CI. The CI changes to Major (orange) status when the CI's score is equal to or smaller than this value.
Major instances	The number of instances with status **Major**.
Major samples	The number of samples with **Major** status.
Max Response Time	The maximum response time as provided by the Deep Transaction Tracing sample.
Max Time	The maximal time an HP Diagnostics transaction has run in seconds.
Max Unavailability	The maximum time that the item may be unavailable, according to the SLA.
Maximum	The maximum value of the instances that passed through the monitored step or group of steps, during the last collection interval.
Measurement	The name of the measurement from SiteScope.
Message	The value(s) returned by the monitor the last time it ran, as displayed in SiteScope. This may simply be the retrieval time and file size or it may include specific parameters for a server component.
Min Response Time	The minimum response time as provided by the Deep Transaction Tracing sample.

Parameter	Description
Min Status	The value of the **PassedStatus** rule parameter.
Minimum	The minimum duration of the instances that passed through the monitored step or group of steps, during the last collection interval
Minor	One of the thresholds used when defining status for the CI. The CI changes to Minor (yellow) status when the CI's score is equal to or smaller than this value.
Minor instances	The number of instances with status **Minor**.
Minor samples	The number of samples with **Minor** status.
Monitor	The monitor type that the CI represents.
Network Availability	The percentage of successful connections.
Node Name	The name of the CI.
Number of instances	The number of instances that completed the monitored step or group of steps.
Number of tickets	The number of current ticket that have the specified initial and final state.
Number of transactions	The total number of successful, completed transactions.
Number of Valid Transactions	The value calculated by the rule. For details, see "TransactionVision Duration Rule (Completed Transactions)" on page 633.
OK	One of the thresholds used when defining status for the CI. The CI changes to OK (green) status when the CI's score is equal to or smaller than this value.
OK Instances	The number of instances with status **OK**.
OK samples	The number of samples with **OK** status.

Parameter	Description
Open Time	The date and time when the alert was issued.
owned By	The owner of the CI in HP OpenView (the first one represents UDX and the second one represents EMS). Only the value relevant to the context is displayed.
Performance	The average download time, for a Real User Monitor CI.
Platform	Indicates the platform (J2EE or .NET) on which the monitored application is running.
PNR Availability	The item's SLA availability percentage the last time data was polled.
PNR Time Left	The amount of time left for that measurement before the SLA is in breach of contract.
Response Time Threshold	The threshold of the response time as provided by the Deep Transaction Tracing sample.
Score	The percentage of green and yellow child CIs. This is a weighted percentage if any of the child CIs have a weight > 1 (check this by viewing the tooltips for the child CIs).
	Note that Dashboard is calculating status using the refined percentage method if a percentage is displayed for **Score** and the group or subgroup status is yellow.
	If Dashboard is calculating status for the group/subgroup using the dominant child method, the message **n/a (Using dominant child)** is displayed.
Server Requests Count	(BPM Transaction tooltips only.) The amount of server requests over the last five minute period.

Parameter	Description
Server Time	(BPM Transaction tooltips only.) The average time taken for the server to process the transaction.
Severity	The severity of the SiteScope measurement (the first one represents UDX and the second one represents EMS). Only the value relevant to the context is displayed.
Short Name	The name of the SAP CCMS measurement where the alert occurred.
SLA	The name of the SLA attached to this CI.
State	The SAP state of the alert: **Active**.
Status	The status of the CI (calculated according to one of the status calculation methods). It may also display: **Not up to date** for decayed CIs, indicating that the CI has passed its timeout period. (For a SiteScope CI, this status is displayed after a SiteScope monitor is disabled.) **Stopped** when a Business Process profile is stopped.
Status	Can be defined as OK, Warning or Critical.
Status for	The value of the rule's duration parameter.
Target Availability	The percentage of time that the item must be available in order to match in the 'Exceeded' threshold, according to the SLA.
Time Interval	The calendar used for calculating PNR. For details, see "Calendars" in *Using Service Level Management*.
Timeout Count	The amount of timeouts that occurred during the last five minute period.

Parameter	Description
Total	The total number of hits/transactions for Real User Monitor.
Total number of incidents	The total number of incidents.
Total TX Count	The total of the number of transactions that failed and the number of late transactions.
Total TX Impact	The financial loss (in $) due to transactions that failed added to the transactions that were late.
Tracking Period	The tracking period used to calculate the PNR. For details, see "Tracking Periods Dialog Box" in *Using Service Level Management*.
Transaction	The name of the parent transaction for the CI.
Transactions volume	The number of completed transactions.
Trend	The trend of the KPI's status.
Under threshold calls	The number of calls that are under the threshold defined for the Availability KPI.
Value	The value of the field in the sample.
Value	The sum of the values of the fields in the sample.
Volume	The number of hits in Real User Monitor.
Warning	One of the thresholds used when defining status for the CI. The CI changes to Warning (light green) status when the CI's score is equal to or smaller than this value.
Warning instances	The number of instances with status **Warning**.

Parameter	Description
Warning samples	The number of samples with **Warning** status.
Weighted Average	The value of the weighted average duration calculated by the rule.

🔍 List of Tooltip Parameter Attributes

The following table lists the attributes that may be specified for the tooltip

Attribute	Description
Available Formatting Methods	Lists the available methods for formatting the value of the tooltip parameter. For example: toLowerCase.
Display Label	The name of the tooltip parameter displayed in the tooltip.
Formatting Method	The method selected from the Available Formatting Methods list. For details on the methods, see "List of (KPI) Formatting Methods" on page 396.
Value Postfix	The text that appears after the value of the tooltip parameter. For example: %.
Value Prefix	The text that appears before the value of the tooltip parameter. For example: Greater than.
Value Source	Indicates where to take the value of the item for the KPI.

📌 Tooltips User Interface

This section describes:

➤ Tooltip Repository page on page 879

➤ Tooltip Details Dialog Box on page 881

➤ Tooltip Parameter Details Dialog Box on page 882

📌 Tooltip Repository page

Description	Displays the list of factory (predefined) and customized tooltips. Those tooltips are available throughout HP Business Availability Center.
	Enables an advanced user to modify existing repository tooltips and create new ones.
	To Access: Admin > **Dashboard** > **Repositories** > **Tooltips**
Important Information	Cloning or overriding an existing tooltip, or creating a new tooltip, adds the corresponding tooltip entry to the Custom Tooltips list. You can then customize the tooltip to your organization's specifications. For details, see "Tooltip Details Dialog Box" on page 881.
	A list of the tooltips and their details is available in "List of Tooltips" on page 818.
	To delete a customized tooltip, you must delete the corresponding rule.
	A tooltip and its rule have the same ID number and the same name.
	You can modify the tooltip information or enter new information. For details, see "Tooltip Details Dialog Box" on page 881. You can modify existing information or enter new information about the tooltip parameter. For details, see "Tooltip Parameter Details Dialog Box" on page 882.
Included in Tasks	"Customize a Tooltip" on page 814

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
✏	Select a tooltip in the Custom Tooltips area, and click the button to open the **Tooltips Details** dialog box. For details, see "Tooltip Details Dialog Box" on page 881.
Clone	In the Factory Tooltips or in the Custom Tooltips areas, select a tooltip, and click the **Clone** button to create a new tooltip by cloning. You clone an existing tooltip to use it as a template. The original tooltip is still available. For details, see "Customize a Tooltip" on page 814. **Note:** Change the name of the tooltip you have cloned to make sure you attach the cloned tooltip and not the original tooltip to a specific rule.
ID	The ID number of the tooltip.
Override	In the Factory Tooltips or in the Custom Tooltips areas, select a context menu, and click the **Override** button to edit an existing tooltip. You override an existing tooltip to replace it with a customized tooltip. The original tooltip is disabled. The overriding tooltip and the original tooltip have the same tooltip ID. The tooltip in the Factory Tooltips area displays the following indication: ☐　　31 　　(Overridden)　　　　Average of values for kpi **Note:** If you later delete the custom tooltip that overrode the factory tooltip, the original factory tooltip is automatically restored.

🔍 Tooltip Details Dialog Box

Description	Enables you to modify the information or enter new information. For a list of the tooltips parameters, see "List of Tooltip Parameter Attributes" on page 878. **To Access:** In the Tooltip Repository page, click the **New** button, or click the relevant **Edit** button 🖉 for a cloned or overridden tooltip.
Important Information	The order of the parameters in the Parameters area reflects the order of the corresponding information in the application. A list of the parameters and their details is available in "List of Tooltip Parameter Attributes" on page 878.
Included in Tasks	"Customize a Tooltip" on page 814

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
Description	The name of the tooltip.
Max Label Width	The maximum width for a tooltip parameter name.
Max Value Width	The maximum width for a tooltip parameter value.
New	Click the **New** button to create a new parameter. For details, see "Tooltip Parameter Details Dialog Box" on page 882.
Parameters	The parameters included in the tooltip. Different icons or buttons appear depending on the procedure you are following.

🔍 Tooltip Parameter Details Dialog Box

Description	Enables you to modify existing information or enter new information about the tooltip parameter. For a list of the tooltip parameter details, see "List of Tooltip Parameter Attributes" on page 878. **To Access:** Click **New** in the Tooltip Details dialog box, or click the **Edit** button 🖉 relevant to the parameter you want to modify.
Important Information	A list of the parameters and their details is available in "List of Tooltip Parameter Attributes" on page 878.
Included in Tasks	"Customize a Tooltip" on page 814

The following elements are included (unlabeled GUI elements are shown in angle brackets):

GUI Element (A-Z)	Description
Available Formatting Method	Select the appropriate formatting method from the list of available methods. For details, see "List of (KPI) Formatting Methods" on page 547.
Display Label	The display label of the row. It appears exactly as written in the section.
Formatting Method	Displays the method you selected in Available Formatting Method list. This is the formatting method that is invoked on the valueSource. Can be blank if not required.
Value Postfix	The row value postfix. Can be blank if not required. The postfix appears after the value of the parameter in the tooltip. It can be retrieved from the CI using the escaping sequence form – if so, the **[[%]]** string must appear before the escaping sequence.

GUI Element (A-Z)	Description
Value Prefix	The row value prefix. Can be blank if not required. The prefix appears before the value of the parameter in the tooltip. It can be retrieved from the CI using the escaping sequence form - if so, the **[[%]]** string must appear before the escaping sequence.
Value Source	The source of the value to display. It can be retrieved from the CI using the escaping sequence form - if so, the **[[%]]** string must appear before the escaping sequence.

Index

H