

HP Business Availability Center

for the Windows and Solaris operating systems

Software Version: 7.50

Using Dashboard

Document Number: BACDASH7.50/01

Document Release Date: September 2008

Software Release Date: May 2008



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Table of Contents

Welcome to This Guide	11
How This Guide Is Organized	11
Who Should Read This Guide	12
Getting More Information	12

PART I: DASHBOARD

Chapter 1: Introduction to Dashboard	15
Dashboard Overview	16
Dashboard Tabs	18
How Dashboard Works	20
Repositories.....	22
Views.....	22
Real-Time Changes to CI Properties.....	23
Dashboard Application Components in the Service Report	24
About Menu Options.....	24
Dashboard General Notes and Tips.....	25
View Data in Dashboard – Workflow.....	26
Customize the Way HP Business Availability Center Displays Views in Dashboard	30
Display Data in Dashboard	34
View Sample Details	35
Acknowledge Performance Problems	36
Switch Off the Alert Sound When CI is Acknowledged	40
Analyze Real-Time Change Information.....	40
View Related Change Requests Reports	42
View Service Impact Report.....	45
Find Visible and Hidden Child CIs	50
Set Up Sound Notification When KPI Status Changes to Critical	52
Customize Dashboard Display and Refresh Rate	53
Use the Troubleshooting Logs.....	55
Dashboard User Interface	57
Troubleshooting and Limitations	87

Chapter 2: Dashboard Top View	89
Top View.....	90
Display and Customize View Information in Top View.....	92
Access an External Application from Top View.....	94
Customize Top View Display	95
Dynamic URL Parameters.....	105
Top View User Interface	107
Chapter 3: Dashboard Console	117
Console Page	117
Service Level Management Results in the Console Page	120
Display and Customize View Information in the Console Tab.....	120
Customize the Console Page.....	123
Console User Interface	124
Chapter 4: Dashboard Filters	131
Filters	132
Display and Customize a View Information in Filters.....	132
Search for Specific CIs and Filter the Results	133
Create or Customize an Active Filter	137
Create a Temporary Filter Using Quick Filter	139
Dashboard Filters User Interface	140
Chapter 5: Geographical Map	155
Geographical Maps.....	156
Display and Customize a View in Geographical Map	162
Display a Geographical Map With Google Earth.....	168
Create a Geographical Map for an Unavailable Zoom Level of a Specific Area	171
Customize Virtual Earth.....	172
Customize Maps Applet	174
Geographical Map User Interface.....	175
Chapter 6: Custom Map	185
Custom Maps.....	186
Display a View in a Custom Map.....	188
Custom Map User Interface	192
Chapter 7: Topology Map	197
Dashboard Topology Map.....	197
Display and Customize a View Information in the Topology Map .	198
Topology Map User Interface.....	198

Chapter 8: HP Business Process Insight Data in HP Business Availability Center	205
HP Business Process Insight Data in HP Business Availability Center Overview	206
Decay of HP Business Process Insight Samples	215
View HP Business Process Insight Data in HP Business Availability Center	215
Customize HP Business Process Insight KPI Assignments	219
Enrich the Business Processes View and Other Improvements	221
HP Business Process Insight Reports User Interface	222
Chapter 9: Business Transaction Management	241
Business Transaction Management - Overview	242
Business Transaction Data in Business Availability Center	244
Business Transaction Management in Dashboard	250
Mapping End User Management Data to Business Transactions	254
Drill Down from End User Management to TransactionVision	255
Business Transaction Flow Map	256
Set Up Integration with HP TransactionVision	263
Map End-User Transactions to Business Transactions	267
Business Transaction Management User Interface	274

PART II: REPORTS

Chapter 10: Dashboard Reports	295
Dashboard Reports Overview	295
View KPIs Over Time Information	298
Reports User Interface	300
Troubleshooting and Limitations	327

PART III: KPIS

Chapter 11: KPIS..... **331**
KPI Configuration Overview 332
How Dashboard KPIS Work..... 333
About Business Rules 336
No Data Timeout for Transaction CIs 339
KPI Objectives..... 340
Selectors for KPIS 350
KPIS for User Modes..... 352
Understanding KPI Status 352
Trend and History 360
Persistent Data and Historical Data 365
Configure a KPI – Workflow 366
Attach KPIS to CIs and Configure the KPIS 373
Edit KPI Properties..... 374
Set Up the Real-Time Monitoring of CI Property Changes 380
Define Selectors 382
Set Up User Mode Functionality 388
KPIS User Interface..... 396

PART IV: KPI ASSIGNMENTS

Chapter 12: KPI Assignments..... **417**
KPI Assignment Management Overview 418
SiteScope KPI Assignment Group Overview 420
Manage KPI Assignment Groups..... 432
Configure a KPI Assignment Rule 433
Work with the SiteScope Assignment Group – Workflow..... 436
KPI Assignments User Interface 437

PART V: EXTERNAL DISPLAY

Chapter 13: Dashboard Ticker **461**
Dashboard Ticker Overview 461
View Data in Dashboard Ticker..... 465
Control Dashboard Ticker 467
Set Ticker Preferences 468
Ticker User Interface..... 469

Chapter 14: Dashboard on a Mobile Device..... **477**
Dashboard on a Mobile Device Overview..... 477
View Data on a Mobile Device 478
Mobile Device User Interface 479

Index.....483

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 11
- ▶ Who Should Read This Guide on page 12
- ▶ Getting More Information on page 12

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, Custom Map, and Topology Map tabs to display the view's data, and how to incorporate HP Business Process Insight and HP TransactionVision data into HP Business Availability Center.

Part II Reports

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

Part III KPIs

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

Part IV 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 V External Display

Describes how to install and manage so the Dashboard Ticker so that you can display HP Business Availability Center data on your desktop in a Ticker Window or in a Message Window.

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 the *HP Business Availability Center Deployment Guide* PDF.

Part I

Dashboard

1

Introduction to Dashboard

This chapter includes general information about Dashboard.

This chapter includes:

Concepts

- Dashboard Overview on page 16
- Dashboard Tabs on page 18
- How Dashboard Works on page 20
- Repositories on page 22
- Views on page 22
- Real-Time Changes to CI Properties on page 23
- Dashboard Application Components in the Service Report on page 24
- About Menu Options on page 24
- Dashboard General Notes and Tips on page 25

Tasks

- View Data in Dashboard – Workflow on page 26
- Customize the Way HP Business Availability Center Displays Views in Dashboard on page 30
- Display Data in Dashboard on page 34
- View Sample Details on page 35
- Acknowledge Performance Problems on page 36
- Switch Off the Alert Sound When CI is Acknowledged on page 40
- Analyze Real-Time Change Information on page 40

- ▶ View Related Change Requests Reports on page 42
- ▶ View Service Impact Report on page 45
- ▶ Find Visible and Hidden Child CIs on page 50
- ▶ Set Up Sound Notification When KPI Status Changes to Critical on page 52
- ▶ Customize Dashboard Display and Refresh Rate on page 53
- ▶ Use the Troubleshooting Logs on page 55

Reference

- ▶ Dashboard User Interface on page 57
- ▶ **Troubleshooting and Limitations** on page 87

Dashboard Overview

HP Business Availability Center is a comprehensive business service management and application management solution. 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” on page 17
- ▶ “Prioritizing IT Operations and Maximizing Business Results” on page 17

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 Tabs

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

This section includes the following topics:

- ▶ “Dashboard Administration Tabs” on page 18
- ▶ “Dashboard Application Tabs” on page 19

Dashboard Administration Tabs

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

Dashboard Administration includes the following tabs:

- ▶ **KPIs tab.** Enables you to edit the KPIs attached to a configuration item (CI), and to attach new KPIs to CIs. 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 398.
- ▶ **Custom Map tab.** Enables you to create a custom map to display real-time indicators icons representing CIs in the view on a custom image. For details, see “Custom Map Page” on page 192.

- **Geographical Map tab.** Enables you to create an association between geographical locations and status indicators on a geographical map. For details, see “Geographical Map Page” on page 176.
- **KPI Assignments tab.** Enables you to configure a KPI assignment. For details, see “Define Assignment Configuration Dialog Box” on page 440.
- **Repositories tab.** Provides access to the Dashboard Repository. 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” on page 22.

Dashboard Application Tabs

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

Dashboard application includes the following tabs:

- **Top View tab.** Displays the components of the active view in a hierarchical, top-down graphic. For details, see “Top View Page” on page 108.
- **Console tab.** Displays the components of the active view arranged in a hierarchical tree. For details, see “Console Page” on page 125.
- **Filters tab.** Displays a filtered list of CIs, according to the selected filter option. For details, see “Filters Page” on page 148.
- **Geographical Map tab.** Displays an association between geographical locations and status indicators in a geographical map. For details, see “Geographical Map Page” on page 176.
- **Custom Map tab.** Displays icons representing CIs in the view on a custom image. For details, see “Custom Map Page” on page 192.
- **Topology Map tab.** Provides a topological representation of the view's CIs and CI relationships. For details, see “Topology Map Page” on page 199.
- **Reports tab.** Displays the Dashboard reports: KPIs Distribution Over Time, KPIs Over Time, KPIs Summary, and KPIs Trend reports. In addition, you can access the Related Change Requests and Service Impact reports. For details, see “Reports User Interface” on page 300.

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.

You can view 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.

Each CI has one or more KPIs showing current operational status or business impact over time. Status propagates up the CI hierarchy, from the monitor (leaf) CIs at the bottom of a tree, up to the root CI shown at the top of the tree. The monitor CIs receive real performance metrics from the monitoring data collected by HP Business Availability Center, and KPI status for these CIs is calculated from that data. For most higher level CIs, KPI status is based on an aggregation of statuses for all child CIs (the calculation method used for this aggregation varies, according to the KPI's business logic).

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

This section contains the following topics:

- ▶ “Monitoring Performance Problems” on page 21
- ▶ “Monitoring Service Level Agreements” on page 21

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.

Repositories

The Repositories tab includes the 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” in *CI Attribute Customization*.

Views

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

The service views displayed in Dashboard are built from CIs contained in the CMDB. 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 Pattern and Instance Views in IT Universe Manager” in *Model Management*.) Each CI has only one instance in the CMDB. Different views can look at the same CI.

Details about specific views are provided in subject-related documentation; for example Real User Monitor views are detailed in “Understanding Real User Monitor Views” in *Using End User Management*.

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. When changes are made to your organization’s infrastructure, they are detected by the discovery process or by the monitoring source adapters. 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 *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.

KPIs are assigned, by default, to monitor CIs and propagate up the hierarchy. You can manually assign additional KPIs to CIs in Dashboard Administration. For each CI, 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 and Their Details” in *CI Attribute Customization*.

For each CI, each KPI column contains status icons or values, representing how the KPI objective is met. For details on KPI status, see “Understanding KPI Status” on page 352.

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*.

Real-Time Changes to CI Properties

Change icons are displayed in the Console tab and in the Filters tab, on the right of the CI name to indicate that changes were made to the first 20 change-monitored properties of a CI, in real time. For details, see “Console Page” on page 125 or “Filters Page” on page 148.

Changes made to additional CIs are displayed in the Change report. For details, see “Change Report Page” in *Model Management*.

To display the real-time change information, see “Analyze Real-Time Change Information” on page 40.

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 BAC 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” in *Using My BAC* or “Report Manager Overview” in *Reports*.

About Menu Options

From most tabs in Dashboard and from the View Explorer, you can access context menu options that enable you to move to different tabs or applications filtered for the selected CI.



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.

The menu options are available for CIs in the Console and Filters tabs, and in View Explorer.

For advanced information on the various menu options, see “Context Menu Items Repository” in *CI Attribute Customization*.

The available menu options of a CI can include the following functionality:

- ▶ Enable you to move to other HP Business Availability Center applications or SiteScope to view information and reports related to the CI, or to 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.
- ▶ Enable you to move to the Filters tab to view the CIs of a CI’s subtree where you can filter the subtree CIs and monitor CIs according to the current active filter selected in the Filters tab.

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

For details about the options, see “Menu Options” on page 62.

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 display the data in topologies (views) relevant to your organization. Views display system performance data about your network and applications.

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

This task includes the following steps:

- “Create SiteScope Monitors” on page 26
- “Create Business Process and Real User Monitor Profiles and Monitors” on page 27
- “Configure Diagnostics Servers and Probes to Monitor Your Applications” on page 27
- “Customize KPI Assignments – Optional” on page 27
- “Customize the Source Adapters” on page 27
- “Run Discovery and Dependency Mapping” on page 28
- “Create Instance Views” on page 28
- “Customize Dashboard Display” on page 28
- “Customize the Views in Dashboard” on page 29
- “Display Data in Dashboard” on page 29

1 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*.

2 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*.

3 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*.

4 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, 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 “Configure a KPI Assignment Rule” in *Using Dashboard*.

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

5 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*.

6 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*.

7 Create Instance 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 instance views to display only the information that is relevant to your organization’s business needs. For details, see “Create and Populate an Instance View” in *Model Management*.

8 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 53.

9 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 about customizing the views in Dashboard, see “Customize the Way HP Business Availability Center Displays Views in Dashboard” on page 30.

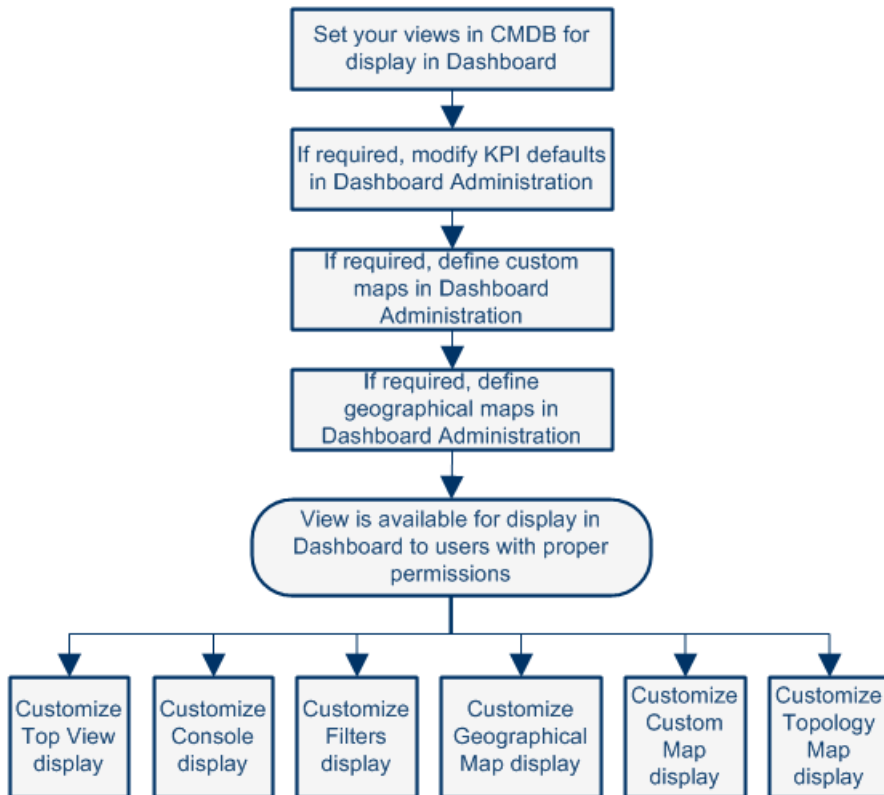
10 Display Data in Dashboard

Use views, Dashboard tabs, and other capabilities to display data in Dashboard. For details, see “Display Data in Dashboard” on page 34.

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 31
- ▶ “Modify KPI Defaults in Dashboard Administration – Optional” on page 31

- “Specify the Time Format Used in a CI Last Status Update Time – Optional” on page 32
- “Define a Custom Map in Dashboard Administration – Optional” on page 33
- “Configure Geographical Map in Dashboard Administration – Optional” on page 33
- “Display Data in Dashboard” on page 34
- “Customize Dashboard Tabs – Optional” on page 33

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 (instance views or pattern views) in CMDB Administration.

For details about instance views, see “Create and Populate an Instance View” in *Model Management*.

For details about pattern views, see “Pattern View Workflow” 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 398.
- ▶ 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 365.

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 **<HP Business Availability Center server root directory>\AppServer\resources\LocaleDate_<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, to a custom image, status indicators that 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 188.

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 the topology map or 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 162.

6 Customize Dashboard Tabs – Optional

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 Tabs” on page 18.

7 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 34.

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. You can:

- ▶ 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 92.
- ▶ Display the components of the active view arranged in a hierarchical tree, select **Applications > Dashboard > Console**. For details, see “Display and Customize View Information in the Console Tab” on page 120.
- ▶ 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 132.
- ▶ 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 162.
- ▶ 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 188.
- ▶ Display the results of pattern views or instance views, select **Applications > Dashboard > Topology Map**. For details, see “Display and Customize a View Information in the Topology Map” on page 198.
- ▶ 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, and the report repository. For details, see “Reports User Interface” on page 300.
- ▶ Display sample details. For details, see “View Sample Details” on page 35.

- Acknowledge performance problems. For details, see “Acknowledge Performance Problems” on page 36.
- Display real-time change information. For details, see “Analyze Real-Time Change Information” on page 40.
- Find visible and hidden children CIs in a specific view. For details, see “Find Visible and Hidden Child CIs” on page 50.

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:

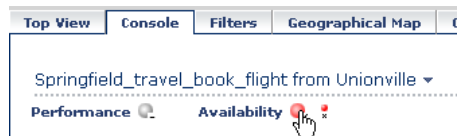
- “Set Up to Display Last Sample Details in Dashboard” on page 35
- “Display the Last Sample Information” on page 35

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” in *CI Attribute Customization*.

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 Dialog Box” on page 397.

Acknowledge Performance Problems

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.

This task includes the following steps:

- “Display/Hide the Ack Column in the Console or Filters Tabs” on page 36
- “Acknowledge a Problem” on page 37
- “View a Problem’s History” on page 38

1 Display/Hide the Ack Column in the Console or Filters Tabs

By default, the **Ack** column is displayed. It 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 62.

2 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 59.

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

You can unset the acknowledgment 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.

The acknowledgement will be set

Add details:

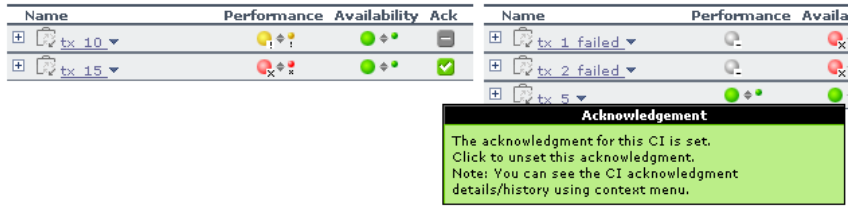
Click **OK** to set or unset the acknowledgment depending on the previous status of the dialog box.

3 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 58.

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 for this CI is set

Acknowledgment details:

Date	User	Action	Message
1/18/06 5:47 AM	admin	Open	set
1/18/06 5:47 AM	admin	Edit	A child problem

The acknowledgement details
 CI history

Add details:

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 58.

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 40
- “Set Up Mute When Acknowledge Option” on page 40

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 52.

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.

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 41
- “Customize the Change Period” on page 41

- “Customize the Number of CIs Monitored for Real-Time Change” on page 41
- “View Real-Time Changes” on page 42

1 Set the CIT to Monitor Changes to Its Properties

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 *CI Attribute Customization*.

2 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.

3 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 40.

4 View Real-Time Changes

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 Related Change Requests Reports

If you are working with Change Control Management, you have the option to view, in Dashboard, a Related Change Requests report for a CI, showing the impact of planned IT changes that have been submitted to the service desk.

To view Related Change Requests reports in Dashboard, you must set up the integration environment and configure infrastructure settings, as described in this section.

This task includes the following steps:

- “Integrate with Change Control Management” on page 43
- “Configure Infrastructure Settings to Work with Change Control Management” on page 43
- “Display the Related Change Requests Report” on page 44

1 Integrate with Change Control Management

To set up the integration with Change Control Management, HP Business Availability Center and HP Change Control Management should be working with the same CMDB server.

2 Configure Infrastructure Settings to Work with Change Control Management

To enable the integration and view the Related Change Requests report in Dashboard, you must set up the environment and configure settings in HP Business Availability Center.

To view change request information in Dashboard, select **Admin > Platform > Setup and Maintenance > Infrastructure Settings**, choose **Applications**, select **Dashboard Application**, and locate the **Active** entry in the Change Control Management Integration Settings table.

- Set the **CCM Integration Status** property to **True**.
- In the **CCM Web Service address** property, define the address of the server where Change Control Management is installed.
- In the **CCM Statuses** property, define the change request statuses used in Change Control Management that you want to include in the Related Change Requests reports. By default, HP Business Availability Center is configured to use the **CLOSED** and **IN_PROGRESS** statuses.

You can change the default statuses or add additional ones, as long as you use the definition used in Change Control Management (**<Change Control Management root directory>\conf\enumeration-labels.properties**). For example, the value **StatusEnum.ASSIGNED=Assigned** should be entered in the CCM Statuses property as **ASSIGNED**.

- ▶ In the **CCM Username** and **CCM Password** properties, enter the details of a user that exists in Change Control Management. The defaults are username **admin**, with no password.

Note: Restart the Gateway Server for the changes to take effect.

3 Display the Related Change Requests Report

If you are working with Change Control Management, then HP Business Availability Center provides an option that enables you to view the impact of IT changes that have been submitted to the service desk. You view this information in a Related Change Requests report, opened in Dashboard for a specific CI using the **Related Change Requests** context menu option.

The Related Change Requests report shows all change requests in the system that have direct or indirect impact on the selected CI. It is generated by Change Control Management, and provides a direct link to the original change request.

You can view the report at any time to check the change requests in the system for a CI. When a CI is registering a problem, by showing a status other than **OK**, you can use the report to determine if the problem is due to a submitted change, before beginning more extensive research into the problem.

For more details on the report, see “Related Change Requests Report” on page 81.

View Service Impact Report

The Service Impact report displays information about how a CI impacts the Business Services it belongs to. Data about the affected Business Service 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 Service Impact Report for a CI” on page 45
- “Modify the Default KPIs and Rules Used to Display Data in Service Impact” on page 46
- “Send a Service Impact Report URL Using Direct Login” on page 48
- “Send a Service Impact Report URL With the Login Page” on page 49

1 Access the Service Impact Report for a CI

To view the Service Impact report for a CI, right-click the CI and select the **Show Service Impact** option. For details, see “Service Impact Report” on page 83.

Example

The following Service Impact report lists the Business Service CIs impacted by the tx_10 CI. It also indicates, in the Service Details area, the status of the KPIs, the current and forecasting statuses of the SLAs that include the Business Service CI selected in the Business Services Summary table.

Service Impact

Business Services Summary

Table below summarizes information about services impacted by 'tx_10' CI. Summary Table includes information about service name, worst KPI status defined on service, average KPI over time, worst SLA status defined on service, and worst forecasting SLA defined on service. Click on a service to display detailed service information.

Name	Current Status	Overtime Status Week to date	SLAs Current Status	SLAs Forecasting
parent service			Exceeded	Exceeded
Financial Services			Exceeded	Exceeded
Online Services			Exceeded	Exceeded

parent service Service Details

Tables below depicts KPIs and SLAs defined for 'parent service'.

KPI	Current Status	Overtime Status Week to date
Performance		
Availability		

SLAs	Customer	Current Status	Forecasting Status	Expected Breach Date
Online Services SLA		Exceeded	Exceeded	N/A
Financial Services SLA		Exceeded	Exceeded	N/A

Close Help

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

The system derives the parameters needed to get the data displayed in Service 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 Service 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 - Service 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.
- ▶ **Number of Users' Sessions KPI.** Sets the Id number of the KPI that defines the number of user sessions in the report. The default is 1050 for the Volume KPI.
- ▶ **Number of Users' Sessions KPI's caption.** Defines the caption in the report for the Number of Users' Sessions KPI.

3 Send a Service Impact Report URL Using Direct Login

You can send a Service 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?cild=<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?cild=<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 Service Impact Report URL With the Login Page

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

You can send a Service 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?cild=<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 Service 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?cild=<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.

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 about including or excluding child CIs, see “Include Related CIs” in *Model Management*.

This task includes the following steps:

- “Find the Visible and Hidden Child CIs For a Specific CI” on page 50
- “Search for the Views That Include a Specific Child CI” on page 50

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

In either the Console 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 **Exclude all child CIs** option has been selected for its parent CI in that view. For details, see “New CI Wizard” 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.

Find Visible and Hidden Child CIs				
fist_bpm_profile_Sanity_1_1				
Performance				
Availability				
Name	Performance	Availability	Visible	
tx_yellow1			<input checked="" type="checkbox"/>	<input type="button" value="Search"/>
tx_red3			<input checked="" type="checkbox"/>	<input type="button" value="Search"/>
tx_green3			<input checked="" type="checkbox"/>	<input type="button" value="Search"/>
tx_fail1			<input checked="" type="checkbox"/>	<input type="button" value="Search"/>
tx_yellow2			<input checked="" type="checkbox"/>	<input type="button" value="Search"/>

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 52
- ▶ “Switch On the Sound Option in the Console or Filters Tabs” on page 52
- ▶ “Modify the Alert Sound – Optional” on page 53
- ▶ “When Using Mozilla, Download a Plug-in” on page 53

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 Page” on page 125 or “Filters Page” on page 148.

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 <HP Business Availability Center 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 54
- “Modify the Maximum Number of CIs to Be Displayed in Dashboard” on page 54
- “Modify the Dashboard Tabs Refresh Rate” on page 54
- “Customize Tooltips and Icons” on page 55

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 many 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 - Service 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” in *CI Attribute Customization*.
- **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” in *CI Attribute Customization*.

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 56
- “Monitor Usage in the System” on page 57

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 <**HP Business Availability Center 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 <**HP Business Availability Center 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 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 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:

- Acknowledgment History and Details Dialog Box on page 58
- Acknowledgments Details Dialog Box on page 59
- Find Visible and Hidden Child CIs Dialog Box on page 60
- Menu Options on page 62
- Node Details Dialog Box on page 80
- Related Change Requests Report on page 81
- Service Impact Report on page 83

Acknowledgment History and Details Dialog Box

Description	<p>Enables you to view the details of the current acknowledgment or the acknowledgment history of the CI.</p> <p>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.</p>
Included in Tasks	“Acknowledge Performance Problems” on page 36

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	<p>The type of action that was performed:</p> <ul style="list-style-type: none"> ➤ 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 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 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	<p>Enables you to set or unset a CI acknowledgment.</p> <p>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.</p> <p>Click the Ack icon to the right of the CI.</p>
Important Information	<p>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).</p> <p>A tooltip for the Ack icon displays the current status of the CI's acknowledgment.</p> <p>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.</p>

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 to set or unset the acknowledgment depending on the previous status of the dialog box.

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, or Filter tab 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 about including or excluding child CIs, see "Include Related CIs" in <i>Model Management</i> . For details, see "Find Visible and Hidden Child CIs" on page 50.
Included in Tasks	"Find Visible and Hidden Child CIs" on page 50

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.
Search	<p>Click 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 "View Explorer" in <i>Model Management</i>.</p> <p>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.</p> <p>Note: The CI is not visible in any view in the following situations:</p> <ul style="list-style-type: none"> ▶ 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, see "New CI Wizard" in <i>Model Management</i>. <p>For more details, see "Find Visible and Hidden Child CIs" on page 50.</p>
Visible	<p>A checkmark indicates that the child CI is visible in the view.</p> <p>An X indicates that the child is hidden in the view.</p>

Menu Options

The menu options displayed in Dashboard View Explorer and the main page of the Console and Filters 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 24.

The options are listed in alphabetical order.

Main Option	Description and Sub-Options	
Acknowledgment	This menu lists options similar to options in the Top View tab to view different trees centered on the selected CI.	
	Acknowledgment Details	Available for all CIs. Opens the Acknowledgment details page that displays information about the CI's acknowledgment. For details, see “Example – Set an Acknowledgment” on page 37.
	Set/Unset Acknowledgment	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 58.

Main Option	Description and Sub-Options	
Application Mapping	This menu lists options that enable you to open specific capabilities filtered by the selected CI.	
	Problem Isolation	<p>Available for SAP-specific CIs.</p> <p>Isolates a CI's problem in a separate browser dialog box. For details about the report, see "Troubleshooting and Limitations" in <i>Solutions and Integrations</i>.</p> <p>For details about the SAP Systems view, see "SAP Systems View" in <i>Solutions and Integrations</i>.</p>
	Show Impact	<p>Available for SAP-specific CIs.</p> <p>Opens a dialog box that shows the impact of a root cause object by displaying all of the objects that are affected by it. For details about the report, see "Troubleshooting and Limitations" in <i>Solutions and Integrations</i>.</p> <p>For details about the SAP Systems view, see "SAP Systems View" in <i>Solutions and Integrations</i>.</p>
Business Transaction Flow Map	<p>Available for TV Monitor CIs.</p> <p>This menu lists options that enable you to open specific capabilities filtered by the selected CI.</p>	
	Completed	<p>Opens the TransactionVision Flow Map for completed instances of the business transaction. For details, see "Business Transaction Flow Map" on page 256.</p>
	In-Process	<p>Opens the TransactionVision Flow Map for instances of the business transaction that are in process. For details, see "Business Transaction Flow Map" on page 256.</p>

Main Option	Description and Sub-Options	
Drill to Diagnostics	<p>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 installed Diagnostics.</p>	
	<p>Layers View</p>	<p>Available for:</p> <ul style="list-style-type: none"> ▶ All Probe Group, and Probe CIs in the Diagnostics View. ▶ Business Process Step CI, in the End User Monitors View. <p>Note: This option is displayed only if you have installed Diagnostics.</p> <p>Opens the Layers (Load) view, with the following characteristics:</p> <ul style="list-style-type: none"> ▶ For a Business Process Step CI, the view displays the layer(s) 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. <p>For more information about Diagnostics, see <i>HP Diagnostics User's Guide</i>.</p>
	<p>Server Requests</p>	<p>Available for the Real User Monitor Business Process Step CIs in the End User Monitors View.</p> <p>Note: This option is displayed only if you have installed Diagnostics.</p> <p>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.</p> <p>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.</p> <p>For more information about Diagnostics, see <i>HP Diagnostics User's Guide</i>.</p>

Main Option	Description and Sub-Options	
Drill to Diagnostics (continued)	Summary View	<p>Available for all Diagnostics Probe Group and Diagnostics Probe CIs in the Diagnostics View.</p> <p>Note: This option is displayed only if you have installed Diagnostics.</p> <p>Opens the Diagnostics Probe Group Summary View for the probe or the probe group in the HP Diagnostics application.</p> <p>For more information about Diagnostics, see <i>HP Diagnostics User's Guide</i>.</p>
	Transactions View	<p>Available for all Business Process Step CIs in the End User Monitors View.</p> <p>Note: This option is displayed only if you have installed Diagnostics.</p> <p>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.</p> <p>For more information about Diagnostics, see <i>HP Diagnostics User's Guide</i>.</p>

Main Option	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	Available for all CIs. Opens the Filters page, which displays the selected CI subtree filtered by the active filter.
	Filter Subtree Monitors	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	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. That filter appears in the Active Filters box.
	Show Subtree Monitors	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. That 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 50.	
Go to BPI	This option is available for Business Process, BPI Monitor, and BPI Monitor CIs. Opens the HP Business Process Insight application. For details, see "Understanding the Application<-->Host or Host Integration Adapters" in <i>Solutions and Integrations</i> .	

Main Option	Description and Sub-Options
Go to Report	<p>This option is available for all CIs.</p> <p>This menu lists options that enable you to access all types of reports that display information about the selected CI.</p>
	<p>BPI Monitors Over Time</p> <p>Available for all BPI Duration, Value, or Custom Monitor CIs.</p> <p>Opens the BPI Monitors Over Time report. For details about the report, see “BPI Monitors Over Time Report” on page 224.</p>
	<p>Business Process Over Time</p> <p>Available for all BPI Business Process Step Monitor or BPI Business Process Monitor CIs.</p> <p>Opens the Business Process Over Time report. For details about the report, see “Business Process Over Time Report” on page 228.</p>
	<p>Business Transaction Over Time</p> <p>Available for TV Monitor CIs.</p> <p>Opens the Business Transaction Over Time report. For details about the report, see “Business Transaction Over Time Report” on page 287.</p>
	<p>Business Transaction Summary</p> <p>Available for TV Monitor CIs.</p> <p>Opens the Business Transaction Summary report. For details about the report, see “Business Transaction Summary Report” on page 282.</p>
	<p>Change Rule</p> <p>Available for all CIs whose properties have changed.</p> <p>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.</p> <p>For details about the report, see “Change Report Page” in <i>Model Management</i>.</p>

Main Option	Description and Sub-Options	
<p>Go to Report (continued)</p>	<p>Configuration Item Status Alerts</p>	<p>Available for all CIs.</p> <p>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.</p> <p>For details about the report, see “Configuration Item Status Alerts Report” in <i>Alerts</i>.</p>
	<p>Diagnostics Web Service Topology</p>	<p>Available for Web Service CIs.</p> <p>Opens the Diagnostics Service Topology view for the selected Web Service CI, for the past half hour. For details about the report, see <i>HP Diagnostics User’s Guide</i>.</p>
	<p>End User Summary</p>	<p>Available for Real User Monitor-specific CIs.</p> <p>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.</p> <p>For details, see “End User Summary Report” in <i>Using End User Management</i>.</p> <p>For details about the Real User Monitor views, see Chapter 11, “Understanding Real User Monitor Views” in <i>Using End User Management</i>.</p>
	<p>Event Count Over Time</p>	<p>Available for Real User Monitor-specific CIs.</p> <p>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.</p> <p>For details, see “Event Count Over Time Report” in <i>Using End User Management</i>.</p> <p>For details about the Real User Monitor views, see Chapter 11, “Understanding Real User Monitor Views” in <i>Using End User Management</i>.</p>

Main Option	Description and Sub-Options	
Go to Report (continued)	Event Summary	<p>Available for Real User Monitor-specific CIs.</p> <p>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.</p> <p>For details, see “Event Summary Report” in <i>Using End User Management</i>.</p> <p>For details about the Real User Monitor views, see Chapter 11, “Understanding Real User Monitor Views” in <i>Using End User Management</i>.</p>
	Event Summary (Errors Monitor)	<p>Available for RUM Error Events CIs.</p> <p>Opens the Event Summary report. For details, see “Event Summary Report” in <i>Using End User Management</i>.</p>
	Event Summary (Event Monitor)	<p>Available for RUM Informational Events CIs.</p> <p>Opens the Event Summary report. For details, see “Event Summary Report” in <i>Using End User Management</i>.</p>
	Event Summary (HTTP Error Monitor)	<p>Available for RUM HTTP Error Events CIs.</p> <p>Opens the Event Summary report. For details, see “Event Summary Report” in <i>Using End User Management</i>.</p>
	Event Summary (Information Event Monitor)	<p>Available for RUM Informational Event Monitor CIs.</p> <p>Opens the Event Summary report. For details, see “Event Summary Report” in <i>Using End User Management</i>.</p>
	KPIs Over Time	<p>Available for all CIs.</p> <p>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.</p> <p>For details about the report, see “KPIs Over Time Report”.</p>

Main Option	Description and Sub-Options	
Go to Report (continued)	Operations Health	<p>Available for Web Service Operation, SiteScope Monitor, and Diagnostics Web Service Monitor CIs.</p> <p>Opens the Health Report in the HP Business Availability Center for SOA application filtered for the specific operation. For details, see “Health Report” in <i>Solutions and Integrations</i>.</p>
	Related Change Requests	<p>Available for all CIs.</p> <p>Opens the Related Change Requests report that displays all change requests in the system that have direct or indirect impact on the selected CI.</p> <p>For details, see “Change Report Page” in <i>Model Management</i>.</p>
	SAP Transaction Changes	<p>Available for SAP-specific CIs.</p> <p>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.</p> <p>For details about the report, see “SAP Transaction Changes Report” in <i>Solutions and Integrations</i>.</p> <p>For details about the SAP System view, see “SAP Systems View” in <i>Solutions and Integrations</i>.</p>
	SAP Transport Changes	<p>Available for SAP-specific CIs.</p> <p>Opens the SAP Transport Changes report. The SAP Transport Changes report displays the changes inside the Transport and the impact on the SAP transaction.</p> <p>For details about the report, see “SAP Transport Changes Report” in <i>Solutions and Integrations</i>.</p> <p>For details about the SAP System view, see “SAP Systems View” in <i>Solutions and Integrations</i>.</p>

Main Option	Description and Sub-Options	
Go to Report (continued)	Server Summary	<p>Available for Real User Monitor-specific CIs.</p> <p>Opens the Server Summary report. The Server Summary report displays data for the servers monitored by the Real User Monitor probe.</p> <p>For details about the report, see “Server Summary Report” in <i>Using End User Management</i>.</p> <p>For details about the Real User Monitor views, see Chapter 11, “Understanding Real User Monitor Views” in <i>Using End User Management</i>.</p>
	Session Analyzer	<p>Available for Real User Monitor-specific CIs.</p> <p>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.</p> <p>For details, see “Session Analyzer Report” in <i>Using End User Management</i>.</p> <p>For details about the Real User Monitor views, see Chapter 11, “Understanding Real User Monitor Views” in <i>Using End User Management</i>.</p>
	Siebel Cross-Performance	<p>Available for the Siebel Application Server, Siebel Web Server Extension, Siebel Component Group, Siebel Component, and Siebel Web Application CIs.</p> <p>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.</p> <p>For details about the report, see “Cross-Performance Report” in <i>Using System Availability Management</i>.</p>

Main Option	Description and Sub-Options	
<p>Go to Report (continued)</p>	<p>SiteScope Cross-Performance</p>	<p>Available for SiteScope Profile, SiteScope Group, and SiteScope Monitor CIs.</p> <p>Opens the Cross-Performance report. For details, see “Cross-Performance Report” in <i>Using System Availability Management</i>.</p>
	<p>SiteScope Quick Report</p>	<p>Available for SiteScope Group and SiteScope Monitor CIs.</p> <p>Opens SiteScope Quick Report. For details, see “Quick Report” in <i>Using System Availability Management</i>.</p>
	<p>SiteScope Server Centric Report</p>	<p>Available for Windows Resource Monitor and Unix Resource Monitor CIs under specific conditions described in the report description.</p> <p>Opens SiteScope Server Centric Report. For details, see “Server-Centric Report” in <i>Using System Availability Management</i>.</p>
	<p>Systinet Web Service Data</p>	<p>Available 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.</p> <p>Opens the HP SOA Systinet application, focused on the relevant Web service. For details, see the HP SOA Systinet documentation.</p> <p>For details on the integration with HP SOA Systinet, see “Integration of HP SOA Systinet” in <i>Solutions and Integrations</i>.</p>
	<p>Transaction Analysis</p>	<p>Available for all CIs.</p> <p>Opens the Transaction Analysis report for the CI. The Transaction Analysis report provides an in-depth picture of the performance of transactions.</p> <p>For details about the report, see “Transaction Analysis Report” in <i>Using End User Management</i>.</p>

Main Option	Description and Sub-Options	
Go to Report (continued)	Trend	<p>Available for all CIs.</p> <p>Opens the trend report for the CI. Trend reports enable you to compare multiple measurements from several profiles.</p> <p>For details about the report, see “Trend Reports” in <i>Reports</i>.</p>
	Triage	<p>Available for Real User Monitor-specific CIs and for Siebel-specific CIs.</p> <p>Opens the Triage report. The Triage report displays transaction data for Business Process Monitor, and Real User Monitor profiles for the past day.</p> <p>For details, see “Triage Report” in <i>Using End User Management</i>.</p> <p>For details about the Real User Monitor views, see Chapter 11, “Understanding Real User Monitor Views” in <i>Using End User Management</i>.</p> <p>For details about the Siebel Sites view, see “Siebel Views” in <i>Solutions and Integrations</i>.</p>
	Web Services Health	<p>Available for Web Services CIs.</p> <p>Opens the Health Report in the HP Business Availability Center for SOA application filtered for the specific.</p> <p>For details, see “Health Report” in <i>Solutions and Integrations</i>.</p>

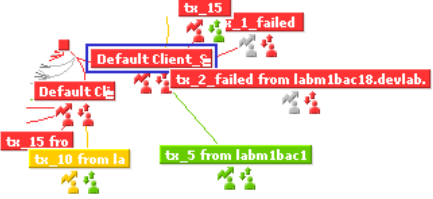
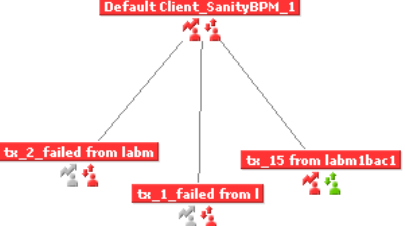
Main Option	Description and Sub-Options	
<p>Go to Siebel Diagnostics</p>	<p>This menu lists options that enable you to open specific pages in the Business Availability Center for Siebel filtered by the selected CI.</p>	
	<p>Show Processes</p>	<p>This option is available for Siebel Application Server, Siebel Component Group, and Siebel Component CIs.</p> <p>This option opens the Task Diagnostics Tool filtered by:</p> <ul style="list-style-type: none"> ▶ 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. <p>For details about the Siebel Task Diagnostics Tool, see “Siebel Views” in <i>Solutions and Integrations</i>.</p> <p>For details about the Siebel CIs, see “Default CITs in the Siebel View” in <i>Solutions and Integrations</i>.</p> <p>For details about the Process Diagnostics Tool, see “Siebel Views” in <i>Solutions and Integrations</i>.</p>

Main Option	Description and Sub-Options	
Go to Siebel Diagnostics (continued)	Show Running Tasks	<p>Available for Siebel Application Server, Siebel Component Group, and Siebel Component CIs.</p> <p>Opens a separate page with the Task Diagnostics Tool filtered by:</p> <ul style="list-style-type: none"> ▶ 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. <p>For details about the Siebel CIs, see “Default CITs in the Siebel View” in <i>Solutions and Integrations</i>.</p> <p>For details about the Siebel Task Diagnostics Tool, see “Siebel Views” in <i>Solutions and Integrations</i>.</p>
	Show Tasks in Error	<p>Available for Siebel Application Server, Siebel Component Group, and Siebel Component CIs.</p> <p>Opens a separate page with the Task Diagnostics Tool filtered by:</p> <ul style="list-style-type: none"> ▶ 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. <p>For details about the Siebel CIs, see “Default CITs in the Siebel View” in <i>Solutions and Integrations</i>.</p> <p>For details about the Siebel Task Diagnostics Tool, see “Siebel Views” in <i>Solutions and Integrations</i>.</p>

Main Option	Description and Sub-Options	
<p>Go to Siebel Diagnostics (continued)</p>	<p>Siebel Database Breakdown</p>	<p>Available for the Siebel Site, Siebel Application, and Siebel Enterprise CIs.</p> <p>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.</p> <p>For details, see “Siebel Views” in <i>Solutions and Integrations</i>.</p>
	<p>Siebel SARM</p>	<p>Available for the Siebel Site, Siebel Application, and Siebel Enterprise CIs.</p> <p>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.</p> <p>For details, see “Siebel Views” in <i>Solutions and Integrations</i>.</p>
<p>Go to SiteScope</p>	<p>Available for SiteScope Profile, SiteScope Group, and SiteScope Measurement Group CIs.</p> <p>Opens the appropriate monitor page in SiteScope.</p> <p>For details about SiteScope, see <i>Using System Availability Management</i>.</p>	
<p>Go to TransactionVision</p>	<p>Available for TV Monitor CIs.</p> <p>Opens the the relevant report in HP TransactionVision.</p>	
<p>Go to Problem Isolation</p>	<p>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.</p> <p>This option is available for all CIs.</p> <p>Opens the Problem Isolation application, which is also accessible through Applications > Problem Isolation. The user enters the application on the Problems List page.</p>	

Main Option	Description and Sub-Options
HP Service Center	<p>This option is available for Business Service CIs or EMS Monitor CIs under Business Service CIs.</p> <p>Opens the HP ServiceCenter application.</p>
Show Event	<p>This option is available for Application Monitor CIs in the Netscout view.</p> <p>Opens the Netscout application.</p>
Properties	<p>This option is available for all CIs.</p> <p>Opens the Properties dialog box appropriate for the CI.</p> <p>For details, see “Working with CIs” in <i>Model Management</i>.</p>
Show Service Impact	<p>This option is available for all CIs.</p> <p>Opens the Service 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 “Service Impact Report” on page 83.</p>
Show Related CIs	<p>This option is available for all CIs.</p> <p>Performs a search for related CIs and displays the result in the Search tab of View Explorer.</p> <p>For details about the Search tab, see “Search for CIs in Search Mode” in <i>Model Management</i>.</p>

Main Option	Description and Sub-Options	
Top View	This menu lists options similar to options in the Top View tab to view different trees centered on the selected CI.	
	Show in Top View	Available for all CIs. Opens the Top View tab with the view's tree centered on the selected CI. For details about the Top View tab, see "Top View Page" on page 108.
	Show Path to Root	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: <div style="text-align: center;"> <pre> graph TD A[End User Locations View] --> B[Default Client_SanityBPM_1] B --> C[Default Client_SanityBPM_1 f] C --> D[cx_10 from labm1b] </pre> </div>

Main Option	Description and Sub-Options	
<p>Top View (continued)</p>	<p>Show Problematic Subtree</p>	<p>Available for all CIs.</p> <p>Opens a dialog box with capabilities similar to the Top View tab capabilities. The dialog box 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.</p> <p>For example, the Default Client_SanityBPM_1 CI has the following children:</p>  <p>If you select the Top View > Show Problematic Subtree option for Default Client_SanityBPM_1, the following children are displayed:</p> 

Node Details Dialog Box

Description	Enables you to view CMDB details about the CI. To Access: In the Console or Filters tab, click Details for the appropriate CI.
--------------------	---

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 <code>entity_id</code>).
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 <code>kpi_id</code>).
Result	The result of the calculation.
System KPI (x)	Where x is the KPI ID (the value returned by the field <code>kpi_type</code>).

Related Change Requests Report

Related Change Requests						
View:	<input type="button" value="Past week"/>	From: 5/22/06 11:52 PM	To: 5/29/06 11:52 PM	Pacific Standard Time	<input type="button" value="Print"/>	<input type="button" value="Refresh"/>
						<input type="button" value="Generate"/>
Actual Start Time	Actual End Time	Description	Severity	Status	Contact	Level
5/24/06 06:58:17 AM	5/24/06 07:58:17 AM	Swap SCSI 0:1 to 15K RPM Seagate drives	CRITICAL	In Progress	-	Release
5/24/06 07:32:22 PM	5/25/06 02:59:22 AM	Upgrade memory	CRITICAL	In Progress	-	Release
5/24/06 10:36:26 PM	5/24/06 11:36:26 PM	Need to upgrade memory for LDAP server	CRITICAL	In Progress	-	Release
5/24/06 11:28:47 PM	5/25/06 02:29:47 AM	Replace HED at microwave farm	CRITICAL	In Progress	-	Release
5/25/06 02:40:26 PM	5/25/06 03:40:26 PM	LDAP Memory upgrade	CRITICAL	In Progress	-	Release
5/25/06 03:15:58 PM	5/25/06 04:15:58 PM	Upgrade Memory	CRITICAL	In Progress	-	Release
5/25/06 05:14:13 PM	5/25/06 07:14:47 PM	New Report for Sales Forecasting	CRITICAL	Pending Approval	-	Release
5/25/06 11:00:00 PM	5/25/06 11:30:00 PM	Tina's test	CRITICAL	Pending Approval	Sanders, Gabbie	Release

Description	<p>Enables you to view the impact of IT changes submitted to the service desk when you work with Change Control Management for the selected CI.</p> <p>To access: In Dashboard, right-click the relevant CI and select Go to Report > Related Change Requests.</p>
Important Information	<p>The report lists all change requests that have a direct or indirect impact on the selected CI during the default time period. The list may include change requests that resulted in a direct change to the CI (a CCI), or that affected the CI as a result of a modification to the change request (an ACI). The report is generated by Change Control Management and provides a link to the original change request.</p> <p>When a CI is registering a problem, by showing a status other than OK, you can use the report to determine if the problem is due to a submitted change, before beginning more extensive research into the problem.</p> <p>The Related Change Requests option is enabled only if HP Business Availability Center is configured to work with Change Control Management. For more information, see “View Related Change Requests Reports” on page 42.</p>
Included in Tasks	“View Related Change Requests Reports” on page 42

Report Settings

GUI Element (A-Z)	Description
<Common report settings>	See “Common Report Elements” in <i>Reports</i> .

Report Content

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

GUI Element (A-Z)	Description
Actual End Time	The time at which execution of the change request ended.
Actual Start Time	The time at which execution of the change request began.
Contact	The owner of the selected change request.
Description	A linked description of the change request. The link opens the change request in the service desk system, where you can see more information on the requested change. (You may need to enter login information for the service desk system.)
Level	The level of the change request in the hierarchy in Change Control Management. Possible values are Release or Change .
Severity	The degree of impact of the change request. The severity level is defined in Change Control Management.
Status	The status of the change request in Change Control Management. You can configure HP Business Availability Center to include additional status levels used in Change Control Management. For details, see the Change Control Management documentation.

Service Impact Report

http://labm1sun07 - HP Business Availability Center - Microsoft Internet Explorer

Service Impact

Business Services Summary

Table below summarizes information about services impacted by 'bx_10' CI. Summary Table includes information about service name, worst KPI status defined on service, average KPI over time, worst SLA status defined on service, and worst forecasting SLA defined on service. Click on a service to display detailed service information.

Name	Current Status	Overtime Status Week to date	SLAs Current Status	SLAs Forecasting
parent service			Exceeded	Exceeded
Financial Services			Exceeded	Exceeded
Online Services			Exceeded	Exceeded

parent service Service Details

Tables below depicts KPIs and SLAs defined for 'parent service'.

KPI	Current Status	Overtime Status Week to date
Performance		
Availability		

SLAs	Customer	Current Status	Forecasting Status	Expected Breach Date
Online Services SLA		Exceeded	Exceeded	N/A
Financial Services SL		Exceeded	Exceeded	N/A

Done Internet

Description	<p>Displays information about the Business Service CIs impacted by the selected CI.</p> <p>To access: In the Console or Filter tab, right-click the relevant CI and select Show Service Impact.</p>
Important Information	<p>If there are no Business Service CIs attached to the CI, the report is empty.</p> <p>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 - Service Impact table and add the KPI numbers separated by a comma.</p> <p>For example, to remove the Performance and KPIs, enter 6,7. Removing KPIs has an impact on the value/status of the CIs to which those KPIs are assigned.</p>
Included in Tasks	<p>“View Service Impact Report” on page 45</p>

Business Services Summary Area

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

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

GUI Element (A-Z)	Description
Over Time Status Week to Date	<p>The average status of the KPI over a predefined time period. The default is: week to date.</p> <p>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 - Service Impact table and modify the entry value.</p>
SLAs Current Status	<p>The worst status of all the SLAs where the Business Service CI is included.</p> <p>If the SLA Current Status is No Data and the SLAs table below the main table indicates: No information, the Business Service CI is not included in any SLA.</p> <p>If the SLA Current Status is No Data and the SLAs table below the main table indicates: No Data, the Business Service CI is included in the SLA and the SLA worst status is No Data.</p>
SLAs Forecasting	<p>The worst expected status of the SLAs where the Business Service CI is included.</p> <p>If the SLA Forecasting Status is No Data and the SLAs table below the main table indicates: No information, the Business Service CI is not included in any SLA.</p> <p>If the SLA Forecasting Status is No Data and the SLAs table below the main table indicates: No Data, the Business Service CI is included in the SLA and the SLA Forecasting worst status is No Data.</p>

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 Service CI, as it appears in Dashboard.
KPI	The list of KPIs attached to the selected Business Service CI.
Over Time Status	The status of the KPI over a predefined time period, as it appears in the KPI Summary 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 84.
SLAs	The list of SLAs where the selected Business Service CI is included. For additional information, see “Business Services Summary Area” on page 84.

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

Dashboard Top View

This chapter describes Dashboard Top View.

This chapter includes:

Concepts

- ▶ Top View on page 90

Tasks

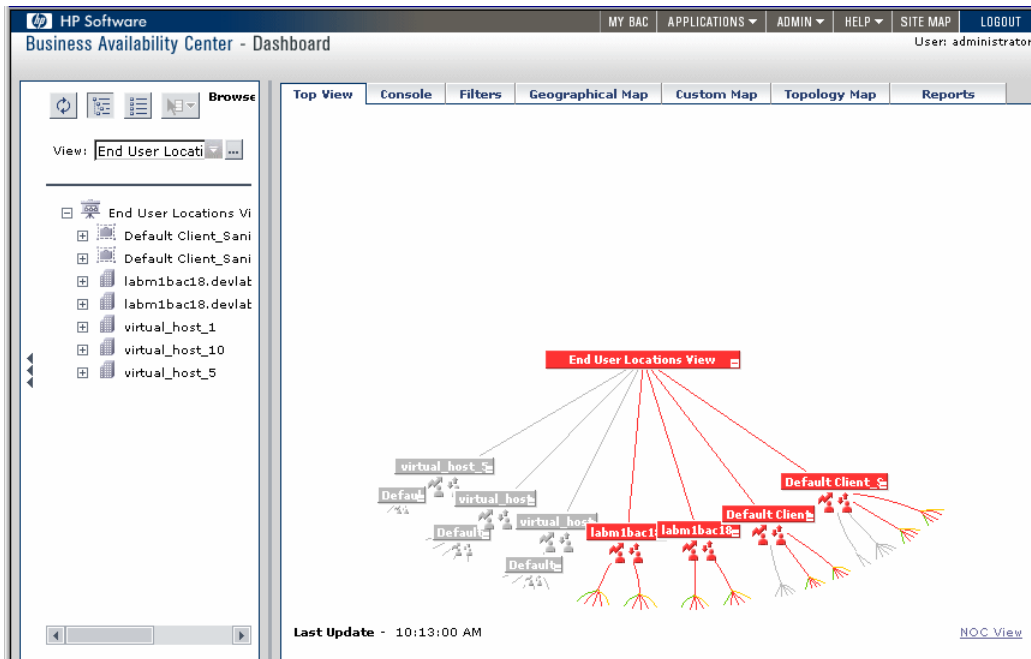
- ▶ Display and Customize View Information in Top View on page 92
- ▶ Access an External Application from Top View on page 94
- ▶ Customize Top View Display on page 95

Reference

- ▶ Dynamic URL Parameters on page 105
- ▶ Top View User Interface on page 107

Top View

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 108.



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 91
- “Understanding the Colors and the Icons” on page 91
- “Virtual Containers” on page 92

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 108.

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 about color coding, see “Understanding KPI Status” on page 352.



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.

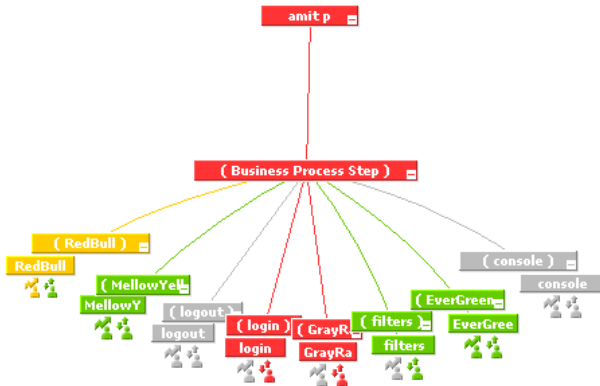
Note: The root CI does not display KPI icons because it is a container and not a real CI.

For a list of the KPIs used in Dashboard, see “List of Dashboard KPIs and Their Details” in *CI Attribute Customization*.

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 “Group By 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 93
- ▶ “Customize the Top View Display” on page 93
- ▶ “Filter the Relevant Information in Top View” on page 93

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, enabling you to gain a big-picture perspective of business availability for both the end-user and system Key Performance Indicators (KPIs) of your organization.

For details, see “Top View Page” on page 108.

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 about the available customizations, see “Customize Top View Display” on page 95.

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 “Top View Menu Options” on page 114.

Access an External Application from Top View

You can configure Dashboard Top View so that a user can open an external application.

To open an external application from Top View:

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 105.

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.
-

Specifying a URL in the Infrastructure Settings, automatically adds the **Open in New Window** option to the context menu options in Top View. By default, no URL is specified and the **Open in New Window** option does not appear in the context menus in Top View. When the user selects **Open in New Window**, Top View calls the 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.

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:

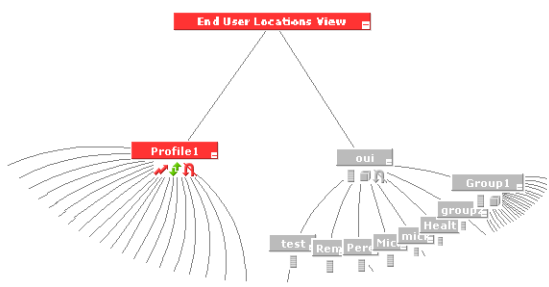
- “Customize the Layout of the Hierarchy in Top View” on page 96
- “Modify the Default Refresh Rate of Top View” on page 99
- “Change the KPI Status Icons” on page 99
- “Viewing Chinese or Japanese Characters in Top View” on page 99
- “Change the Text Color in Top View Bars” on page 99
- “Change Fonts in Top View” on page 100
- “Change the Caption Font Size in Top View” on page 100
- “Modify the Number of CIs Displayed in Top View” on page 100
- “Specify the Maximum Length of the Line Between Two CIs” on page 101
- “Change the Number of CI Levels Displayed in Top View” on page 101
- “Change the Number of CI Levels That Can Be Expanded in Top View” on page 101

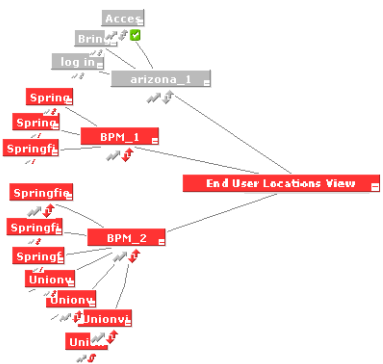
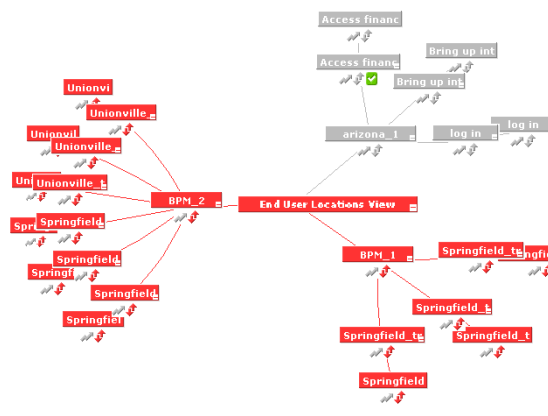
- “Hide or Display the View Bar in Top View When the View has a Single Root CI” on page 102
- “Change the Color of the CI Bar in Top View When the CI Status is OK” on page 102
- “Customize the Background Image for Top View” on page 103
- “Customize Top View Tooltips” on page 103
- “Set Up the Top View Debugging Mechanism” on page 105

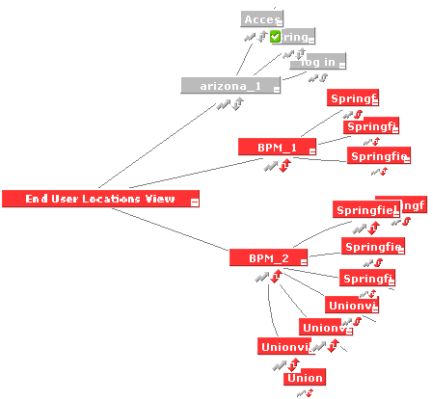
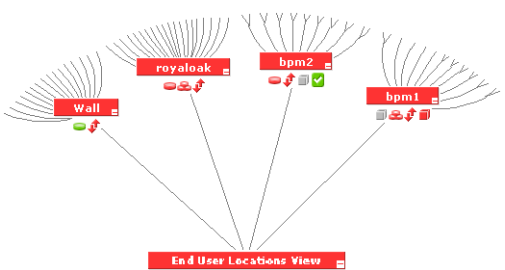
1 Customize the Layout of the Hierarchy in Top View

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
<p>BOTTOM</p>	<p>Default. The parent CI is above the child CIs and is centered on the page.</p> 

Type of Layout	Description
LEFT	<p>The child CIs are to the left of the parent CI and the parent CI is centered on the page.</p> 
RADIAL	<p>The second level of the tree is distributed around the parent and the parent is centered on the page.</p> 

Type of Layout	Description
<p>RIGHT</p>	<p>The child CIs are to the right of the parent CI and the parent CI is centered on the page.</p>  <p>The diagram illustrates a 'RIGHT' layout. A central parent CI, 'End User Locations View', is positioned on the left side of the page. From this parent CI, several child CIs branch out to the right. These include 'arizona_1', 'BPM_1', 'BPM_2', and 'Unionvi'. Each of these child CIs further branches into more child CIs, such as 'Springfie', 'Springfie', 'Springfie', 'Unionvi', and 'Union'. The parent CI is centered vertically, and the child CIs are arranged in a fan-like pattern extending to the right.</p>
<p>TOP</p>	<p>The parent CI is under the child CIs and is centered on the page.</p>  <p>The diagram illustrates a 'TOP' layout. A central parent CI, 'End User Locations View', is positioned at the bottom center of the page. From this parent CI, several child CIs branch out upwards. These include 'Wall', 'royalfoak', 'bpm2', and 'bpm1'. Each of these child CIs further branches into many more child CIs, creating a dense, fan-like structure that spreads across the top of the page. The parent CI is centered horizontally, and the child CIs are arranged in a wide, shallow arc above it.</p>

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” in *CI Attribute Customization*.

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 BAC.

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

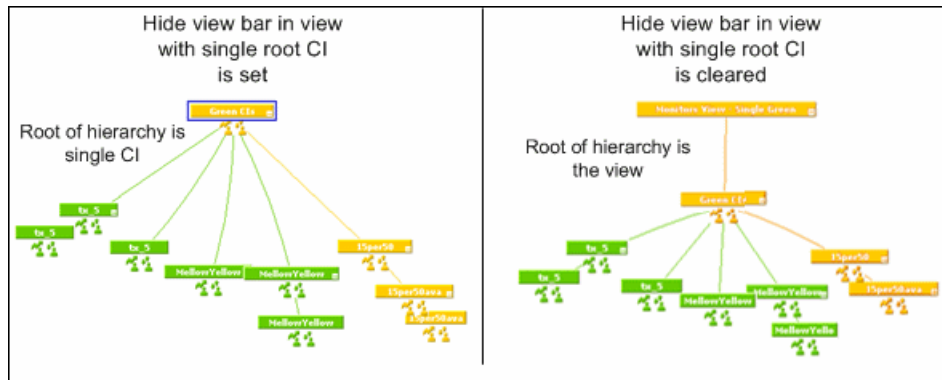
To change the default setting (7) for the number of levels of CIs that are displayed when you select the **Expand more levels** context menu item, on the Infrastructure Settings page, select **Admin > Platform > Setup and Maintenance > Infrastructure Settings**, choose **Applications**, select **Dashboard 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:
`<HP Business Availability Center 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 BAC.
- Using this option might affect the performance.
- Adding a weight to a CI is explained in “Relationship Properties Dialog Box” 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**.

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.

Constant	Description	
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.	
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	If you want to filter by status, use NODE.STATUS .	

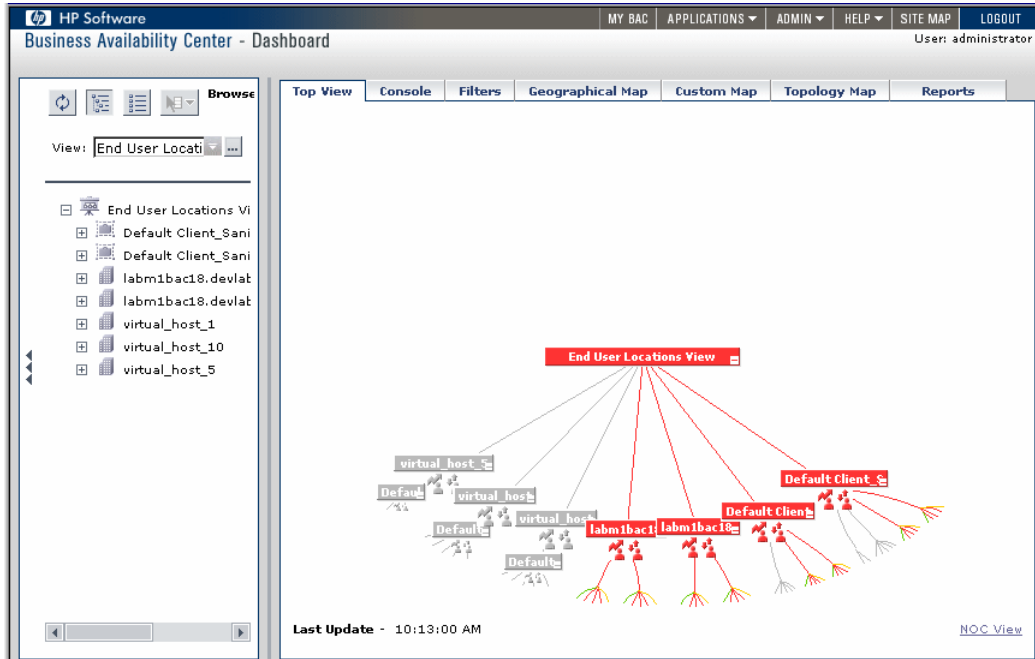
Constant	Description
NODE.PARENTID	The ID of the parent CI.
NODE.CHILDIDS	The ID number of the CI children.

Top View User Interface

This section describes:

- Top View Page on page 108

Top View Page

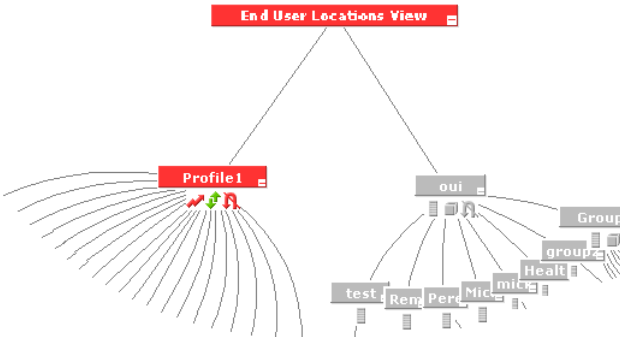


The screenshot displays the HP Business Availability Center dashboard. The top navigation bar includes the HP logo, "HP Software", and menu items: "MY BAC", "APPLICATIONS", "ADMIN", "HELP", "SITE MAP", and "LOGOUT". The user is identified as "administrator". The main dashboard area is titled "Business Availability Center - Dashboard" and features a "Browse" sidebar on the left. The sidebar shows a tree view of "End User Locations View" with sub-items: "Default Client_Sani", "labm1bac18.devlat", "virtual_host_1", "virtual_host_10", and "virtual_host_5". The main content area is titled "End User Locations View" and shows a hierarchical topology diagram. The root node is "End User Locations View", which branches into "virtual_host" and "Default Client". The "virtual_host" node further branches into "Default" and "virtual_host", which then branches into "Default" and "labm1bac18". The "labm1bac18" node branches into "labm1bac18" and "Default Client". The "Default Client" node branches into "Default Client" and "Default Client". The diagram shows a complex network of nodes and connections, with red lines indicating the primary path. At the bottom of the diagram, it says "Last Update - 10:13:00 AM" and "NOC View".

Description	<p>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.</p> <p>To Access: Select Applications > Dashboard, select a view in View Explorer, and click the Top View tab.</p>
Important Information	<p>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.</p> <p>Note: You can add this report as a portlet in My BAC. For details, see “Add Portlets to <page_name>/Add Portlets Dialog Box” in <i>Using My BAC</i>.</p> <p>Functionality:</p> <ul style="list-style-type: none"> ▶ 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 open the Top View tab again it reverts to the default display format.
Included in Tasks	<p>“Display and Customize View Information in Top View” on page 92.</p>
Useful Links	<p>“Top View” on page 90</p> <p>For details about the functionality of View Explorer, see “View Explorer” in <i>Model Management</i>.</p>

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









GUI Element (A-Z)	Description
<CIs, Child CIs, and Root CIs>	<p>The tree is built from branch parent and child configuration items (CIs) and monitor CIs. For details, see “Working with CIs” in <i>Model Management</i>.</p> <p>Right-click a bar to display the context menu options. For details, see “Top View Menu Options” on page 114.</p> <p>Click a bar to move the bar to the center of the graphic.</p> <p>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.</p>
<KPIs and their statuses/values>	<p>For each CI, Dashboard displays the CI’s KPIs and their real-time status as a color-coded icon (LED). For details, see “Understanding KPI Status” on page 352.</p> <p>For details about the icons, see below.</p>
<right-click menu options>	<p>Right-click a CI bar to list the available menu options. For details, see “Top View Menu Options” on page 114.</p>







GUI Element (A-Z)	Description
<p><View bar></p>	<p>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.</p> <ul style="list-style-type: none"> ▶ 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.  <p>Hold the cursor over a bar to enable the following functionality:</p> <ul style="list-style-type: none"> ▶ The bar is outlined in grey. ▶ If the CI has a long name, the bar expands to display the full name. ▶ A tooltip is displayed, providing status and performance data in each KPI for the item. <p>Right-click the bar to display the available menu options. For details, see “Top View Menu Options” on page 114.</p>
<p><View Explorer></p>	<p>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.</p>

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.
NOC View	<p>Click to display the top view tree in a separate window to be used by a Network Operations Center (NOC).</p> <p>To return to the Top View tab, close the Top View standalone window.</p> <p>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.</p>

KPI Icons in Top View

A CI can have one of the following icons:

Icon	Description
	Availability KPI (with OK status)
	Customer KPI (with OK status)
	System/HP System 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)
	User KPI (with OK status)

Icon	Description
	All other KPIs (with OK status)
	The CI has been acknowledged
	The Duration KPI (with OK status)
	The Business Health KPI (with Major status)
	The Backlog KPI (with No data Status)
	The Volume KPI (with OK status)

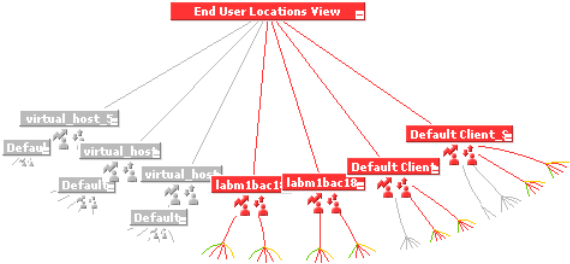
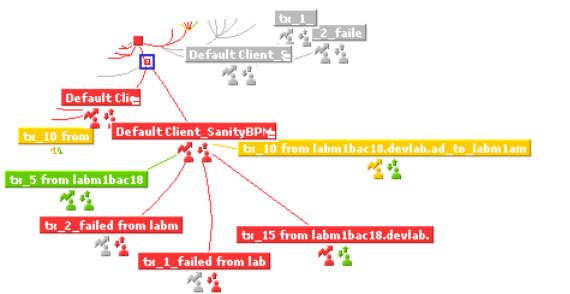
Note:

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” in *CI Attribute Customization*.

Top View Menu Options

Right-click a CI bar to display the following menu options (in alphabetical order):

Menu Option	Description
Acknowledgment Details	To display acknowledgment information for the CI. For details, see “Acknowledge Performance Problems” on page 36.
Expand more levels	Opens a number of levels (7 by default) below the selected level.
Expand to problem	<p>Collapses the branches where CIs do not have Critical or Major statuses.</p> <p>For example, in the End User Locations view, Default Client_SanityBPM support is red.</p>  <p>Right-click Default Client_SanityBPM 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.</p> 

Menu Option	Description
Open in new window	Opens a pop-up window that contains the page accessed by the specified URL. This is useful to open external applications. By default, this option does not appear in the menu. For details about setting up an external URL option, see “Access an External Application from Top View” on page 94.
Set/Unset Acknowledgment	Enables you to set or clear the CI acknowledgment. For details, see “Acknowledge Performance Problems” on page 36.
View in Console	Displays the CI’s branch in the Console tab.

3

Dashboard Console

This chapter describes the Dashboard Console.

This chapter includes:

Concepts

- ▶ Console Page on page 117
- ▶ Service Level Management Results in the Console Page on page 120

Tasks

- ▶ Display and Customize View Information in the Console Tab on page 120
- ▶ Customize the Console Page on page 123

Reference

- ▶ Console User Interface on page 124

Console Page

The Console page shows the components of the active Dashboard view organized into the same hierarchy tree format that you defined for the CIs. For details, see “Working with CIs” in *Model Management*.

For details about the Console page user interface, see “Console Page” on page 125.

The tree is built from group CIs (parents and children) and monitor CIs.

This section includes the following topics:

- “KPI Status” on page 118
- “CIs” on page 118
- “Drill Down” on page 119

KPI Status

The KPI columns for the view (for example, **System**, **Performance**, and **Availability**) contain colored indicators representing performance status for each CI under that KPI (if the KPI is applicable for the CI).

If a KPI is relevant for at least one CI in the tree branches currently displayed, then that KPI is displayed for all CIs. The KPIs that are not relevant for a particular CI display a hyphen (-) meaning that the KPI is not applicable for this CI.

For an explanation of the status icons, see “Understanding KPI Status” on page 352.

CIs

The Console tab top level displays the view and the status of the top level CIs’ KPIs. The tree pane provides a snapshot of tree branches at two consecutive levels (configurable default). For example, when you first access the view, if there is only one parent, you see the two highest levels: Tours Business (parent) and Springfield and Unionville (children).

The screenshot shows the Dashboard Console interface with the 'Console' tab selected. The main view displays 'Tours Business' as the parent CI. Below it, a table lists two child CIs: Springfield and Unionville. The table has columns for CI Name, System, Performance, Availability, and PNR. Springfield has green indicators for System and Performance, a red 'x' for Availability, and a PNR of -93M 47S. Unionville has hyphens for System and Performance, a red lightning bolt for Availability, and a PNR of -.

CI Name	System	Performance	Availability	PNR
Springfield	●	●	✘	-93M 47S
Unionville	-	-	⚡	-

If there is more than one child, all CIs are shown collapsed when you first access the view.

Service Level Management Results in the Console Page

You can use the Dashboard Console to proactively monitor your service level agreements (SLAs). The console displays a PNR KPI bar that enables you to see which SLAs are problematic. You can drill down to see which specific CI may cause you to breach a service contract.

Dashboard calculates whether the measurements of an SLA are within the limits set out in a service level agreement (as defined in Service Level Management). Furthermore, Dashboard calculates whether an SLA is in breach of contract, or might be in breach in the near future.

Dashboard displays the results color-coded according to the status of the CI (that is, whether the CI is functioning within the SLA's time constraints).

For details on attaching a PNR (point of no return) KPI to a CI to view data in Dashboard, see “Example – Attaching a PNR KPI to a CI” on page 367.

For details about the tooltip that is displayed when you move the mouse over the PNR KPI, see “SLM PNR Rule” in *CI Attribute Customization*.

Display and Customize View Information in the Console Tab

This task describes how to view information in the Console tab.

This task includes the following steps:

- ▶ “Select a View and Display a View Information in the Console Page” on page 121
- ▶ “Customize the View Information in the Console Page” on page 121
- ▶ “Access Additional Information” on page 121

1 Select a View and Display a View Information in the Console Page

The data displayed in the Console tab depends on the view you have selected. Select a view and click the **Console** tab to display the components of the active Dashboard view organized into the same hierarchy tree format defined for the CIs in Dashboard Administration. The KPIs columns for the view (for example, **System**, **Performance**, or **Availability**) contain colored indicators representing performance status for each KPI under the CI. For details, see “Console Page” on page 125.

2 Customize the View Information in the Console Page

Customization options are available to filter parts of the hierarchy and to handle acknowledgments. For details about the options, see “Customize the Console Page” on page 123.

3 Access Additional Information

Access more information by using the context menu options.

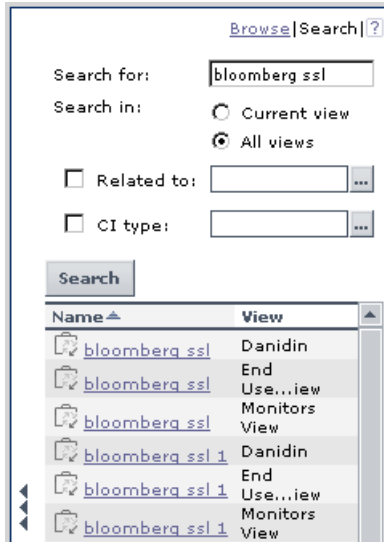
For details, see “Menu Options” on page 62.

Example – Find Visible and Hidden Child CIs

You can display a CI’s visible and hidden child CIs in a specific view. For details, see “Find Visible and Hidden Child CIs” on page 50.

Example – Searching for Views That Include a Specific Child

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.



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 **Exclude all child CIs** option has been selected for its parent CI in that view. For details see the **Remove manually added children** button in “Instance View Editor” in *Model Management*.

Customize the Console Page

You can customize the Console page display using the following options:

This task includes the following steps:

- “Modify the Number of Levels Displayed in the Console Page” on page 123
- “Display Children Section Expanded” on page 123
- “Display the Information in Columns” on page 124
- “Modify the Background Color of the Console Page” on page 124
- “Add a Details Link to CIs in the Console Page” on page 124

1 Modify the Number of Levels Displayed in the Console Page

To modify the number of levels in the Console tab, select **Admin > Platform > Setup and Maintenance > Infrastructure Settings**, choose **Applications**, select **Dashboard Application**, and locate the **Business Console - Number of display levels** entry in the Dashboard Layout Properties table. Modify the value. Default is 2. If you specify 1 only the parent CIs are displayed.

2 Display Children Section Expanded

To display the children section expanded when accessing the Console page, select **Admin > Platform > Setup and Maintenance > Infrastructure Settings**, click **Applications** context, select **Dashboard Application**, and change the **Business Console -Default state** in the Dashboard Application - Dashboard Layout Properties table to **expanded**. The default is **collapsed**. The change is performed immediately.

3 Display the Information in Columns

You can modify the Console tab definition to display columns instead of one table.

To display the Console tab in columns, select **Admin > Platform > Setup and Maintenance > Infrastructure Settings**, click **Applications** context, select **Dashboard Application**, 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 in the Console tab. The default is 1. You can select a number between 1 and 3. The change is performed immediately.

4 Modify the Background Color of the Console Page

To modify the background color of the Console tab, edit the `/* added for bam */` section of the stylesheet used by the Dashboard Console tab located at

`<HP Business Availability Center root directory>/AppServer/webapps/siet.war/static/act/stylesheet/Properties.css`.

It is recommended to backup the original stylesheet before making any changes.

5 Add a Details Link to CIs in the Console Page

To add a Details link for every CI in the tab, 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. For details, see “Node Details Dialog Box” on page 80.





























Console User Interface

This section describes:

- ▶ Console Page on page 125

Console Page

End User Locations View ▲ ☰ 🔍 🔔




Name	Performance	Availability	Ack
 Default Client_SanityBPM_1 ▼			
 Default Client_SanityBPM_2 ▼			
 labm1bac18.devlab.ad to labm1amrnd08_1 ▼			
 labm1bac18.devlab.ad to labm1amrnd08_2 ▼			
 virtual_host_1 ▼			
 virtual_host_10 ▼			
 virtual_host_5 ▼			




Last Update - 10:42:34 AM

Description	Shows the components of the active Dashboard view organized into the same hierarchy tree format that you defined for the CIs. For details, see “Working with CIs” in <i>Model Management</i> . To Access: Select Applications > Dashboard , and click the Console tab.
Important Information	Customizable: You can customize this tab. For details, see the customization section in “Dashboard Console” on page 117. Note: You can add this report as a portlet in My BAC. For details, see “Add Portlets to <page_name>/Add Portlets Dialog Box” in <i>Using My BAC</i> .

Included in Tasks	“Display and Customize View Information in the Console Tab” on page 120
Useful Links	<p>“Console Page” on page 117</p> <p>“Real-Time Changes to CI Properties” on page 23</p> <p>For details about the functionality of View Explorer, see “View Explorer” in <i>Model Management</i>.</p>

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

GUI Element (A-Z)	Description
	Click to access the context menu options. For details, see “Menu Options” on page 62.
	The acknowledge utility enables you to track performance problems identified in the system and in the network infrastructure by keeping a record of when the problem was acknowledged and by which user. For details, see “Acknowledge Performance Problems” on page 36.
	<p>Indicates that at least one change-monitored property of the CI’s child CIs has changed.</p> <p>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.</p> <p>For details about setting this feature, see “Analyze Real-Time Change Information” on page 40.</p>

GUI Element (A-Z)	Description
	<p>Indicates that at least one change-monitored property of the CI's child CIs has changed.</p> <p>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.</p> <p>For details about setting this feature, see “Analyze Real-Time Change Information” on page 40.</p>
	<p>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.</p> <p>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.</p> <p>For details about setting this feature, see “Analyze Real-Time Change Information” on page 40.</p>
	<p>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 52 or “Switch Off the Alert Sound When CI is Acknowledged” on page 40.</p>
<CIs>	<p>The tree is built from group parent, children and monitor configuration items (CIs). For details, see “Working with CIs” in <i>Model Management</i>.</p>
<Expand/collapse>	<p>Click [+] or [-] in the tree of CIs to expand or collapse the tree.</p>

GUI Element (A-Z)	Description
<KPIs and their statuses/values>	<p>For each CI in the view, Dashboard displays real-time status in one or more KPI columns (for example, System, Performance, and Availability). A color-coded icon (LED) represents the status assigned to the KPI for its current performance level. Additional icons show trend and history for the CI under that KPI. For details, see “Understanding KPI Status” on page 352.</p> <p>If a KPI is relevant for at least one CI in the tree branches currently displayed, then that KPI is displayed for all CIs. The KPIs that are not relevant for a particular CI display a hyphen (-), meaning that those KPIs are not applicable for this CI.</p> <p>Tooltip: Move the cursor above a KPI status icon to display a tooltip providing additional information about the KPI:</p> <ul style="list-style-type: none"> ➤ 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: <ul style="list-style-type: none"> ➤ Not up to date. For decayed CIs, indicating that the CI has passed its timeout period. (For a SiteScope CI, this status is displayed after a SiteScope monitor is disabled.) ➤ Stopped. When a Business Process 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 50. <p>The KPIs are ordered, from left to right, according to their Display Order defined in the Repositories. For details, see “KPIs Repository Page” in <i>CI Attribute Customization</i>.</p>

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.

4

Dashboard Filters

This chapter describes the Dashboard Filters.

This chapter includes:

Concepts

- ▶ Filters on page 132

Tasks

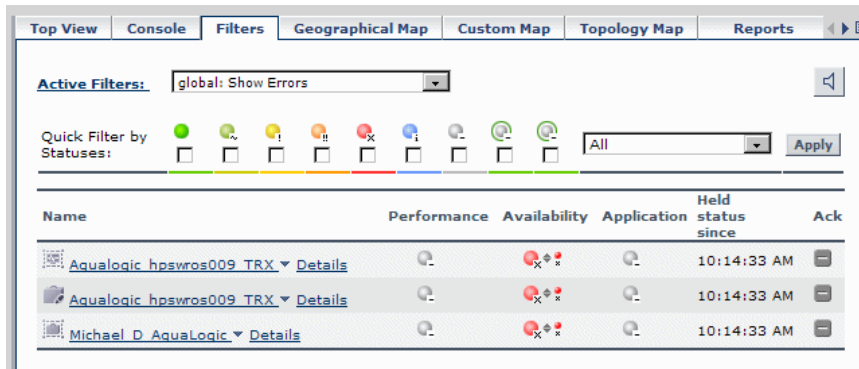
- ▶ Display and Customize a View Information in Filters on page 132
- ▶ Search for Specific CIs and Filter the Results on page 133
- ▶ Create or Customize an Active Filter on page 137
- ▶ Create a Temporary Filter Using Quick Filter on page 139

Reference

- ▶ Dashboard Filters User Interface on page 140

Filters

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 about the Filters tab user interface, see “Filters Page” on page 148.

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 132
- “Set the Active Filters” on page 133
- “Add a Details Link to CIs in the Filters Page – Optional” on page 133

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 148.

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 148.

You can also create a new active filter. For details, see “Create or Customize an Active Filter” on page 137.

You can also create a temporary filter. For details, see “Create a Temporary Filter Using Quick Filter” on page 139.

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 80.

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 about 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 about the Filters tab, see “Filters Page” on page 148.

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.

The screenshot shows a dashboard interface with a search panel on the left and a main table of CI data. The search panel includes a search bar with the text 'prof', radio buttons for 'Current view' and 'All views', and checkboxes for 'Related to:' and 'CI type:'. The main table has columns for Name, Performance, Availability, Application, Held status since, and Ack. The table lists various CI entries like 'anna_prof', 'eprof1', 'eprof2', etc., with their respective status icons and dates.

Name	Performance	Availability	Application	Held status since	Ack
anna_prof			-	2/14 12:50:28 AM	
eprof1			-	2/25 03:42:50 AM	
eprof2			-	2/25 03:42:50 AM	
eprof3			-	2/25 04:42:56 AM	
eprof4			-	2/25 04:42:56 AM	
eprof6			-	2/25 06:52:33 AM	
prof				2/26 06:28:24 AM	
prof.1			-	2/14 12:50:28 AM	
prof1			-	3/1 11:05:26 PM	
prof32			-	1/31 03:50:16 AM	

Last Update - 11:17:05 PM

- 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.

The screenshot shows a dashboard interface with a search panel on the left and a main content area on the right. The search panel includes a search box with 'prof' entered, search options for 'Current view' and 'All views', and a search button. Below the search panel is a list of search results with columns for 'Name' and 'View'. The main content area has tabs for 'Top View', 'Console', 'Filters', 'Geographical Map', 'Custom Map', 'Topology Map', and 'Reports'. The 'Filters' tab is active, showing 'Active Filters' set to 'global: Show All' and a 'Quick Filter by Statuses' section with various status icons. Below this is a table of filtered CIs.

Name	Performance	Availability	Held status since	Ack
eprof3			2/25 04:42:56 AM	
ynet			2/25 04:42:56 AM	
ynet from virtual_host_1			2/25 04:42:56 AM	
ynet from virtual_host_10			2/25 04:42:56 AM	

Last Update - 11:18:40 PM

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.

The screenshot shows a dashboard interface with a search panel on the left and a main table of results. The search panel has a search box containing 'Rum' and options to search in 'Current view' or 'All views'. The main table is titled 'Active Filters: global: Show All' and contains the following data:

Name	Volume	Performance	Availability	Held status since
Rum Errors	0	-	-	2/25 01:37:55 AM
Rum Errors	0	-	-	2/14 07:27:36 AM
Rum Errors	0	-	-	1/31 03:42:13 AM
Rum Errors	0	-	-	1/31 03:42:13 AM
Rum Errors	0	-	-	2/25 01:37:55 AM
Rum Errors	0	-	-	2/25 01:37:55 AM
Rum Errors	0	-	-	2/7 06:04:56 AM
Rum Errors	0	-	-	2/27 04:51:02 AM
Rum Errors	0	-	-	1/31 03:10:22 AM
Rum Errors	0	-	-	2/6 04:57:57 AM
Rum Errors	0	-	-	2/14 04:27:20 AM

The interface also shows a 'Last Update' timestamp of 11:28:48 PM at the bottom of the table area.

- 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.

The screenshot displays the dashboard interface with the 'Filters' tab selected. On the left, a search panel shows 'Search for: Rum' and 'Search in: All views'. Below this is a search results table with columns 'Name' and 'View'. The main panel shows 'Active Filters: global: Show All' and a 'Quick Filter by Statuses' section with various status icons. A table of search results is displayed below, with columns 'Name', 'Volume', 'Held status since', and 'Ack'.

Name	Volume	Held status since	Ack
Bad user request	0	2/6 04:57:57 AM	
Request not found	0	2/6 04:57:57 AM	
Request refused	0	2/6 04:57:57 AM	
Rum Errors	0	2/6 04:57:57 AM	
Server error	0	2/6 04:57:57 AM	

Last Update - 11:30:01 PM

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).

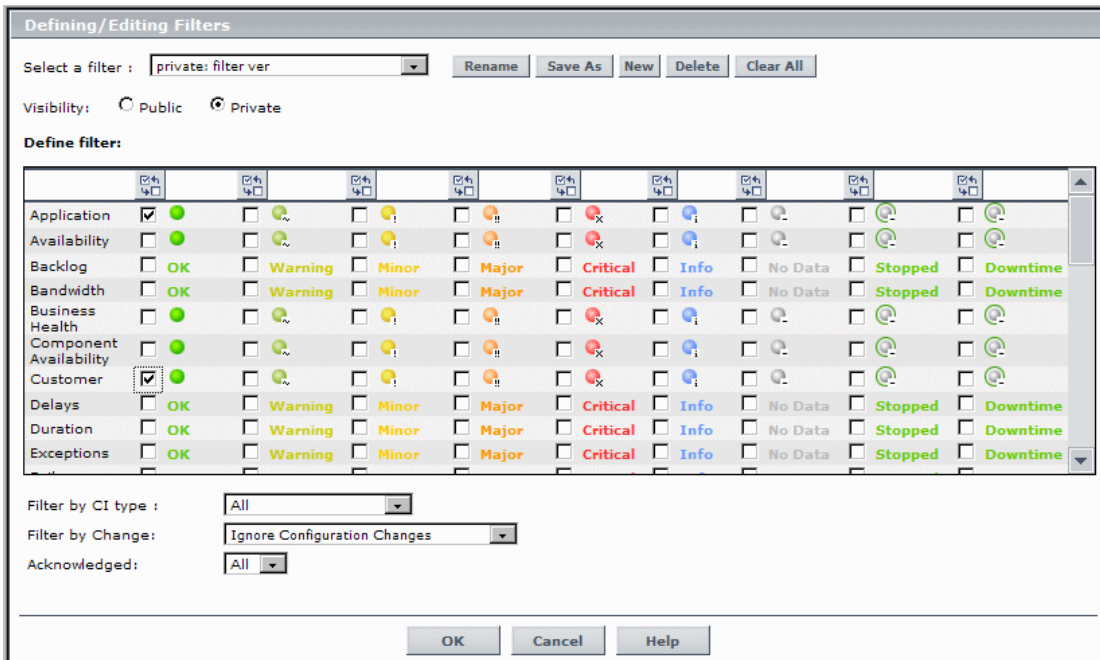
To define or customize filters, access the Filters tab, and select one of the following options:

- To define a new filter, click **New**. The Defining/Editing Filters Page opens.
- 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 148.

Example

The **private:filter ver** filter for Application KPIs and Customer KPIs with the OK status.



Create a Temporary Filter Using Quick Filter

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, change its selection of statuses, or select another filter.






































After you select a combination of filters to display a view's data, you can further refine the report by selecting specific KPI's statuses. The displayed CIs have at least one KPI with one of the selected statuses.

For details, see “Filters Page” on page 148.

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 141.

Example

The global:Show All report includes all statuses.

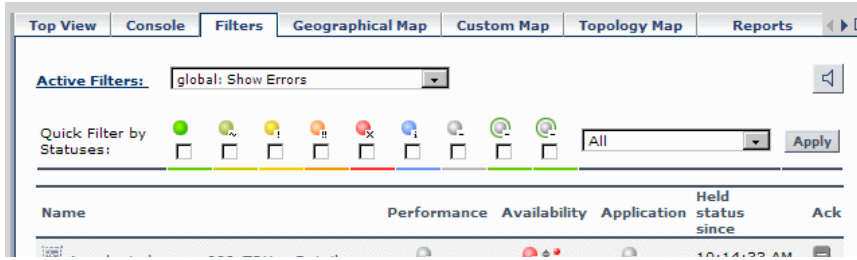
Name	Backlog	Volume	Performance	Value	Exceptions	Availability	OT Impact
 amit_service ▾ Details	-	-		-	-		-
 bs AutoSanity31 ▾ Details	-	-		-	-		-
 bs AutoSanity32 ▾ Details	-	-		-	-		\$33,612.534
 bs AutoSanity33 ▾ Details	-	-		-	-		\$33,686.714
 buq77660-4 ▾ Details	-	-		-	-		-
 buq77660-5 ▾ Details	-	-		-	-		-
 bus_bus ▾ Details	-	-		-	-		-
 Rum_service ▾ Details	-	-		-	-		-
 Sanity ▾ Details							-
 ServiceImpact SK1 ▾ Details	-	-		-	-		-
 ServiceImpact SK2 ▾ Details	-	-		-	-		-

Last Update - 11:39:32 PM

To display only the CIs whose KPIs have **OK** and/or **Critical** statuses, select those statuses in the Quick Filter bar and click **Apply**.



The filtered report includes only the **OK** and/or **Critical** statuses.



Dashboard Filters User Interface


This section describes:

- ▶ Defining/Editing Filters Dialog Box on page 141
- ▶ Filter Name Dialog Box on page 147
- ▶ Filters Page on page 148

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 144. Note: <ul style="list-style-type: none"> ▶ 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 137

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: <ul style="list-style-type: none"> ▶ 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	<p>Click to exit the Defining/Editing Filters dialog box without saving your changes to the filter criteria for the currently displayed filter.</p> <p>Warning: The filter you create is saved and appears in the Active Filters list.</p>
Clear All	<p>Clears all the selected filter fields.</p>
Define filter	<p>Select the check box for each KPI status type that you want to include in the filter.</p> <p>Specify any combination of the listed filter criteria. The filter displays the CIs that meet all of the selected criteria, as follows:</p> <p>If no status is selected for a KPI then all statuses are included in the filter.</p>
Filter by Change	<p>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). For details, see “Real-Time Changes to CI Properties” on page 23:</p> <ul style="list-style-type: none"> ➤ 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.
Filter by CI type	<p>Select one of the following options:</p> <ul style="list-style-type: none"> ➤ 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	<p>Click to define a completely new filter in the Filter Name dialog box that opens. All the KPI's statuses are cleared.</p> <p>Note: By default, a filter is called Custom Filter when you create a filter without assigning it a name.</p>
OK	<p>Click to save your changes to the currently displayed filter and to close the Defining/Editing Filters dialog box.</p>
Rename	<p>Click to rename the filter; for example, when you are want to change the name of a filter you created.</p>
Save As	<p>Select the filter name in the Select a filter list, and click 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.</p> <p>The Filters Name dialog box opens, where you can specify a name for the filter you are creating.</p>
Select a filter	<p>Click to modify an existing filter, select the filter in the box and click Select a filter.</p> <p>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.</p> <p>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.</p> <p>For details, see "Predefined Filters" on page 144.</p>
Visibility	<p>Select the required visibility option:</p> <ul style="list-style-type: none"> ➤ Private. If you want to create a private filter. ➤ Public. If you want to create a public filter. <p>Note: Visibility is displayed only to the administrator or to a user with the appropriate permissions.</p> <p>Different levels of visibility are available. For details, see "Visibility Levels" on page 145.</p>

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.
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
<p>Global</p>	<p>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 144.</p>
<p>Public</p>	<p>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.</p>

Visibility Level	Filter Description
<p>Private</p>	<p>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.</p> <p>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.</p>
<p>Temporary</p>	<p>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 139. You cannot save temporary filters.</p>

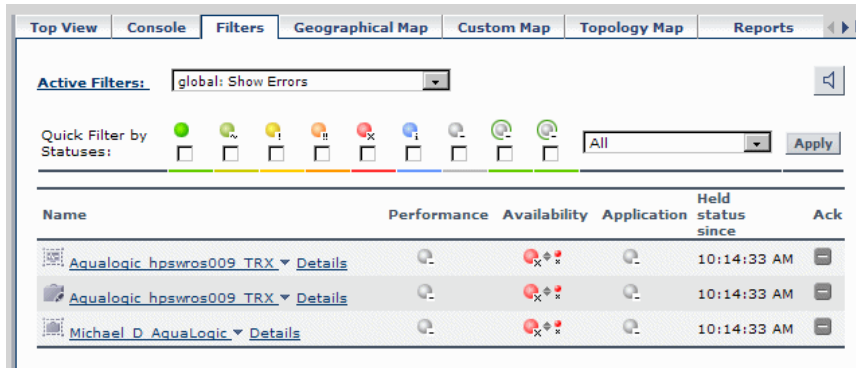
Filter Name Dialog Box

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



<p>Description</p>	<p>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.</p> <p>To Access: Select Applications > Dashboard and click the Filters tab.</p>
<p>Important Information</p>	<ul style="list-style-type: none"> ▶ 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. <p>Customization: For details, see “Add a Details Link to CIs in the Filters Page – Optional” on page 133.</p>


Included in Tasks	“Display and Customize a View Information in Filters” on page 132
Useful Links	“Filters” on page 132 “Real-Time Changes to CI Properties” on page 23 For details about the functionality of View Explorer, see “View Explorer” in <i>Model Management</i> .

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 52 or “Switch Off the Alert Sound When CI is Acknowledged” on page 40.
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 141.
Apply	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	<p>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.</p> <p>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.</p> <p>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:</p> <ul style="list-style-type: none"> ▶ 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. <p>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 141.</p>

Filtered CIs Area

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

GUI Element (A-Z)	Description
↓*	<p>Indicates that at least one change-monitored property of the CI's child CIs has changed.</p> <p>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.</p> <p>For details about setting this feature, see “Analyze Real-Time Change Information” on page 40.</p>
←*	<p>Indicates that at least one change-monitored property of CI itself has changed.</p> <p>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.</p> <p>For details about setting this feature, see “Analyze Real-Time Change Information” on page 40.</p>
↕*	<p>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.</p> <p>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.</p> <p>For details about setting this feature, see “Analyze Real-Time Change Information” on page 40.</p>
<menu options>	<p>Access more information by using the context menu options. For details, see “Menu Options” on page 62.</p>

GUI Element (A-Z)	Description
<Tooltip>	<p>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.</p>
Ack	<p>Displays an icon that represents the CI Acknowledgment status.</p> <p>Note: A tooltip for the Ack icon displays the current status of the CI's acknowledgment.</p> <p>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.</p> <p>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.</p>
Held Status Since	<p>The time and date when the KPI status changed to the current status.</p>

GUI Element (A-Z)	Description
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 “Understanding KPI Status” on page 352.
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 53.

5

Geographical Map

This chapter describes the Dashboard Geographical Map.

This chapter includes:

Concepts

- ▶ Geographical Maps on page 156

Tasks

- ▶ Display and Customize a View in Geographical Map on page 162
- ▶ Display a Geographical Map With Google Earth on page 168
- ▶ Create a Geographical Map for an Unavailable Zoom Level of a Specific Area on page 171
- ▶ Customize Virtual Earth on page 172
- ▶ Customize Maps Applet on page 174

Reference

- ▶ Geographical Map User Interface on page 175

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 about the geographical map user interface, see “Geographical Map Page” on page 176.

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 176.

If you have an Internet connection, geographical maps can be displayed using Virtual Earth. For details, see “Understanding Virtual Earth” on page 160.

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 161.

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 157
- “Geographical Map Tooltips” on page 158
- “Understanding Google Earth” on page 159
- “Understanding Virtual Earth” on page 160
- “Understanding the Maps Applet” on page 161

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 “Understanding KPI Status” on page 352.

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 “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.

To determine a location status, Dashboard takes the worst KPI status for all KPIs attached to all the CIs assigned to that location and determines an overall worst status.

Geographical Map Tooltips

Tooltips provide the worst status for each KPI associated with the location, and how long the KPI has been at that status. 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:

Item	Description
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.

Understanding Google Earth

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

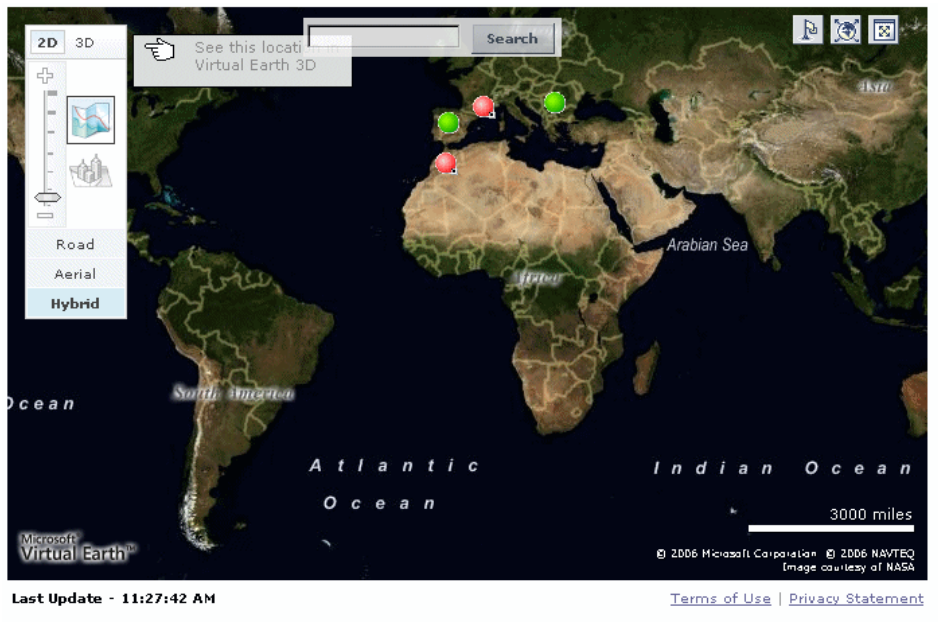
You can view the geographical map information in a three-dimensional map using the Google Earth feature. This feature is available only to the administrator.

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.



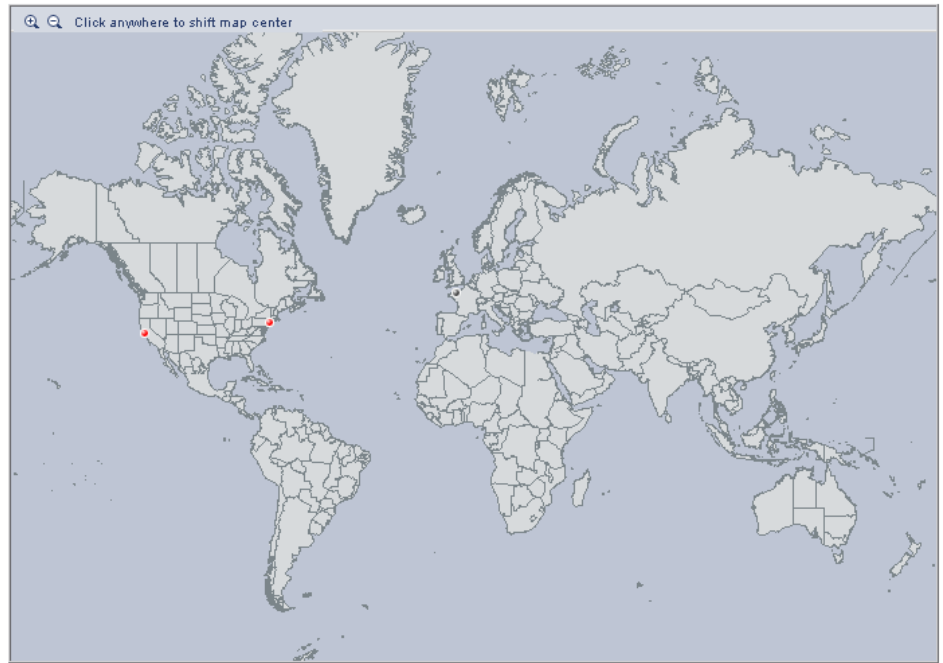
The Virtual Earth geographical map presents a flat geopolitical view of the planet where you can display the country borders, the geographical features, or both.

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:

- ▶ “Setup Requirements for the Map Applet” on page 162
- ▶ “Specify the Hierarchy Structure of the Business Process Monitoring Source Adapter” on page 162
- ▶ “Assign a Geographical Location to the Appropriate CIs” on page 163
- ▶ “Select the Display Technology” on page 164
- ▶ “Assign a Geographical Map to a View” on page 165
- ▶ “Refine the Geographical Map” on page 167
- ▶ “View the Geographical Map” on page 167
- ▶ “Adjust the Displayed Geographical Map” on page 167

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 Specify the Hierarchy Structure of the Business Process Monitoring Source Adapter

The geographical map displays real-time status indicators showing the worst status at different geographical locations. To view this information you must change the hierarchy structure of the Business Process Monitoring source adapter to Transactions/Locations.



Select **Admin > Universal CMDB > Modeling > Source Manager**, and click the **Edit** button for the Business Process Monitoring source adapter and select the **Transactions/Locations** hierarchy structure.

Example

The Business Process Monitoring source adapter hierarchy is **Transaction/Location**.

Edit Source: Business Process Monitoring

Type: Business Process Monitoring

Name: Business Process Monitoring

Server URL: http://localhost:8080/topaz

Include Client Monitor profiles

Hierarchy structure: Transaction/Location

Sync interval: 60 minutes

Enable

OK Cancel Edit Template Help

3 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**.

Example

The jpetstore CI is located in Paris, France.

General Properties	
Class Type	Application
Create Time	11/27/06 4:16 AM
Update Time	11/27/06 4:16 AM
Created By	
Name *	jpetstore
Description	
Origin	SOURCE_ID_-6439704883559907144
Updated By	Unknown: Unknown
<input checked="" type="checkbox"/> Allow CI Update	
Display Label	jpetstore
User Label	
Country	France
State	
City	Paris
Context Menu	RUM Application Menu

4 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.

5 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.

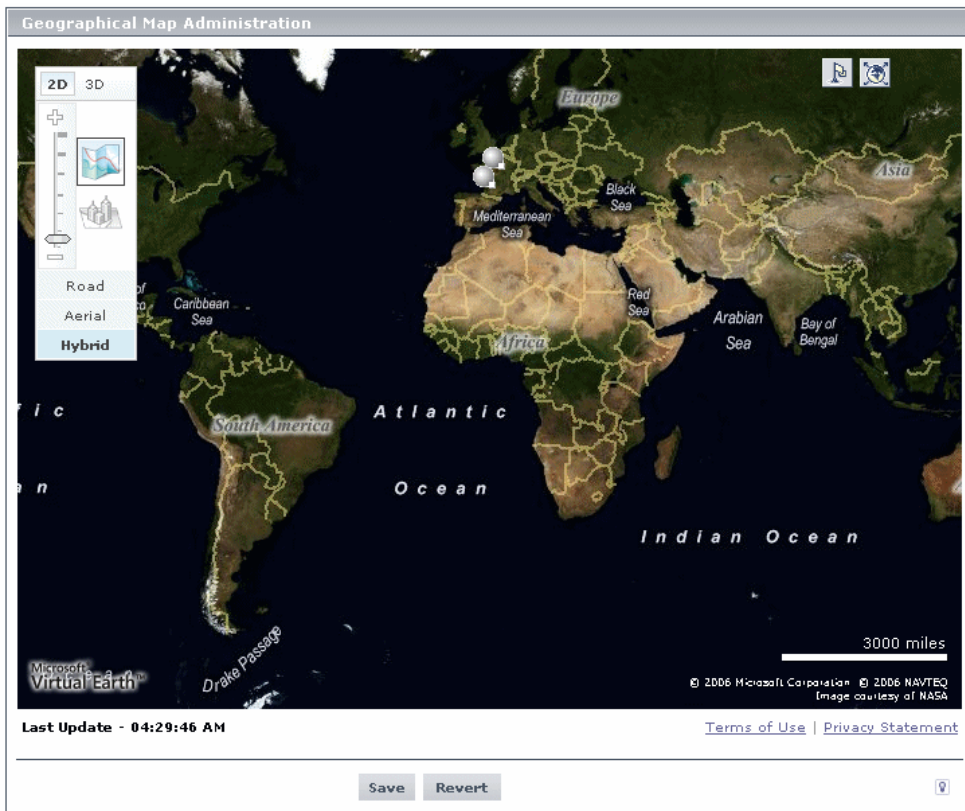
To assign a geographical map to a view, select **Admin > Dashboard**, click the **Geographical Map** tab to open the Geographical Map Administration page, select the appropriate view in the **View** list in View Explorer, and click **Save**.

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 Paris, France.



6 Refine the Geographical Map

As an administrator, you can refine the geographical display depending on the type of display you have selected using the following possibilities:

- ▶ Adjust the geographical map using the elements described for each type of map. For details, see “Geographical Map Page” on page 176.
- ▶ Customize the map. For details about Virtual Earth, see “Customize Virtual Earth” on page 172. For details about the Map Applet, see “Customize Maps Applet” on page 174.

You can save the changes.

7 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.

8 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 cannot be saved. For details, see “Geographical Map Page” on page 176.

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:

- ▶ “Import Location Status into Google Earth” on page 168
- ▶ “Set the Refresh Rate for the View” on page 170
- ▶ “View Indicators by Status” on page 170
- ▶ “View Connecting Lines” on page 170

1 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** Open the Google Earth application.
- c** Click the **My Places** directory in the **Places** area.
- d** Select **Add > Network Link**.
- e** The Google Earth - New Network Link dialog box opens.
- f** Enter the view name in the **Name** box.
- g** Copy 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.

- h** 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 (you can also set the cursor on the folder before you select **Add > Network Link** in step d).

- i** 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.

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

2 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 **Edit**.
- c** Select **Refresh Parameters** to open the **Time-Based Refresh** area.
- d** In the **Time-Based Refresh** area, select **Periodically** from the **When** list and select **1 minute**.
- e** Click **OK**.

3 View Indicators by Status

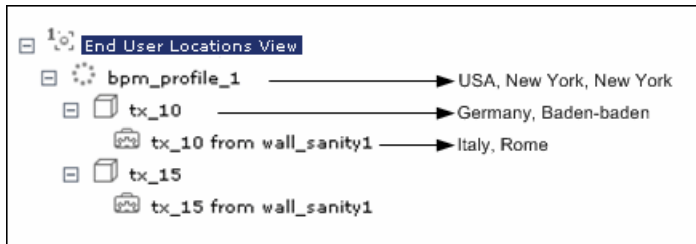
You can filter the status indicators that are displayed in Google Earth to include specific statuses.

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.

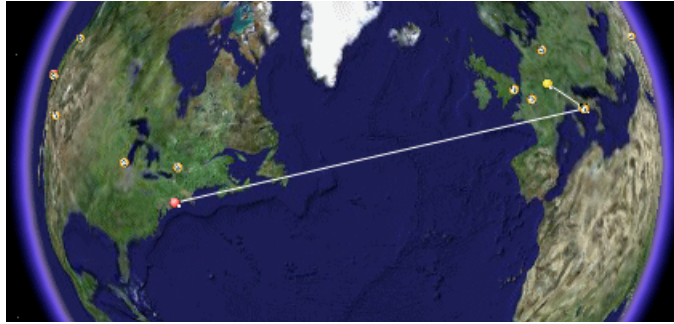
4 View Connecting Lines

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:



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 172
- ▶ “Specify the Size of the Indicators” on page 172
- ▶ “Specify the Statuses to Be Displayed” on page 173
- ▶ “Specify the Time Delay” on page 173

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 176.

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 174
- ▶ “Specify the Map Refresh Rate” on page 174
- ▶ “Specify the Maximum Number of CIs Displayed in a Location’s Tooltip” on page 175

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 176.

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 on page 176








Geographical Map Page



<p>Description</p>	<p>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.</p> <p>To Access:</p> <ul style="list-style-type: none"> ➤ Select Admin > Dashboard, and click the Geographical Map tab. ➤ Select Applications > Dashboard, and click the Geographical Map tab.
<p>Important Information</p>	<p>When you magnify the map, the main cities appear for the part of the map that is displayed on the screen.</p> <p>The geographical map display can be rendered using:</p> <ul style="list-style-type: none"> ➤ Virtual Earth. For details, see “Using Virtual Earth” on page 177. ➤ A maps applet. For details, see “Using the Map Applet” on page 180. ➤ Google Earth. For details, see “Using Google Earth (Admin)” on page 182. <p>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 164.</p>
<p>Included in Tasks</p>	<p>“Display and Customize a View in Geographical Map” on page 162</p>
<p>Useful Links</p>	<p>“Geographical Maps” on page 156</p> <p>For details about the functionality of View Explorer, see “View Explorer” in <i>Model Management</i>.</p>

Using Virtual Earth

<p>Description</p>	<p>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.</p> <p>Virtual Earth geographical maps are based on Microsoft Network (MSN) technology and use dynamic HTML.</p> <p>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.</p> <p>When you magnify the view, the main cities appear for the part of the map that is displayed on the screen.</p>
<p>Useful Links</p>	<p>“Understanding Virtual Earth” on page 160</p> <p>For details about the functionality of View Explorer, see “View Explorer” in <i>Model Management</i>.</p>

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

GUI Element (A-Z)	Description
	<p>Enable you to zoom in and out in order to enlarge or shrink the map.</p> <p>Note:</p> <ul style="list-style-type: none"> ▶ 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.
	<p>Click to shift the center of the map to the nearest CI.</p> <p>Note:</p> <ul style="list-style-type: none"> ▶ 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.
	<p>Click to zoom out completely.</p> <p>Note:</p> <ul style="list-style-type: none"> ▶ 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.
	<p>This icon is only available in Dashboard Application.</p> <p>Click to open the map on a standalone page.</p> <p>Close the page to return to Dashboard.</p>
 <p>2D</p>	<p>Click to display the map in two-dimensional format.</p>



GUI Element (A-Z)	Description
 3D	<p>Click to display the map in three-dimensional format.</p> <p>Note: This is available only if you have Windows XP installed on your local computer.</p>
<Adjustments>	<ul style="list-style-type: none"> ▶ Click the map and drag to move the map in the window. ▶ Double-click the map to zoom in. <p>Note:</p> <ul style="list-style-type: none"> ▶ 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.
<p><Status of a location></p> 	<p>The geographical map of the view displays the worst status at each geographical location.</p> <p>The color coding is the same as for other icons in Dashboard. For more information about color coding, see “Understanding KPI Status” on page 352.</p> <p>The round icon represents the status of a location when at least one of the CIs is not a monitor CI.</p> <p>The square icon represents the status of a location where all the CIs are monitor CIs.</p>
<Tooltip>	<p>Move the cursor above a status icon to display the location tooltip that provides the worst status for all KPIs associated with the location. A KPI is associated with a location if that KPI is assigned to at least one of the CIs attached to the location. For details about the contents of the tooltips, see “Geographical Map Tooltips” on page 158.</p>
<View>	<p>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.</p>
Last Update	<p>Shows connectivity with the Dashboard servlet, running on the Tomcat servlet engine by displaying the time the information in the tab was last updated.</p>

GUI Element (A-Z)	Description
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 BAC window.
Road/Aerial/Hybrid	<p>Click:</p> <ul style="list-style-type: none"> ▶ Road to display the map with the country borders ▶ Aerial to display the map with the topographical features ▶ Hybrid to display the map with both the country borders and the topographical features <p>Note:</p> <ul style="list-style-type: none"> ▶ 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

Description	<p>If you do not have an Internet connection, the Geographical Map page displays a maps applet graphic instead of a Virtual Earth map.</p> <p>The Geographical tab displays the worst status at each geographical location and detailed information about the CI's KPIs.</p> <p>The map applet present a flat geopolitical view of the planet.</p>
Useful Links	<p>"Understanding the Maps Applet" on page 161</p> <p>For details about the functionality of View Explorer, see "View Explorer" in <i>Model Management</i>.</p>

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


GUI Element (A-Z)	Description
	<p>Enable you to zoom in and out to enlarge or shrink the map.</p> <p>Note:</p> <ul style="list-style-type: none"> ▶ 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>	<p>Click the area that interests you. The map shifts to make the location you clicked the new center of the map.</p> <p>Note:</p> <ul style="list-style-type: none"> ▶ 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>	<p>The geographical map of the view displays the worst status at each geographical location.</p>
	<p>The geographical map of the view displays the worst status at each geographical location.</p> <p>The color coding is the same as for other icons in Dashboard. For more information about color coding, see “Understanding KPI Status”.</p> <p>The round icon represents the status of a location when at least one of the CIs is not a monitor CI.</p> <p>The square icon represents the status of a location where all the CIs are monitor CIs.</p>

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. For details about the contents of the tooltips, see “Geographical Map Tooltips” on page 158.
<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)

Description	<p>Displays the worst status at each geographical location and detailed information about the CI’s KPIs.</p> <p>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.</p>
Important Information	<p>Note to HP Software-as-a-Service: This feature is not available when working with HP Software-as-a-Service.</p> <p>Notes:</p> <ul style="list-style-type: none"> ➤ 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	<p>“Understanding Google Earth” on page 159</p> <p>For details about the functionality of View Explorer, see “View Explorer” in <i>Model Management</i>.</p>

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.
<p><Status of a location></p> 	<p>The geographical map of the view displays the worst status at each geographical location.</p> <p>The map presents color-coded status indicators that represent the worst status at each geographical location. The color coding is the same as for other icons in Dashboard. For more information about color coding, see “Understanding KPI Status” on page 352.</p> <p>The round icon represents the status of a location with group CIs.</p> <p>The square icon represents the status of a location with monitor CIs.</p>
<Tooltip>	<p>Move the cursor above a status icon to display the location tooltip that provides the worst status for all KPIs associated with the location. A KPI is associated with a location if that KPI is assigned to at least one of the CIs attached to the location. For details about the contents of the tooltips, see “Geographical Map Tooltips” on page 158.</p>
<Zoom and direction tools>	Enables you to zoom in or out of the current display.

6

Custom Map

This chapter describes the Dashboard Custom Map.

This chapter includes:

Concepts

- ▶ Custom Maps on page 186

Tasks

- ▶ Display a View in a Custom Map on page 188

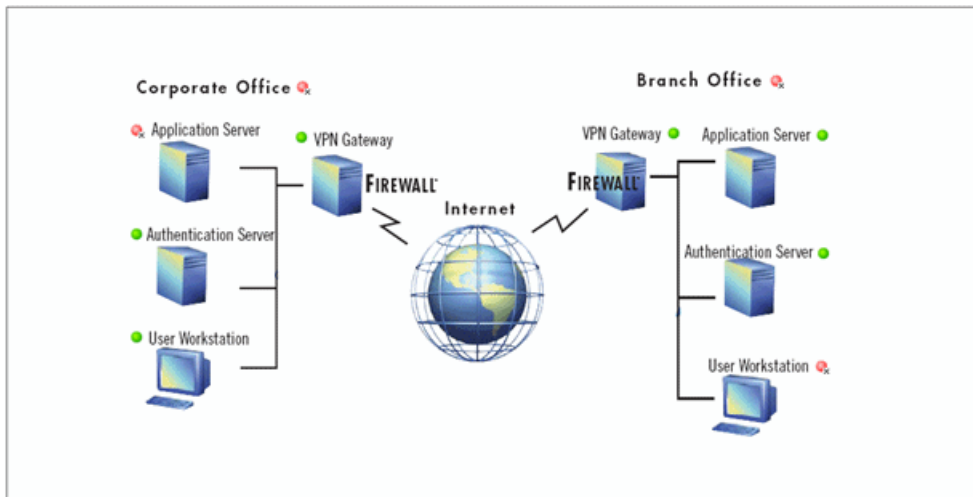
Reference

- ▶ Custom Map User Interface on page 192

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 about the custom maps user interface, see “Custom Map Page” on page 192.

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 192.

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 188
- “Add CIs to the Custom Map” on page 189
- “Display a View’s Custom Map” on page 190
- “Access Additional Information” on page 192

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 192.

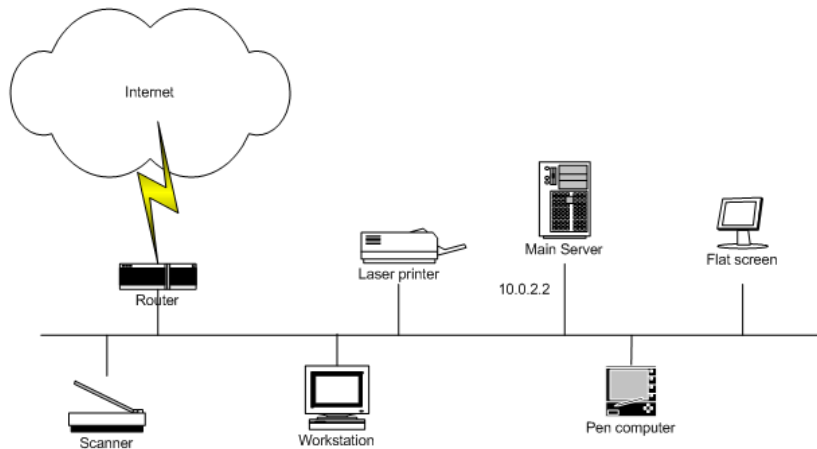
Any type of image supported by the browser can be loaded from any URL (including HTTP protocol and HTTP authentication); in such a case, ensure that the URL is available at all times.

You can also upload a file system image; in such a case the image is available at all times. The type of the image must be supported by the browser.

The best image to select depends on the customer’s environment. The custom map feature does not resize the image, so in higher resolution screens it looks different from the same image in lower resolution screens. 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**

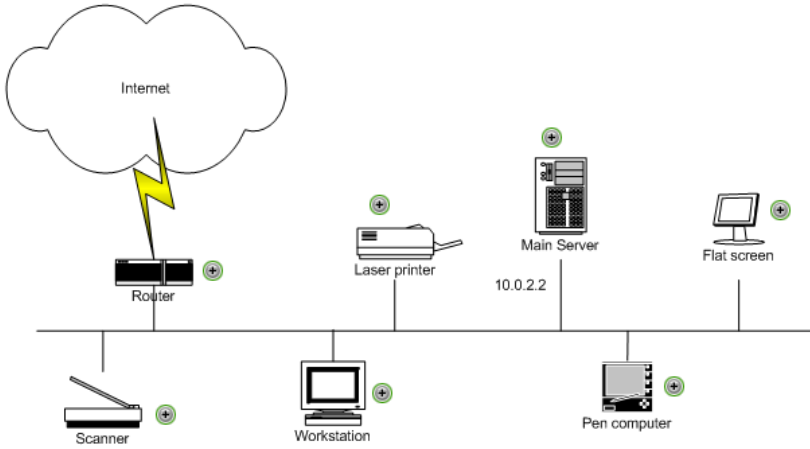
You can add CI icon(s) to the image, to create an association between the image and the view. Select the CI in View Explorer, and click **Add CI Icon**. The CI icon is displayed in the left top corner of the diagram with a blue outline. Drag the CI to the required location in the diagram. The CI icon is set at that position.



For details, see “Custom Map Page” on page 192.

Example

You add the appropriate CI to the custom map:

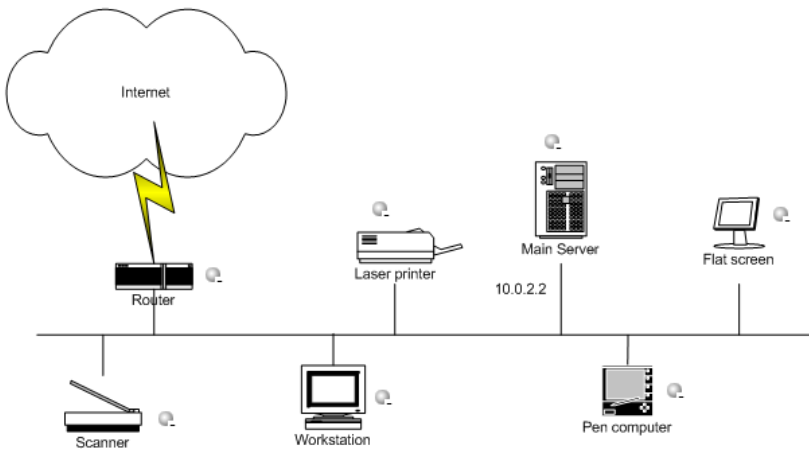


3 Display a View's Custom Map

After you complete the custom map, display it in Dashboard to view the CI's status in the appropriate location in the diagram.

Example

You add the appropriate CI to the custom map:



Example

Other examples of custom maps can be:


























PRODUCTION

CRM

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

PRM

Login	🟡
Logout	🟡
Homepage	🟢
Query Transactions	
Customer Billing Address query	🟡
Customer Services Query (installed Assets)	🟢
Customer Pre-Bill Account Enquiry	🟢
Customer Post-Bill Account Enquiry	🔴x

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

4 Access Additional Information

Use the context menu options to access more information. For details, see “Menu Options” on page 62.

Custom Map User Interface

This section describes:




- Custom Map Page on page 192

Custom Map Page


Description	<p>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.</p> <p>To Access:</p> <ul style="list-style-type: none"> ➤ Select Admin > Dashboard, and click the Custom Map tab. ➤ Select Applications > Dashboard, and click the Custom Map tab.
--------------------	---

Important Information	<ul style="list-style-type: none"> ▶ Use, as an image, any diagram or picture, created using any tool, provided that the format is supported by the browser. It is recommended to use one of the following formats: GIF, JPG, or PNG. ▶ Do not overlap CI icons. When icons overlap, you see only the top status indicator 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 BAC. For details, see “Add Portlets to <page_name>/Add Portlets Dialog Box” in <i>Using My BAC</i>.
Included in Tasks	“Display a View in a Custom Map” on page 188
Useful Links	<p>“Custom Maps” on page 186</p> <p>For details about the functionality of View Explorer, see “View Explorer” in <i>Model Management</i>.</p>

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.
	This icon appears only in Dashboard Application. Indicates the worst status (worst of all KPIs) of 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.

GUI Element (A-Z)	Description																																				
<Current image information>	A string with the image information is displayed above the image. The string starts with Linked URL <URL> or Saved Image.																																				
<Tooltip>	<p>Move the cursor above the status icon of the CI to display additional information about each KPI attached to the CI in a separate section. The tooltip associated with a CI status indicator displays information about each KPI attached to the CI in a separate section. The color of each section represents the color of the corresponding KPI's status. For details about the colors, see "Understanding KPI Status" on page 352.</p> <table border="1"> <thead> <tr> <th colspan="2">Details - Volume</th> </tr> </thead> <tbody> <tr> <td>CI name:</td> <td>new group</td> </tr> <tr> <td>Status:</td> <td>Uninitialized</td> </tr> <tr> <td>Held status since:</td> <td>8/22/05 12:20:53 PM</td> </tr> <tr> <th colspan="2">Details - Performance</th> </tr> <tr> <td>CI name:</td> <td>new group</td> </tr> <tr> <td>Status:</td> <td>Minor</td> </tr> <tr> <td>Held status since:</td> <td>8/22/05 12:20:38 PM</td> </tr> <tr> <td>Historical worst:</td> <td>Minor</td> </tr> <tr> <th colspan="2">Details - System</th> </tr> <tr> <td>CI name:</td> <td>new group</td> </tr> <tr> <td>Status:</td> <td>Uninitialized</td> </tr> <tr> <td>Held status since:</td> <td>8/22/05 12:37:13 PM</td> </tr> <tr> <th colspan="2">Details - Availability</th> </tr> <tr> <td>CI name:</td> <td>new group</td> </tr> <tr> <td>Status:</td> <td>OK</td> </tr> <tr> <td>Held status since:</td> <td>8/22/05 12:12:35 PM</td> </tr> <tr> <td>Historical worst:</td> <td>OK</td> </tr> </tbody> </table> <p>The tooltip can display any of the following information, depending on the KPI:</p> <ul style="list-style-type: none"> ➤ the header of each section displays Details followed by the name of the KPI ➤ CI name. The name of the CI. ➤ Status. The status of the KPI. ➤ 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 360. 	Details - Volume		CI name:	new group	Status:	Uninitialized	Held status since:	8/22/05 12:20:53 PM	Details - Performance		CI name:	new group	Status:	Minor	Held status since:	8/22/05 12:20:38 PM	Historical worst:	Minor	Details - System		CI name:	new group	Status:	Uninitialized	Held status since:	8/22/05 12:37:13 PM	Details - Availability		CI name:	new group	Status:	OK	Held status since:	8/22/05 12:12:35 PM	Historical worst:	OK
Details - Volume																																					
CI name:	new group																																				
Status:	Uninitialized																																				
Held status since:	8/22/05 12:20:53 PM																																				
Details - Performance																																					
CI name:	new group																																				
Status:	Minor																																				
Held status since:	8/22/05 12:20:38 PM																																				
Historical worst:	Minor																																				
Details - System																																					
CI name:	new group																																				
Status:	Uninitialized																																				
Held status since:	8/22/05 12:37:13 PM																																				
Details - Availability																																					
CI name:	new group																																				
Status:	OK																																				
Held status since:	8/22/05 12:12:35 PM																																				
Historical worst:	OK																																				

GUI Element (A-Z)	Description
Add CI Icon	<p>This button appears only in Dashboard Administration.</p> <p>Click 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.</p>
Browse	<p>This button appears only in Dashboard Administration.</p> <p>Click to browse the local file system and select the image you want to use as a background for the custom map.</p>
Clear CI Icons	<p>This button appears only in Dashboard Administration.</p> <p>Click to clear all the CI icons. A confirmation message is issued: You are about to clear all nodes from the view. Are you sure?</p>
Delete Image	<p>This button appears only in Dashboard Administration.</p> <p>Click to delete the image and all the CI icons from the custom map associated with the current view.</p>
Image URL	<p>This field appears only in Dashboard Administration.</p> <p>The URL of the image must use the format: <protocol>://<hostname>/<path_to_image></p> <p>The protocol can be HTTP or HTTPS.</p> <p>To use a local machine as the location of the image, enter the URL with the following format: file:///<path_to_image></p> <p>This results in an image that cannot be displayed for a user working outside the local network.</p> <p>You can also use a file-sharing path as follows: \\server\<path_to_image></p> <p>When you enter a URL, the Save and Link to URL buttons are enabled.</p>

GUI Element (A-Z)	Description
<p>Link to URL</p>	<p>This button appears only in Dashboard Administration.</p> <p>The button is enabled only when the file in the Image URL box is not a file system image (shared or URL).</p> <p>Click to save the URL of the image.</p> <p>Note:</p> <ul style="list-style-type: none"> ➤ 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.
<p>Remove CI Icon</p>	<p>This button appears only in Dashboard Administration.</p> <p>Click to remove the CI icons in the custom map.</p>
<p>Revert</p>	<p>This button appears only in Dashboard Administration.</p> <p>Click to revert to the last saved configuration before you save the changes.</p>
<p>Save</p>	<p>This button appears only in Dashboard Administration.</p> <p>Click to save the image.</p> <p>Note:</p> <ul style="list-style-type: none"> ➤ 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.

7

Topology Map

This chapter describes Dashboard Topology Map.

This chapter includes:

Concepts

- ▶ Dashboard Topology Map on page 197

Tasks

- ▶ Display and Customize a View Information in the Topology Map on page 198

Reference

- ▶ Topology Map User Interface on page 198

Dashboard Topology Map

The topology map in Dashboard displays the results of a pattern or an instance view. You set up the topology map by creating an instance view or pattern view in View Manager. For information on those views, see “Instance Views and Pattern Views” in *Model Management*.

For details about the Topology Map user interface, see “Topology Map Page” on page 199.

The topology map shows the results of the currently selected view in the View Explorer, and includes CIs and relationships that are defined in the view you created in View Manager. You can change the way the maps are displayed by selecting one of the view layouts (**Hierarchical, Symmetric, Circular, or Orthogonal**). For details, see “Layout Properties Dialog Box” in *Reference Information*.

Display and Customize a View Information in the Topology Map

You can display and customize a view's topology map.

This task includes the following steps:

- “Select a View in View Explorer” on page 198
- “Customize the View Information” on page 198

1 Select a View in View Explorer

To view the results of an instance view or a pattern view defined in View Manager in the Topology Map, access the Topology Map. For details, see “Topology Map Page” on page 199.

2 Customize the View Information

You can display the contents of the topology map using different layout options. For details, see “Layout Properties Dialog Box” in *Model Management*.

Topology Map User Interface

This section describes:







- Topology Map Page on page 199


 **Topology Map Page**

<p>Description</p>	<p>Provides a topological representation of the view's CIs and CI relationships. CIs are represented by pictorial icons, with an attached indicator that shows worst status for each CI. When the CIs are organized by layers, you click a CI icon to drill down to the next layer. Use the topology map tools to change the topological layout and to focus on areas of interest.</p> <p>To Access: Select Applications > Dashboard and select the Topology Map tab. In View Explorer, select the required view from the View list.</p>
<p>Important Information</p>	<p>For information on pattern and instance views, see “Working with Pattern and Instance Views in IT Universe Manager” in <i>Model Management</i>.</p> <p>Note: You can add this report as a portlet in My BAC. For details, see “Add Portlets to <page_name>/Add Portlets Dialog Box” in <i>Using My BAC</i>.</p> <p>Context menu options are available from View Explorer. For details, see “Customize Dashboard Display and Refresh Rate” on page 53.</p> <p>From the Topology Map tab, the Open in Console context menu option is available to open the Console tab opens and displays the selected CI and its direct child CIs. For details, see “Console Page” on page 125.</p> <p>In the topology map, you can select multiple CIs by holding down the CTRL button and clicking the CIs or dragging the mouse diagonally along the CIs.</p> <p>If you select multiple CIs, only one CI has a black selection rectangle around it, while all of the other selected CIs have red selection rectangles around them. In this situation, when you right-click anywhere on the map to open the context menu, the option is performed only on the CI surrounded by the black rectangle.</p>

Included in Tasks	“Display and Customize a View Information in the Topology Map” on page 198
Useful Links	“Dashboard Topology Map” on page 197 For details about the functionality of View Explorer, see “View Explorer” in <i>Model Management</i> .

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

GUI Element	Description
	<p>An icon with a downward arrow indicates that there is an additional CI layer beneath it, created by a parent or child organization rule defined in View Manager (in a pattern view). For information on how to set up organization rules, see “Adding Folding Rules to Relationships” in <i>Model Management</i>.</p> <p>For example, if the IP CI is defined as a child of the host CI in View Manager, you can double-click any host icon in the topology map to display a map of IPs connected with that host.</p> <p>To drill down to the lower level(s), double-click an icon with a downward arrow.</p>
	<p>This icon attached to a CI icon indicates that the best status of the CI’s KPIs is Critical. For details about the KPI’s statuses, see “Colors of KPI Statuses Used in Dashboard” on page 354.</p>
	<p>This icon attached to a CI icon indicates that the worst status of the CI’s KPIs is Info. For details about the KPI’s statuses, see “Colors of KPI Statuses Used in Dashboard” on page 354.</p>
	<p>This icon attached to a CI icon indicates that the best status of the CI’s KPIs is Minor. For details about the KPI’s statuses, see “Colors of KPI Statuses Used in Dashboard” on page 354.</p>
	<p>This icon attached to a CI icon indicates that the best status of the CI’s KPIs is Not up to date/Stopped/Downtime. For details about the KPI’s statuses, see “Colors of KPI Statuses Used in Dashboard” on page 354.</p>
	<p>This icon attached to a CI icon indicates that the best status of the CI’s KPIs is OK. For details about the KPI’s statuses, see “Colors of KPI Statuses Used in Dashboard” on page 354.</p>

GUI Element	Description																				
	<p>This icon attached to a CI icon indicates that the best status of the CI's KPIs is Major. For details about the KPI's statuses, see "Colors of KPI Statuses Used in Dashboard" on page 354.</p>																				
<CI Icons>	<p>The icon that represents each CI in the topology map is defined by the administrator in CI Type Manager. For information on how to assign an icon to a CIT, see "Icon Page" in <i>CI Attribute Customization</i>.</p>																				
<CI_tooltip>	<p>Click the appropriate CI on the map to display a tooltip that provides status information about the KPIs assigned to the CI.</p>																				
<main menu>	<p>The options in the main menu are a subset of the options described in "Main Menu" in <i>Model Management</i>.</p>																				
<Node>	<p>The nodes in the topology map represent CIs.</p> <p>Hold the pointer over a node to display its tooltip which describes the type of the CI.</p>																				
<relationship_tooltip>	<p>When you point to a relationship in the topology map, a tooltip is displayed that contains the relationship CI type of the selected relationship as defined in CI Type Manager. For details, see "CI Type Manager" in <i>CI Attribute Customization</i>.</p> <p>When you point to a CI in the topology map, a tooltip is displayed containing information about the CI, as seen below.</p> <table border="1"> <thead> <tr> <th colspan="2">Performance</th> </tr> </thead> <tbody> <tr> <td>CI name:</td> <td>sap- zmtrans4 on mi6</td> </tr> <tr> <td>Status:</td> <td>OK</td> </tr> <tr> <td>Calculation Rule:</td> <td>Worst Child Rule</td> </tr> <tr> <td>Held status since:</td> <td>2/9/06 08:20:55 PM</td> </tr> </tbody> <thead> <tr> <th colspan="2">Availability</th> </tr> </thead> <tbody> <tr> <td>CI name:</td> <td>sap- zmtrans4 on mi6</td> </tr> <tr> <td>Status:</td> <td>OK</td> </tr> <tr> <td>Calculation Rule:</td> <td>Worst Child Rule</td> </tr> <tr> <td>Held status since:</td> <td>2/9/06 08:20:55 PM</td> </tr> </tbody> </table>	Performance		CI name:	sap- zmtrans4 on mi6	Status:	OK	Calculation Rule:	Worst Child Rule	Held status since:	2/9/06 08:20:55 PM	Availability		CI name:	sap- zmtrans4 on mi6	Status:	OK	Calculation Rule:	Worst Child Rule	Held status since:	2/9/06 08:20:55 PM
Performance																					
CI name:	sap- zmtrans4 on mi6																				
Status:	OK																				
Calculation Rule:	Worst Child Rule																				
Held status since:	2/9/06 08:20:55 PM																				
Availability																					
CI name:	sap- zmtrans4 on mi6																				
Status:	OK																				
Calculation Rule:	Worst Child Rule																				
Held status since:	2/9/06 08:20:55 PM																				

GUI Element	Description
<Relationship>	The links in the topology map represent relationships. Hold the pointer over a relationship to display its tooltip, which describes the type of the relationship.
<right-click option>	Right-click the appropriate CI on the map to display the Open in Console option. Select the option to open the Console tab focussed on the CI.
<Toolbar>	For details about the icons displayed in the toolbar, see “Toolbar Options” in <i>Model Management</i> .
Last Update	Shows connectivity with the Dashboard servlet, running on the Tomcat servlet engine by displaying the time that the information in the tab was last updated. Note: This field appears in the Topology Map in Dashboard only.

8

HP Business Process Insight Data in HP Business Availability Center

This chapter describes how to incorporate HP Business Process Insight data in HP Business Availability Center.

This chapter includes:

Concepts

- ▶ HP Business Process Insight Data in HP Business Availability Center Overview on page 206
- ▶ Decay of HP Business Process Insight Samples on page 215

Tasks

- ▶ View HP Business Process Insight Data in HP Business Availability Center on page 215
- ▶ Customize HP Business Process Insight KPI Assignments on page 219
- ▶ Enrich the Business Processes View and Other Improvements on page 221

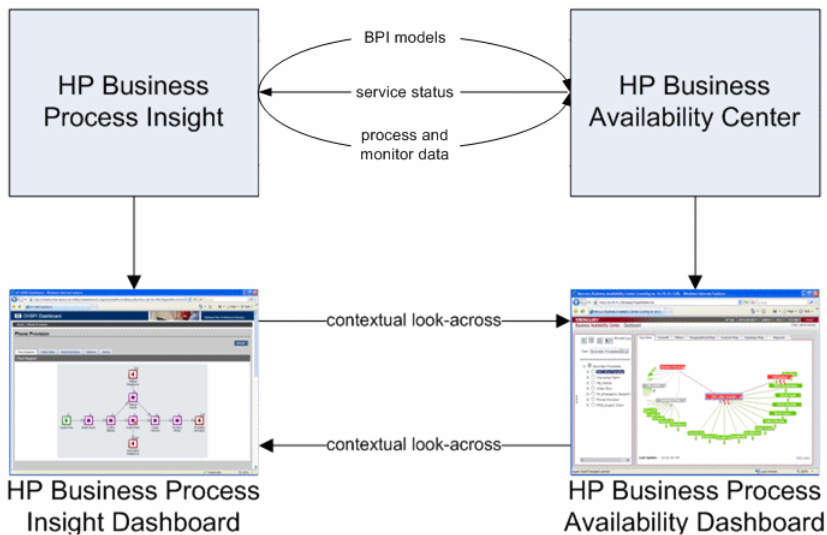
Reference

- ▶ HP Business Process Insight Reports User Interface on page 222

HP Business Process Insight Data in HP Business Availability Center Overview

HP Business Process Insight sends topology and data to HP Business Availability Center, about the business process flows and business process steps that you monitor to obtain meaningful impact data about the health of your business.

In HP Business Availability Center, the HP Business Process Insight KPI assignments group creates the Business Process topology for the monitored HP Business Process Insight system, and the Business Processes view. HP Business Availability Center calculates the performance of the CIs that represent HP Business Process Insight business processes and business process steps and displays that information in the Business Processes view. HP Business Process Insight monitors the Business Processes view.



In addition, you can also access the HP Business Process Insight application using a context menu option in the HP Business Availability Center application.

This section includes the following topics:

- “Business Processes View” on page 207
- “Topology for HP Business Process Insight” on page 208
- “KPI Assignments for HP Business Process Insight” on page 210

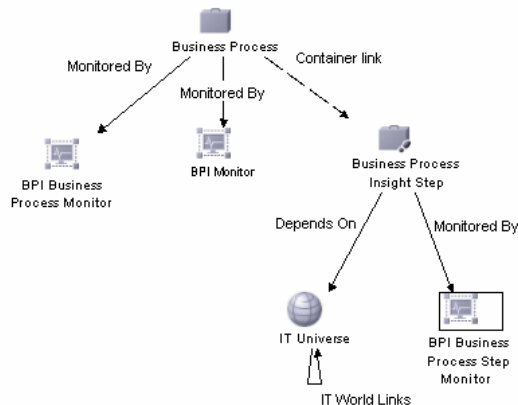
Business Processes View

HP Business Process Insight creates the processes topology in the CMDB using the UCMDB API. The topology includes the **Business Process** CIs and the **BPI Business Process Step** CIs, as well as the **BPI Value Monitor**, **BPI Process Monitor**, **BPI Duration Monitor**, **BPI Custom Value Monitor**, and **BPI Step Monitor** CIs for the monitored HP Business Process Insight system.

In HP Business Availability Center, 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.

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

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



The **Business Process** CI, in Dashboard, corresponds to the Business Process flow in HP Business Process Insight.

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

The **Business Process Insight Step** CI, in Dashboard, corresponds to an activity in the Business Process flow in HP 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 HP Business Process Insight.

The **IT Universe** CI represents the HP Business Availability Center CI the **BPI Step** CI depends on, such as: database, host, CPU, and other information provided by the SiteScope, Business Process Monitor, Real User Monitor, or Diagnostics monitors or probes.

Topology for HP Business Process Insight

All the sample information sent by HP Business Process Insight is displayed by the **Backlog**, **Volume**, **Business Health**, **Value**, and **Duration** KPIs attached to the **BPI Business Process Step Monitor**, **BPI Business Process Monitor**, **BPI Value Monitor**, **BPI Duration Monitor**, and **BPI Custom Value Monitor** CIs and propagated to the Business Process CI. The rules listed in the table below calculate the statuses of those KPIs based on data obtained from HP Business Process Insight samples.

The **Business Process Insight Menu**, and the **Business Process Monitor Group Menu** context menus, **Goto 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 HP Business Process Insight-related CIs in Dashboard. For details about the KPIs, rules, context menus, context menu items, and tooltips, see Repositories in *CI Attribute Customization*.

In Dashboard, the CIs, KPIs, and default rules that are preconfigured to work with HP Business Process Insight are:

CI	KPI	Rule
BPI Value Monitor or BPI Custom Value Monitor	"Backlog" in <i>CI Attribute Customization</i>	"BPI Monitor Backlog Value Rule" in <i>CI Attribute Customization</i>
	"Volume" in <i>CI Attribute Customization</i>	"BPI Monitor Volume Value Rule" in <i>CI Attribute Customization</i>
	"Value" in <i>CI Attribute Customization</i>	"BPI Value Monitor Rule" in <i>CI Attribute Customization</i>
BPI Duration Monitor	"Backlog" in <i>CI Attribute Customization</i>	"BPI Monitor Backlog Value Rule" in <i>CI Attribute Customization</i>
	"Volume" in <i>CI Attribute Customization</i>	"BPI Monitor Volume Value Rule" in <i>CI Attribute Customization</i>
	"Duration" in <i>CI Attribute Customization</i>	"BPI Duration Monitor Rule" in <i>CI Attribute Customization</i>
BPI Business Process Step Monitor	"Backlog" in <i>CI Attribute Customization</i>	"BPI Monitor Backlog Value Rule" in <i>CI Attribute Customization</i>
	"Volume" in <i>CI Attribute Customization</i>	"BPI Monitor Volume Value Rule" in <i>CI Attribute Customization</i>

CI	KPI	Rule
BPI Business Process Monitor	“Backlog” in <i>CI Attribute Customization</i>	“BPI Monitor Backlog Value Rule” in <i>CI Attribute Customization</i>
	“Volume” in <i>CI Attribute Customization</i>	“BPI Monitor Volume Value Rule” in <i>CI Attribute Customization</i>
	“Business Health” in <i>CI Attribute Customization</i>	“BPI Health Average Weighted Status Value Rule” in <i>CI Attribute Customization</i>

Note: The KPIs listed in the table use special icons in Top View in Dashboard. For details, see “KPI Icons in Top View” in *Using Dashboard*.

In Service Level Management, specific KPIs, and rules are preconfigured to work with HP Business Process Insight. For details, see “KPIs and Rules for Business Process Insight” in *Using Service Level Management*.

KPI Assignments for HP Business Process Insight

Note: This KPI assignment attaches the KPIs listed in the **KPI config** column and their rules listed in the **rule** column in the task table, and the context menu listed in the **context menu id** column in the Task table to the BPI Custom Monitor CIs. For details about KPI assignments, see “Assignment Groups Page” on page 438.

The HP Business Process Insight assignment group includes the following KPI assignments:

► **BPI Custom Monitor CIs:**

► **Condition:**

The table headers represent the tags used for specifying the cmdb_class (CI), property condition-name, operator, and value.

cmdb_class	property condition_name	Operator	Value
bpi_custom_monitor	N/A	N/A	N/A

► **Task:**

The table headers represent the tags used for specifying the context menu ids, KPIs, and rules that compose the assignment.

context menu id	KPI config	rule
BPIMenu – Business Process Insight Menu	600 – Backlog	605 – BPI Monitor Backlog Value Rule
	1050 – Volume	607 – BPI Monitor Volume Value Rule
	1311 – Value	609 – BPI Value Monitor Rule

► **BPI Duration Monitor CIs:**

► **Condition:**

The table headers represent the tags used for specifying the cmdb_class (CI), property condition-name, operator, and value.

cmdb_class	property condition_name	Operator	Value
bpi_duration_monitor	N/A	N/A	N/A

► **Task:**

The table headers represent the tags used for specifying the context menu ids, KPIs, and rules that compose the assignment.

context menu id	KPI config	rule
BPIMenu – Business Process Insight Menu	600 – Backlog	605 – BPI Monitor Backlog Value Rule
	601 – Duration	608 – BPI Duration Monitor Rule
	1050 – Volume	607 – BPI Monitor Volume Value Rule

► **BPI Step Monitor CIs:**

► **Condition:**

The table headers represent the tags used for specifying the cmdb_class (CI), property condition-name, operator, and value.

cmdb_class	property condition_name	Operator	Value
bpi_step_monitor	N/A	N/A	N/A

► **Task:**

The table headers represent the tags used for specifying the context menu ids, KPIs, and rules that compose the assignment.

context menu id	KPI config	rule
BPIMenu – Business Process Insight Menu	600 – Backlog	605 – BPI Monitor Backlog Value Rule
	1050 – Volume	607 – BPI Monitor Volume Value Rule

► **BPI Process Monitor CIs:**

► **Condition:**

The table headers represent the tags used for specifying the cmdb_class (CI), property condition-name, operator, and value.

cmdb_class	property condition_name	Operator	Value
bpi_process_monitor	N/A	N/A	N/A

► **Task:**

The table headers represent the tags used for specifying the context menu ids, KPIs, and rules that compose the assignment.

context menu id	KPI config	rule
BPIMenu – Business Process Insight Menu	600 – Backlog	605 – BPI Monitor Backlog Value Rule
	602 - Business Health	617 - BPI Health Average Weighted Status Value Rule
	1050 – Volume	607 – BPI Monitor Volume Value Rule

► **BPI Value Monitor CIs:**

► **Condition:**

The table headers represent the tags used for specifying the cmdb_class (CI), property condition-name, operator, and value.

cmdb_class	property condition_name	Operator	Value
bpi_step_monitor	N/A	N/A	N/A

► **Task:**

The table headers represent the tags used for specifying the context menu ids, KPIs, and rules that compose the assignment.

context menu id	KPI config	rule
BPIMenu – Business Process Insight Menu	600 – Backlog	605 – BPI Monitor Backlog Value Rule
	1050 – Volume	607 – BPI Monitor Volume Value Rule
	1311 – Value	609 – BPI Value Monitor Rule

Decay of HP Business Process Insight Samples

In HP Business Process Insight, the **collection_interval** attribute specified for each monitor CI indicates the time period after which the sample is sent to HP Business Availability Center. The default is 15 minutes. This value is customizable. For details on customizing the default, see HP Business Process Insight documentation.

HP Business Availability Center displays the last sample information for the time period specified in the **collection_interval** attribute, until the next sample is sent from HP Business Process Insight. The sample is kept for an additional 90 seconds (default decay setting) to make sure that the views continue to display the same statuses. This is needed to have views display statuses instead of **No data**, when a new sample has not yet been received by HP Business Availability Center due to overload problems or late arrival of the new sample. The default decay setting is customizable. For details, see “Customize the Decay Settings of the HP Business Process Insight Samples – Optional” on page 217.

View HP Business Process Insight Data in HP Business Availability Center

HP Business Process Insight data can be incorporated in HP Business Availability Center. The topology of the Business Process flow and its steps is inserted in the CMDB by HP Business Process Insight. Real-time data (samples) is sent to HP Business Availability Center using the Web Data Entry (WDE) mechanism, which receives data from HP Business Process Insight for processing before it enters the data loader. Data about each BPI Monitor CI and its KPIs is periodically sent to HP Business Availability Center.

This task includes the following steps:

- ▶ “Prerequisite Steps” on page 216
- ▶ “Log Out of HP Business Availability Center and Log Back In” on page 216
- ▶ “Customize the Decay Settings of the HP Business Process Insight Samples – Optional” on page 217

- “Specify the Data Unit for the CI” on page 217
- “Customize the KPI Assignments – Optional” on page 217
- “View HP Business Process Insight Data in the Business Processes View” on page 218
- “Create Other Views or Enrich the Business Processes View – Optional” on page 218
- “Use HP Business Process Insight CIs in Service Level Management” on page 218
- “Use Reports to Analyze the Data” on page 218
- “Access the HP Business Process Insight Application from HP Business Availability Center” on page 219
- “View HP Business Process Insight Portlets in My BAC” on page 219

1 Prerequisite Steps

- HP Business Process Insight and HP Business Availability Center must be in the same Domain Name Server (DNS).
- Consult HP Business Process Insight documentation for the steps to be performed on the HP Business Process Insight server before data can be sent to HP Business Availability Center. This includes specifying the host name, user name, and password of the server where HP Business Availability Center is located and to make sure that the appropriate samples are sent periodically.

2 Log Out of HP Business Availability Center and Log Back In

After you have set up HP Business Availability Center information in HP Business Process Insight, you must log out of HP Business Availability Center and then log back in. This step adds the the HP Business Process Insight reports in **Application > Dashboard > Reports**.

3 Customize the Decay Settings of the HP Business Process Insight Samples – Optional

To modify the default decay settings of the HP Business Process Insight samples, launch your Web browser, enter the following address, using JMX login credentials:

http://<server_name>:8080/jmx-console (where <server_name> is the name of the machine on which HP Business Availability Center is installed), and in the **Infrastructure Settings Manager** service under **Foundations**, execute the **setSettingValuePerCustomerId** method with the following parameters:

- **contextName** = decay-settings
- **settingName** = com.mercury.am.rules.dashboard.decay-time
- **customerId** = <customer_id> (1 if not in HP Software-as-a-Service mode)
- **newValue** = <value>

For details on the sample decay settings, see “Decay of HP Business Process Insight Samples” on page 215.

4 Specify the Data Unit for the CI

You can assign a data unit to a BPI Business Process Monitor CI. The data unit is displayed in Dashboard with the value of the CI’s KPI.

Select **Admin > UCMDB > Modeling > IT Universe Manager**, select the appropriate BPI Business Process Monitor CI, click the **Properties** tab, and scroll down to the **Data Units** box in the Other Properties area where you can enter the data unit required for the CI.

5 Customize the KPI Assignments – Optional

If required, you can change the way the KPI assignments retrieves the samples provided by the HP Business Process Insight system and assigns the appropriate logic: KPIs, rules, context menus, context menu items, and tooltips. For details, see “Customize HP Business Process Insight KPI Assignments” on page 219.

6 View HP Business Process Insight Data in the Business Processes View

You can view the status of business process flows and business process steps in the Business Processes view in HP Business Availability Center.

7 Create Other Views or Enrich the Business Processes View – Optional

You can create additional views that include HP Business Process Insight CIs or enrich the Business Processes view with other CIs. For details, see “Enrich the Business Processes View and Other Improvements” on page 221.

8 Use HP Business Process Insight CIs in Service Level Management

You can create service agreements based on HP Business Process Insight CI. For details, see “Services Manager and Business Services” in *Using Service Level Management*.

9 Use Reports to Analyze the Data

Access the following reports to help you analyze HP Business Process Insight data:

- ▶ **BPI Monitors Over Time report.** Displays two graphs for each selected BPI Duration Monitor CI or BPI Custom/Value Monitor CI. One graph display the average/minimum/maximum/weighted value or duration of the selected CI over time. The other graph display the violated instances of the CI over time. For details, see “BPI Monitors Over Time Report” on page 224.
- ▶ **Business Process Over Time report.** Displays over time information about the volume, backlog, and health of the selected Business Process CI, over the selected time period. You can select only Business Process CIs with BPI Business Process Monitor child CI. For details, see “Business Process Over Time Report” on page 228.
- ▶ **Business Process Summary report.** Displays the summary data of the selected business processes. For details, see “Business Process Summary Report” on page 233.

10 Access the HP Business Process Insight Application from HP Business Availability Center

From the Business Processes view, you can connect to the HP Business Process Insight application using the **Go to BPI** context menu option from view CIs or from other views where you have added the HP Business Process Insight-related CIs.

11 View HP Business Process Insight Portlets in My BAC

You can add the HP Business Process Insight portlets to My BAC to display the HP Business Process Insight data. For details on how to add these portlets to a My BAC page, see “Manage the Portlets in Your Portal” in *Using My BAC*. For details on how to add these portlets to a My BAC module, see “Add Portlets to a Page” in *Using My BAC*.

Customize HP Business Process Insight KPI Assignments

The KPI assignment mechanism retrieves the samples provided by the HP Business Process Insight system, assigns the appropriate logic: KPIs, rules, context menus, context menu items, and tooltips, depending on the type of sample and displays the information using the Business Processes view.

You can modify the pre-defined HP Business Process Insight KPI assignments. For details about the pre-defined KPI assignments, see “KPI Assignments for HP Business Process Insight” on page 210.

Select **Admin > Dashboard > KPI Assignments**, and select HP Business Process Insight to access the HP Business Process Insight KPI assignment definitions. In the Define Assignment Configuration dialog box, you can modify the data assignment rules. For details about the data assignment rules, see “Define Assignment Configuration Dialog Box” on page 440.

For details about the rules that are attached to the KPIs, see “Topology for HP Business Process Insight” on page 208.

Example

In an online book store, you can use the **BPI Value Monitor CIs** assignment rule to calculate how much money you made from selling a specific book, (multiply the number of books you sold by the price per unit). You can use the **BPI Custom Monitor CIs** assignment rule to calculate the loss incurred by a book "on sale" (multiply the number of units of the book you sold "on sale" by the difference between the sale price and the regular price per unit).

Enrich the Business Processes View and Other Improvements

You can create other views to display the impact of other CIs in HP Business Process Insight or you can enrich the Business Processes view with other CIs.

This task includes the following steps:

- “View the Impact of Other CI’s Statuses in HP Business Process Insight” on page 221
- “Enrich the Business Processes View” on page 222

1 View the Impact of Other CI’s Statuses in HP Business Process Insight

You can create other views that include the HP Business Process Insight CIs and make those CIs dependent on other HP Business Availability Center CIs. The statuses of those HP Business Process Insight CIs are impacted by the statuses of the relevant HP Business Availability Center CIs. The impact is automatically propagated to all the views where those HP Business Process Insight CIs appear including the Business Processes view that is monitored by HP Business Process Insight. This way, you can see the impact of other CI statuses in HP Business Process Insight.

Example

HP Business Process Insight monitors the Business Processes view and retrieves the status of all the BPI CIs in that view.

To view the impact of non-BPI CIs in the Business Processes view, you can create multiple views within HP Business Availability Center where each view represents different BPI processes and/or Process Steps (Nodes). In those views, you make the status/value of BPI processes or process steps dependent on the relevant non-BPI CIs from HP Business Availability Center other views.

With this structure, when the status of a BPI process becomes **critical** due to non-BPI CIs status change, the status of the BPI process is reflected in all the HP Business Availability Center views that contain the BPI process. One of these views is the Business Processes view that is monitored by the HP Business Process Insight monitors, which then see the current status of the process/steps and bring it across correctly to HP Business Process Insight.

2 Enrich the Business Processes View

To enrich the Business Processes view, you can attach **IT Universe** CIs to the appropriate **Business Process Insight Step** CI. For example, if the **Business Process Insight Step** CI depends on a specific host, then you attach a **Host** CI to the **Business Process Insight Step** CI. The KPIs of the **IT Universe** CI are then propagated to the **Business Process Insight Step** CI and displayed by the KPIs you assigned to the **IT Universe** CIs.

For details about attaching KPIs to a CI, see “Attach KPIs to CIs and Configure the KPIs” on page 373.

For details about the Business Process Monitor, or Real User Monitor, see “Source Manager Overview” in *Model Management*.

For details about the KPIs, see “KPI Repository” in *CI Attribute Customization*.

For details about the rules, see “Business Rules Repository Overview” in *CI Attribute Customization*.

HP Business Process Insight Reports User Interface

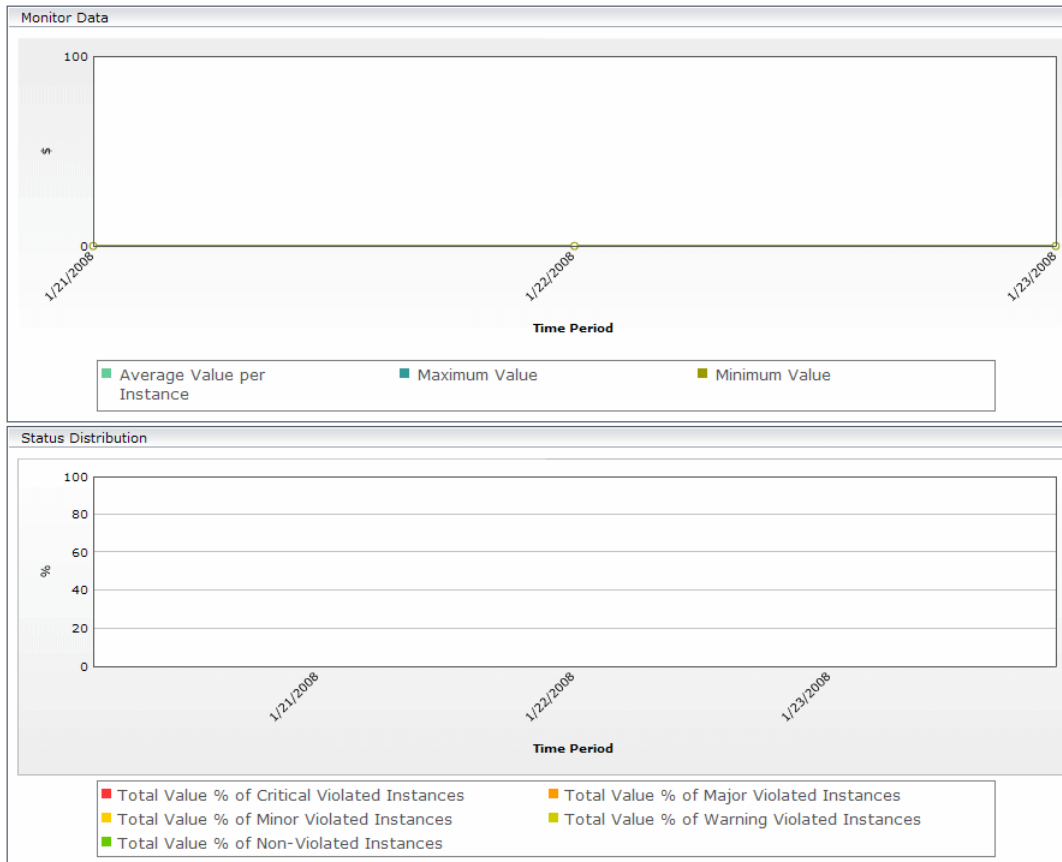
This section describes:

- ▶ BPI Monitors Dialog Box on page 223
- ▶ BPI Monitors Over Time Report on page 224
- ▶ Business Processes Dialog Box on page 227
- ▶ Business Process Over Time Report on page 228
- ▶ Business Process Summary Report on page 233

 **BPI Monitors Dialog Box**

Description	Enables you to select the view and the view's CIs you want to display in the report. To access: Click BPI Monitors in the BPI Monitors Over Time report.
Important Information	You can select only BPI Duration Monitor CIs, BPI Value Monitor, or BPI Custom Monitor CIs that have a Business Process CI as their direct parent.

BPI Monitors Over Time Report



<p>Description</p>	<p>Displays two graphs for each selected BPI Duration Monitor CI or BPI Custom/Value Monitor CI. One graph displays the average/minimum/maximum/weighted value or duration of the selected CI over time. The other graph displays the violated instances of the CI over time.</p> <p>To access: Select Applications > Dashboard > Reports > BPI Monitors Over Time</p>
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Important Information	This report is displayed only when HP Business Process Insight includes information about HP Business Availability Center and starts sending samples.
Included in Tasks	“View HP Business Process Insight Data in HP Business Availability Center” on page 215

Report Settings

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

GUI Element (A–Z)	Description
<Common report settings>	For details, see “Common Report Elements” in <i>Reports</i> .
BPI Monitors	Click to open the BPI Monitors dialog box. If one CI is selected, its name is displayed to the right of the link. If more than one CI is selected, Filtered (n) is displayed to the right of the link, where n represents the number of selected CIs.

Monitor Data Area

<p>Description</p>	<p>Displays a separate graph line for each one of the selected CI for the selected time period.</p> <p>If you have selected BPI Value/Custom Monitor CIs, the graph displays the following information:</p> <ul style="list-style-type: none"> ▶ Average Value per Instance. The average value of the completed instances of the selected CIs out of the total number of completed instances of the selected CIs. ▶ Minimum Value. The minimum value of all the completed instances of the selected CIs. ▶ Maximum Value. The maximum value of all the completed instances of the selected CIs. ▶ Weighted Average Value. The weighted average value of all the completed instances of the BPI Custom Monitor CIs out of the total number of completed instances of the CI. This is displayed only when you select BPI Custom Monitor CIs. <p>If you have selected BPI Duration Monitor CIs, the graph displays the following information:</p> <ul style="list-style-type: none"> ▶ Average Duration per Instance. The average duration of the completed instances of the selected CIs out of the total number of completed instances of the selected CIs. ▶ Weighted Average Duration. The weighted average duration of all the completed instances of the BPI Custom Monitor CIs out of the total number of completed instances of the CI. This is displayed only when you select BPI Custom Monitor CIs. ▶ Minimum Duration. The minimum duration of all the completed instances of the selected CIs. ▶ Maximum Duration. The maximum duration of all the completed instances of the selected CIs. <p>A tooltip for each point in the graph displays the value of the point.</p>
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Status Distribution Area

Description	<p>Displays the following data for the selected CI over the selected time period:</p> <ul style="list-style-type: none"> ▶ % of Critical Value/Duration Violated Instances. The percentage of the total number of instances of the CI that completed with a Critical Violated status out of the total number of completed instances of the CI. ▶ % of Major Value/Duration Violated Instances. The percentage of the total number of instances of the CI that completed with a Major Violated status out of the total number of completed instances of the CI. ▶ % of Minor Value/Duration Violated Instances. The percentage of the total number of instances of the CI that completed with a Minor Violated status out of the total number of completed instances of the CI. ▶ % of Warning Value/Duration Violated Instances. The percentage of the total number of instances of the CI that completed with a Warning Violated status out of the total number of completed instances of the CI. ▶ % of Value/Duration Non-Violated Instances. The percentage of the total number of instances of the CI that completed with a Non-Violated status out of the total number of completed instances of the CI. <p>Tooltip for violated stacked bars displays the number of instances, the total number of instances and the percentage.</p>
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Business Processes Dialog Box

Description	<p>Enables you to select the view and the view's CIs you want to display in the report.</p> <p>To access: Click Business Process in the Business Process Summary report.</p>
Important Information	<p>You can select only Business Process CIs that have a BPI Business Process Monitor child CI.</p>

Business Process Over Time Report

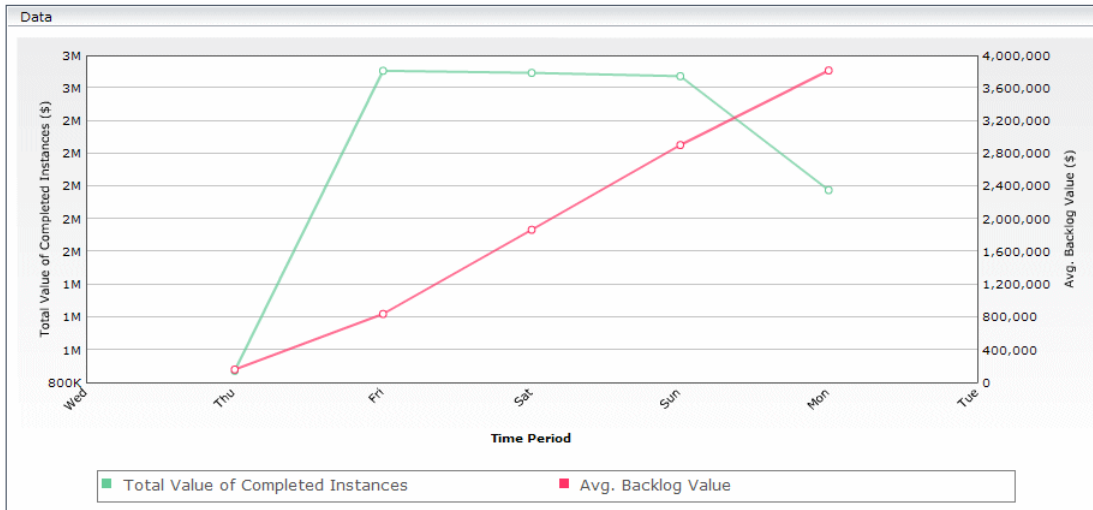
Description	Displays information about the volume, backlog, and health of the selected Business Process CI, over the selected time period. You can select only Business Process CIs with BPI Business Process Monitor child CI. To access: Drill down from the Business Processes Summary report or from the corresponding portlet in My BAC.
Important Information	This report is displayed only when HP Business Process Insight includes information about HP Business Availability Center and starts sending samples.
Included in Tasks	“View HP Business Process Insight Data in HP Business Availability Center” on page 215

Report Settings

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

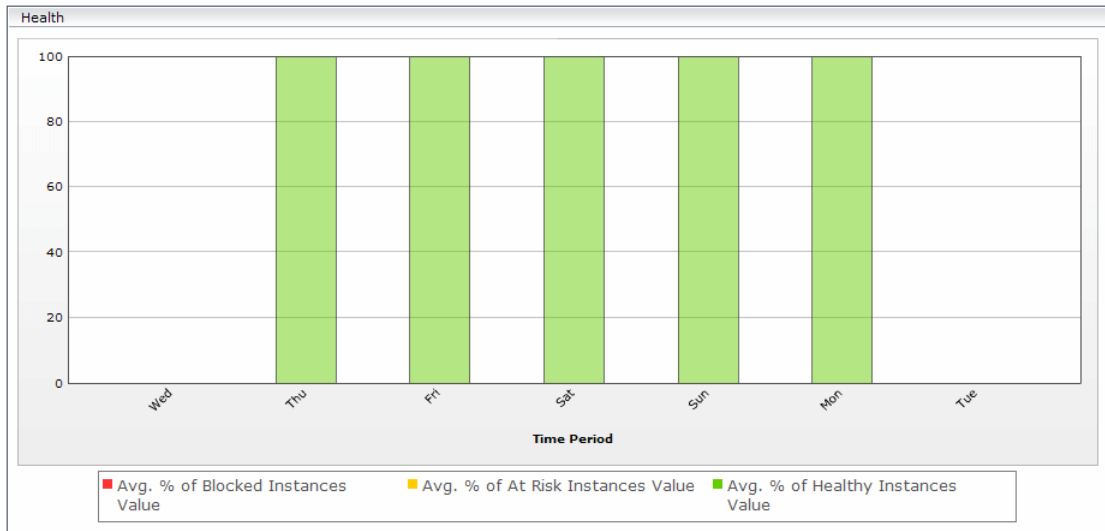
GUI Element (A–Z)	Description
<Common report settings>	For details, see “Common Report Elements” in <i>Reports</i> .
Business Process	Click to open the Business Processes dialog box where you can select the view and the view’s CI you want to display. The selected CI is displayed to the right of the link.
Show	Select one of the following options: <ul style="list-style-type: none"> ▶ Value. Select to display value-related metrics for the business processes in the Value area. ▶ Count. Select to display count-related metrics for the business processes in the Count area.

Data Area



<p>Description</p>	<p>When you click the Drill Down to Business Process Over Time report button in the Value area of the Business Process Summary report, the report displays the following information:</p> <ul style="list-style-type: none"> ▶ Total Value of Completed Instances. Displays the total value of completed business process instances, over the specified period of time. This element uses the left y-axis. ▶ Avg. Backlog Value. Displays the average value of backlogged business process instances out of the number of samples reported over the specified period of time. This element uses the right y-axis. <p>When you click the Drill Down to Business Process Over Time report button in the Count area of the Business Process Summary report, the report displays the following information:</p> <ul style="list-style-type: none"> ▶ # of Completed Instances. Displays the total number of completed business process instances, over the specified period of time. This element uses the left y-axis. ▶ Avg. # of Backlog Instances. Displays the average number of backlogged business process instances in process out of the number of samples reported over the specified period of time. This element uses the right y-axis.
<p>Important Information</p>	<p>Click a point in the graph to drill down to the lowest granularity level which is an hour. For example, drill down from the day in the week to the hour in the day.</p> <p>A tooltip provides the value of each point in the graph when you move the mouse over the point.</p>

Health Area



<p>Description</p>	<p>When you click the Drill Down to Business Process Over Time report button in the Value area of the Business Process Summary report, the report displays the average distribution of the value of the backlogged business process instances, over the specified time period, per status. The components of the backlogged business process instances are Avg. Value of Healthy/At Risk/Blocked Instances, which displays, as a green/yellow/red bar, the average percentage/distribution of Healthy/At Risk/Blocked backlogged business process instances out of the number of samples reported over the specified period of time.</p> <p>When you click the Drill Down to Business Process Over Time report button in the Count area of the Business Process Summary report, the report displays the average distribution of the backlogged business process instances, over the specified time period, per status. The components of the backlogged business process instances are Avg. % of Healthy/At Risk/Blocked Instances, which displays, as a green/yellow/red bar, the average percentage of Healthy/At Risk/Blocked backlogged business process instances out of the number of samples reported over the specified period of time.</p>
<p>Important Information</p>	<p>Click a bar in the graph to drill down to the lowest level of granularity, which is 1 hour. For example, drill down from the day in the week to the hour in the day.</p> <p>A tooltip provides the exact number of business processes instances/values.</p>

Business Process Summary Report

Value					
Business Process ▲	Completed instances total value	Avg. backlog value	Avg. value of healthy instances	Avg. value of instances at risk	Avg. value of blocked instances
EWT_Wire Transfer (\$)	-	-	4.00	5.00	6.00
EWT_Wire Transfer (\$)	0.00	6,444,208.82	0.00	6,444,208.82	0.00
PC_Emergency Department	0.00	0.00	0.00	0.00	0.00
Phone Provision (\$)	0.00	145,950.47	0.00	0.00	145,950.47

Count					
Business Process ▲	Completed instances (#)	Avg. backlog (#)	Avg. of healthy instances (#)	Avg. of instances at risk (#)	Avg. of blocked instances (#)
EWT_Wire Transfer	5	1.00	17.80	2.00	3.00
EWT_Wire Transfer	0	1,162.00	0.00	1,162.00	0.00
PC_Emergency Department	0	9,041.00	9,041.00	0.00	0.00
Phone Provision	0	1,703.00	0.00	0.00	1,703.00

Description	Displays the summary data of the selected Business Process CIs. To access: Select Applications > Dashboard > Reports > Business Process Summary .
Important Information	This report is displayed only when HP Business Process Insight includes information about HP Business Availability Center and starts sending samples.
Included in Tasks	“View HP Business Process Insight Data in HP Business Availability Center” on page 215

Report Settings




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

GUI Element (A-Z)	Description
<Common report settings>	For details, see “Common Report Elements” in <i>Reports</i> .
Business Processes	<p>Click to open the Business Processes dialog box where you can select the view and the view's CIs you want to display.</p> <p>You can select only Business Process CIs that have a BPI Business Process Monitor child CI.</p> <p>If one CI is selected, its name is displayed to the right of the link. If more than one CI is selected, Filtered (n) is displayed to the right of the link, where n represents the number of selected CIs.</p>
Show	<p>Select one of the following options:</p> <ul style="list-style-type: none"> ▶ Value. Select to display value-related metrics for the business processes in the Value area. ▶ Count. Select to display count-related metrics for the business processes in the Count area. ▶ Both. Select to display both the count-related and value-related metrics for the business processes. Both the Value and the Count area are displayed. This is the default.

Value Area

Important Information	The area is displayed if you select Value .
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The following elements are included (unlabeled GUI elements are shown in angle brackets>):

GUI Element (A–Z)	Description
	Select a business process and click the Drill Down to Business Process Over Time button to drill down to the Business Process Over Time report for the selected business process. The report is displayed with the Value option selected.
	Select a business process and click the Drill Down to Duration Monitors Over Time button to drill down to the BPIs Monitors Over Time report for the selected business process. Only the selected BPI Duration Monitors CIs are displayed in the report. The button is enabled only if the selected business process has BPI Duration Monitors child CIs.
	Select a business process and click the Drill Down to Value Monitors Over Time button to drill down to the BPIs Monitors Over Time report for the selected business process. Only the selected BPI Value Monitor and BPI Custom Monitor CIs are displayed in the report. The button is enabled only if the selected business process has BPI Value Monitor or BPI Custom Monitors child CIs.




GUI Element (A–Z)	Description
<p>Avg. Value of At Risk Instances</p>	<p>Displays the average value of the backlogged business processes that have an At Risk status in HP Business Process Insight, out of the number of samples reported over the specified period of time. The cell background is green.</p> <p>Tooltip: Displays:</p> <ul style="list-style-type: none"> ➤ The value of the table cell. ➤ The value of the Avg. Value of Backlog Instances cell. ➤ The percentage of the current table cell value compared to the value of the Avg. Value of Backlog Instances cell.
<p>Avg. Value of Backlog Instances</p>	<p>Displays the average value of backlogged business process instances out of the number of samples reported over the specified period of time.</p> <p>Tooltip: Displays the value of the table cell.</p>
<p>Avg. Value of Blocked Instances</p>	<p>Displays the average value of the backlogged business processes that have a Blocked status in HP Business Process Insight, out of the number of samples reported over the specified period of time. The cell background is green.</p> <p>Tooltip: Displays:</p> <ul style="list-style-type: none"> ➤ The value of the table cell. ➤ The value of the Avg. Value of Backlog Instances cell. ➤ The percentage of the current table cell value compared to the value of the Avg. Value of Backlog Instances cell.

GUI Element (A–Z)	Description
Avg. Value of Healthy Instances	<p>Displays the average value of the backlogged business processes that have a Healthy status in HP Business Process Insight, out of the number of samples reported over the specified period of time. The cell background is green.</p> <p>Tooltip: Displays:</p> <ul style="list-style-type: none"> ▶ The value of the table cell. ▶ The value of the Avg. Value of Backlog Instances cell. ▶ The percentage of the current table cell value compared to the value of the Avg. Value of Backlog Instances cell.
Business Process	<p>The name of the selected Business Process CI.</p> <p>Tooltip: Displays the name of the business process CI.</p>
Total Value of Completed Instances	<p>Displays the total value of the instances that were completed in the selected time period.</p> <p>Tooltip: Displays the value of the table cell.</p>

Count Area

Important Information	The area is displayed if you select Count .
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The following elements are included (unlabeled GUI elements are shown in angle brackets>):

GUI Element (A-Z)	Description
	Select a business process and click the Drill Down to Business Process Over Time button to drill down to the Business Process Over Time report for the selected business process. The report is displayed with the Count option selected.
	Select a business process and click the Drill Down to Duration Monitors Over Time button to drill down to the BPIs Monitors Over Time report for the selected business process. The report is displayed with the Count option selected. Only the BPI Duration Monitors CIs are displayed in the report. The button is enabled only if the selected business process has BPI Duration Monitors child CIs.
	Select a business process and click the Drill Down to Value Monitors Over Time button to drill down to the BPIs Monitors Over Time report for the selected business process and with the Count option selected. Only the BPI Value or BPI Custom Monitor CIs are displayed in the report. The button is enabled only if the selected business process has BPI Value or BPI Custom Monitors child CIs.

GUI Element (A–Z)	Description
Avg. Number of At Risk Instances	<p>Displays the average number of backlogged At Risk business process instances out of the number of samples reported over the specified period of time.</p> <p>Tooltip: Displays:</p> <ul style="list-style-type: none"> ▶ The value of the table cell. ▶ The value of the Avg. Number of Backlog Instances cell. ▶ The percentage of the current table cell value compared to the value of the Avg. Number of Backlog Instances cell.
Avg. Number of Backlog Instances	<p>Displays the average number of backlogged business process instances out of the number of samples reported over the specified period of time.</p> <p>Tooltip: Displays the value of the table cell.</p>
Avg. Number of Blocked Instances	<p>Displays the average number of backlogged Blocked business process instances out of the number of samples reported over the specified period of time.</p> <p>Tooltip: Displays:</p> <ul style="list-style-type: none"> ▶ The value of the table cell. ▶ The value of the Avg. Number of Backlog Instances cell. ▶ The percentage of the current table cell value compared to the value of the Avg. Number of Backlog Instances cell.
Avg. Number of Healthy Instances	<p>Displays the average number of backlogged Healthy business process instances out of the number of samples reported over the specified period of time.</p> <p>Tooltip: Displays:</p> <ul style="list-style-type: none"> ▶ The value of the table cell. ▶ The value of the Avg. Number of Backlog Instances cell. ▶ The percentage of the current table cell value compared to the value of the Avg. Number of Backlog Instances cell.

GUI Element (A-Z)	Description
Business Process	The name of the selected Business Process CI. Tooltip: Displays the name of the business process CI.
Number of Completed Instances	Displays the total number of the instances that were completed in the selected time period. Tooltip: Displays the value of the table cell.

9

Business Transaction Management

This chapter describes Business Transaction Management for Business Availability Center.

This chapter includes:

Concepts

- ▶ Business Transaction Management - Overview on page 242
- ▶ Business Transaction Data in Business Availability Center on page 244
- ▶ Business Transaction Management in Dashboard on page 250
- ▶ Mapping End User Management Data to Business Transactions on page 254
- ▶ Drill Down from End User Management to TransactionVision on page 255
- ▶ Business Transaction Flow Map on page 256

Tasks

- ▶ Set Up Integration with HP TransactionVision on page 263
- ▶ Map End-User Transactions to Business Transactions on page 267

Reference

- ▶ Business Transaction Management User Interface on page 274

Business Transaction Management - Overview

Business Transaction Management integrates HP TransactionVision data into Business Availability Center applications, providing visibility into the business transactions driving your enterprise.

TransactionVision tracks user-defined business transactions throughout their entire lifecycle, using non-intrusive methods. TransactionVision traces WebSphere MQ API, CICS API, J2EE servlet, EJB, and JMS calls across transaction-based systems, and tracks and analyzes the interaction with each component.

The data on each transaction's path through the monitored components is sent to HP Business Availability Center in aggregated samples (see "Business Transaction Samples" on page 246). This data is mapped to the business transaction CIs (see "Transaction Class – Business Transaction CI Mapping" on page 244).

Business Transaction Management provides the following capabilities:

- ▶ **Dashboard/reports.** In Business Availability Center Dashboard and reports, the business transaction CIs enable you to measure business impact and to monitor health for your critical business transactions, based on KPIs. You can also drill down from a business transaction to HP TransactionVision. See "Business Transaction Management in Dashboard" on page 250.
- ▶ **Business Transaction Flow Map.** Business Availability Center supports ad hoc calls to TransactionVision to request real-time data on a business transaction. This data is used to generate a transaction flow map across the infrastructure components. See "Business Transaction Flow Map" on page 256.
- ▶ **My BAC.** You can view real-time and historical data for business transactions in the predefined Business Transactions page in My BAC. See "Default Module" in *Using My BAC*.
- ▶ **Service Report.** You can create a service report that includes business transaction metrics. See "Service Report Builder Wizard" in *Using My BAC*.

- ▶ **Service Level Management.** You can include the business transactions in Service Level Management agreements, and use business transaction measurements such as backlog or exception rate to verify that your revenue-generating transactions are functioning as expected, and to check compliance with your business goals. See “Business Process and Business Transaction Data in Service Level Management” in *Using Service Level Management*.
- ▶ **End User Management.** Business Transaction Management integrates TransactionVision with Real User Monitor and Business Process Monitor, providing contextual drill-down capability from the End User Management reports to TransactionVision’s Transaction Tracking report, enabling further analysis of business transaction metrics. See “Drill Down from End User Management to TransactionVision” on page 255.

Note: For details on setting up the integration, see “Set Up Integration with HP TransactionVision” on page 263.

Business Transaction Data in Business Availability Center

Business Transaction Management is built on the integration of HP TransactionVision data into Business Availability Center. The following sections describe the structure and mapping of the data.

- ▶ “Transaction Class – Business Transaction CI Mapping” on page 244
- ▶ “Business Transaction Samples” on page 246
- ▶ “Business Transaction Properties” on page 247
- ▶ “Business Transaction State Categories” on page 249

Transaction Class – Business Transaction CI Mapping

Once the integration is set up between HP TransactionVision and HP Business Availability Center, each transaction class in TransactionVision is mapped to a CI of type **Business Transaction** in the CMDB. Each Business Transaction CI has an attached child CI (using **monitored_by** link) of type **TV Monitor**. Both these CIs take their name from the name of the transaction class in TransactionVision.

The CIs are automatically included in the Business Transactions view (viewable in **Admin > Universal CMDB > Modeling > IT Universe Manager**), and are available to be added to other instance views, enabling you to create views for your applications and critical business processes that include data from TransactionVision.

Whenever a transaction class is updated in TransactionVision, the update is propagated to the corresponding CIs in the CMDB; creating a new transaction class triggers the automatic creation of the CIs for the new business transaction in the CMDB, and deleting a transaction class causes the deletion of the corresponding business transaction CIs.

The image displays two screenshots from HP Business Availability Center. The top screenshot shows the TransactionVision interface with a table of transaction classes and their schemas. The bottom screenshot shows the Business Availability Center - Universal CMDB Administration interface, specifically the Topology View, which visualizes the transaction classes as nodes in a topology. A large black arrow points from the Transaction Class column in the top screenshot to the corresponding nodes in the Topology View of the bottom screenshot.

Transaction Class	Schema(s)
<input type="checkbox"/> Bond	TRADE
<input type="checkbox"/> Bond Trading Form	All Schema's
<input type="checkbox"/> Equity	TRADE
<input type="checkbox"/> Equity Trading Form	All Schema's
<input type="checkbox"/> Fund Transfer	TRADE
<input type="checkbox"/> Fund Transfer Form	All Schema's
<input type="checkbox"/> Home Page	All Schema's
<input type="checkbox"/> Trade Simulation Page	All Schema's

Business Availability Center - Universal CMDB Administration

Modeling > IT Universe Manager

View: Business Transactions

- Bond
 - Bond monitor
- Bond Trading Form
 - Bond Trading Form monitor
- Equity
 - Equity monitor
- Equity Trading Form
 - Equity Trading Form monitor
- Fund Transfer
 - Fund Transfer monitor
- Fund Transfer Form
 - Fund Transfer Form monitor
- Home Page
 - Home Page monitor
- Trade Simulation Page
 - Trade Simulation Page monitor

Topology View

Nodes in Topology View: Fund Transfer, Bond Trading Form, Equity, Trade Simulation Page, Fund Transfer Form, Bond, Equity Trading Form, Home Page.

Business Transaction Samples

Business transaction samples are sent to Business Availability Center through a TransactionVision scheduled job running in the TransactionVision Web application server. The TransactionVision sample job delivers aggregated samples, containing pre-defined metrics over a configurable time frame (default is 5 minutes), for instances of a monitored business transaction.

Samples are sent for two types of instances of the business transaction: **completed** and **in-process**:

- ▶ The **completed** metrics are based on the aggregation of all completed instances (reached their end criteria) during the time frame.
- ▶ The **in-process** metrics are based on a snapshot of all in-process instances (not yet reached their end criteria) at the time TransactionVision created the sample.

The metrics for both these transaction instance types are mapped to a single TV Monitor CI (based on the TransactionVision ID attached to the CI), but different KPI rules deal with each metric type.

The samples contain numerical count and monetary value metrics for the completed and in-process transaction instances, broken down by various state categories (see “Business Transaction State Categories” on page 249). For details on the fields in the samples, see “Data Sample for TransactionVision” in *Reference Information*.

Business Transaction Properties

The properties for the TV Monitor CI include attributes that are populated from the transaction class in TransactionVision. You can view the properties by selecting **Properties** in the context menu for a TV Monitor CI in **Applications > Dashboard**, or in the information pane for the CI in **Admin > Universal CMDB > Modeling > IT Universe Manager**.

The screenshot shows a dialog box titled "General Properties" with a sub-section "Other Properties". The following properties are visible:

- Aggregation delta *: 60
- TransactionVision threshold: 1000
- TransactionVision Failures attribute rule
- Selector Expression: `((sampleType=="tv_trans_t")&&(tx_id==2))` (with an "Edit Selector Expression" button)
- Collection Interval *: 500
- TransactionVision ID *: 2
- TransactionVision Exception attribute rule
- TransactionVision Value attribute rule
- TransactionVision currency unit: USD

Buttons at the bottom include "Close" and "Help".

The properties received from TransactionVision are used by the KPIs and reports for the TV Monitor CI. These properties are described below:

Property	Description
Aggregation delta	The time period allocated for the delay while the sample is created. The default is 60 seconds (defined in TransactionVision).
Collection interval	The time period, in seconds, covered by each sample received for this business transaction. The default is 300 seconds (defined in TransactionVision).

Property	Description
TransactionVision currency unit	The applicable currency for the monetary values received for this business transaction. This currency unit is displayed in the Dashboard tabs and reports for all monetary values associated with this business transaction.
TransactionVision Exception attribute rule	The check box for this property is selected if the Exception attribute rule is defined for the transaction class in TransactionVision. If the check box is selected, Business Availability Center assigns the Exceptions KPI to the business transaction.
TransactionVision Failures attribute rule	The check box for this property is selected if the Failures attribute rule is defined for the transaction class in TransactionVision. If the check box is selected, Business Availability Center assigns the Failures KPI to the business transaction.
TransactionVision ID	The internal ID for the business transaction in TransactionVision.
TransactionVision threshold	The response time threshold defined for the business transaction in TransactionVision. Instances of the transaction that take longer than this time are considered "late."
TransactionVision Value attribute rule	The check box for this property is selected if the Value attribute rule is defined for the transaction class in TransactionVision. If the check box is selected, Business Availability Center assigns the Value KPI to the business transaction.

Business Transaction State Categories

The samples from TransactionVision contain metrics for completed and in-process (backlogged) business transaction instances. These metrics are further broken down by various state categories for the data, according to definitions in the TransactionVision application.

The state categories referred to in Business Availability Center are:

- **Failed.** Business transaction instances that did not meet a success threshold defined by the TransactionVision Failures attribute rule. For example, the rule may classify all transaction instances that did not meet a threshold of \$100, as failed.
- **Successful.** The total count of transaction instances, minus the failed count.
- **Late.** (Also referred to as **delayed**.) Business transaction instances with a response time that exceeded the threshold set in TransactionVision. The threshold used can be seen in the properties for the TV Monitor CI.
- **Exceptions.** Business transaction instances that did not follow the expected flow path, as defined by the TransactionVision Exception attribute rule.

Note: Transactions can be classified in more than one state category, for example, as both late and as successful.

Business Transaction Management in Dashboard

The following sections describe the options available for analyzing your business transaction data in Dashboard, and the KPIs and rules used with the data.

- “Business Transactions View” on page 250
- “KPIs and Rules for TransactionVision Data” on page 252

Business Transactions View

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.

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 252.

By default, the Business Transactions view includes only TransactionVision CIs, providing back-end monitoring. You can add the end-user perspective by mapping end-user transactions from Business Process Monitor and Real User Monitor to the business transactions. For details, see “Map End-User Transactions to Business Transactions” on page 267.

TV Monitor CI Context Menu

In Dashboard, the context menu for the TV Monitor CI contains the following Business Transaction Management options:

- ▶ **Business Transaction Over Time report.** Opens the report in a new browser window, enabling you to view a graphical representation of KPI values for the selected business transaction, over time. You can also access the report by drilling down from the Business Transaction Summary report. For details, see “Business Transaction Over Time Report” on page 287.
- ▶ **Business Transaction Summary report.** Opens the report in a new browser window, enabling you to view a summary of KPI values for the selected business transaction over a selected time period. You can also access the report from the Dashboard Reports tab. For details, see “Business Transaction Summary Report” on page 282.
- ▶ **Go to TransactionVision.** Enables you to drill down to the Transaction Tracking report in HP TransactionVision. In the Transaction Tracking report, you can see all instances for the business transaction during the last 5 minutes (approximately in synchronization with the data displayed in Dashboard).
- ▶ **Business Transaction Flow Map - Completed/In-Process.** Opens the flow map for the selected business transaction in either Completed or In-process mode. For details, see “Business Transaction Flow Map” on page 256.

TV Monitor CI Tooltip

The tooltip for the TV Monitor CI KPIs displays standard Dashboard tooltip information, including the name of the rule used for the KPI. The tooltip may contain additional business transaction information, depending on the rule in use for the KPI. For example, information may be displayed on the number of valid transaction instances used for the calculation, or the average duration time.

KPIs and Rules for TransactionVision Data

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

- Backlog
- Delays
- Duration
- Exceptions
- Failures
- Value
- Volume

Descriptions of the KPIs, and lists of which rules are relevant for each KPI, can be found in “List of Dashboard KPIs and Their Details” in *CI Attribute Customization*.

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 450. **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—see “Business Transaction Properties” on page 247.)

The **Duration** KPI must always 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.

The screenshot shows the Business Availability Center - Dashboard interface. The main content area displays the 'Bond monitor' KPI with the following metrics: Backlog 6, Volume 0, Value \$59,888, Failures \$0, Delays, and Ack. A mouse cursor is hovering over the 'Value \$59,888' metric, which has opened a 'Details - Value' popup window. The popup window contains the following information:

Details - Value	
CI name:	bond monitor
Status:	Info
Calculation Rule:	TransactionVision Value Rule (In-Process Transactions)
Held status since:	5/11/08 10:19:13 AM
Transactions Value:	\$59,888
Value for:	300 seconds period

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.

Mapping End User Management Data to Business Transactions

By default, the Business Transactions view includes only CIs for business transactions from HP TransactionVision, providing back-end monitoring. 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 Business Transaction Flow Map for a transaction includes worst status Application and Performance measurements for the Web Clients component. For details, see “Data Retrieval for the Flow Map” on page 258.

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).

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 Business Transactions” on page 267.

Drill Down from End User Management to TransactionVision

Business Availability Center supports HP TransactionVision integration with Real User Monitor and Business Process Monitor. From certain Real User Monitor and Business Process Monitor reports, you can perform a contextual drill-down to the relevant TransactionVision report, to view connected back-end activity as monitored by TransactionVision business transactions.

- ▶ **Drill down from Real User Monitor.** Both TransactionVision and Real User Monitor monitor actual customer transactions, but from different complementary, perspectives. The drill downs to the TransactionVision Transaction Tracking report help you to correlate the TransactionVision business transactions with Real User Monitor sessions, session pages, and business-critical (configured) pages. This enables you to investigate, for example, why a transaction took a long time or did not complete properly.

For more information, see “Viewing HP TransactionVision Data From Real User Monitor Reports” in *Using End User Management*.

- ▶ **Drill down from Business Process Monitor.** From the Triage report and the Triage Raw Data report, you can drill down to the TransactionVision Transaction Tracking report, helping you to correlate TransactionVision business transactions with transaction breakdown data collected by Business Process Monitor.

For more information, see “Triage Report” and “Triage Raw Data Report” in *Using End User Management*.

Business Transaction Flow Map

The business transaction flow map provides a detailed, graphical representation of the flow path for instances of a business transaction, through the network and target machines. The flow data is received from HP TransactionVision, and shows the flow of completed instances or backlogged instances.

For details on the contents of the flow map, see “Business Transaction Flow Page” on page 276.

The following sections describe the flow map components and functionality:

- ▶ “Completed and In-Process Flow Maps” on page 256
- ▶ “Data Retrieval for the Flow Map” on page 258
- ▶ “Time Frame for the Flow Map” on page 257
- ▶ “Flow Map Components” on page 260
- ▶ “Flow Map Structure” on page 261
- ▶ “Flow Map Metrics” on page 262

Completed and In-Process Flow Maps

When Business Availability Center is integrated with TransactionVision (see “Set Up Integration with HP TransactionVision” on page 263), you can open a flow map for a business transaction in one of two modes. Select the required **Business Transaction Flow Map** mode from the context menu for a TV Monitor CI in Dashboard:

- ▶ In the **Completed** mode of the flow map, the data is based on the aggregation of all transaction instances that reached their end criteria during a specific time frame. This time frame reflects the collection interval for the business transaction data currently displayed in Dashboard.
- ▶ In the **In-Process** mode of the flow map, the data is based on a snapshot of the transaction instances that have not reached their end criteria at that specific point in time. The snapshot time corresponds to the end of the time frame for the business transaction data currently displayed in Dashboard.

For information on how the time frame is calculated, see “Time Frame for the Flow Map” on page 257.

Time Frame for the Flow Map

The Business Transactions view in Dashboard shows data for the last data collection interval. The flow map aims to show data relating to the same time frame.

To achieve this, Business Availability Center and TransactionVision use the following information:

- ▶ The **timestamp** of the last sample from TransactionVision (the same sample that was used for calculating the current Dashboard data). The timestamp is the time that TransactionVision sent the sample to Business Availability Center.
- ▶ The **collection interval** that the sample covered, included as an attribute on the TV Monitor CI. The default value for the collection interval is 300 seconds (configurable in TransactionVision).
- ▶ The **aggregation delta** for the sample, included as an attribute on the TV Monitor CI. The aggregation delta is defined in TransactionVision, and allows for the delay during sample creation. Default value is 60 seconds (configurable in TransactionVision).

Tip: You can check the aggregation delta and collection interval in the Properties dialog box for the TV Monitor CI (opened from the CI context menu). See “Business Transaction Properties” on page 247.

When you select to open a **Completed** flow map, the query to TransactionVision requests all completed transactions within the following time frame:

- ▶ **End time:** The timestamp minus the aggregation delta.
- ▶ **Start time:** The end time minus the collection interval.

When you select to open an **In-Process** flow map, the query to TransactionVision requests all transactions that were currently in process at the end of the time frame (the same end time as above).

Note: If there is no data for the query period, an error message is displayed when the flow map tries to open.

Once you have opened the flow map, the data in it is not automatically updated when the data collection interval changes in the Dashboard. You must use the **Refresh** button in the flow map to update the data to reflect the new collection interval.

Data Retrieval for the Flow Map

Each time you open a flow map for a business transaction, you set up an ad hoc call to the TransactionVision machine. All TransactionVision information shown in the flow map is retrieved using this connection—no information is taken from the TransactionVision samples that arrive to the Bus.

The call to the TransactionVision machine requests information on the high-level components activated by the business transaction instances, for the relevant time frame. (For information on the time frame used for the request, see “Time Frame for the Flow Map” on page 257.)

The retrieved TransactionVision information generally includes data for the hosts on which the components are deployed, including the host IP address. Business Availability Center uses the IP address to query the CMDB for a matching Host CI, and retrieves status information for KPIs attached to the Host CI. The KPI status is usually based on SiteScope data.

The host information from TransactionVision and Business Availability Center are combined, so that each relevant component in the flow map displays a status icon showing the worst status of the host KPIs (when this information exists). The tooltip for the component shows host information retrieved from TransactionVision and from the CMDB (for example, the host type), as well as information on the associated KPIs.

Component Description	
Ip:	10.10.10.10
Type:	Program
Host:	tvvm
Name:	queue:///BOND Listener
System	
CI name:	10.10.10.10
Status:	Critical
Calculation Rule:	Worst Child Rule
Held status since:	3/26/08 03:05:53 PM

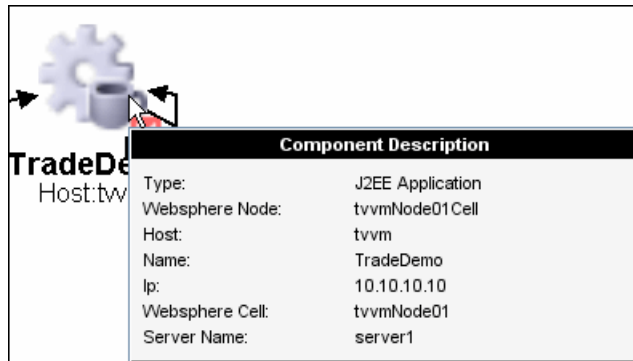
In addition, if you have mapped one or more End User Management transaction CIs to the Business Transaction CI (as described in “Mapping End User Management Data to Business Transactions” on page 254), then Business Availability Center displays information on the worst status Performance and Availability KPIs (of the KPIs attached to the End User Management transaction CIs), in the tooltip for the **Web Clients** component.

Component Description	
Type:	Customer
Name:	Web Clients
Performance	
CI name:	bond
Status:	Minor
Calculation Rule:	Worst Child Rule
Held status since:	3/26/08 10:24:51 AM
Availability	
CI name:	bond
Status:	OK
Calculation Rule:	Worst Child Rule
Held status since:	3/26/08 10:24:51 AM

Flow Map Components

The flow map shows the flow of the instances for a business transaction through the components of the network and target machines. The components are represented in the map by flow component icons. The map may also display a component icon labeled **Web Clients**, representing the Web client (or multiple Web clients) that originated one or more instances of the transaction, in response to an end user action.

Each flow component represents an actual software or hardware element that one of the transaction instances passed through, and may include additional data from the software or hardware upper layers. For example, if a transaction instance passed through a J2EE application, the map shows a flow component for the J2EE application, and may include additional data for the application server and the host in the tooltip.



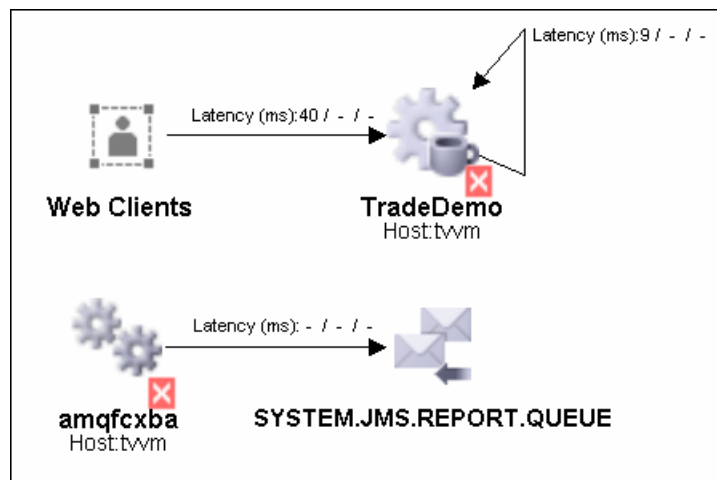
Each component is shown only once, regardless of how many instances of the transaction passed through that component.

The flow map includes only specific component types (so you will not see all component types identified by TransactionVision). The icon for each component type is determined by the CMDB class type for that component. For a list of the component icons used in the flow map, see “Flow Map Components” on page 291.

Flow Map Structure

Communication between components in the map is represented by links (directed arrows). There is no particular order to the flow as represented in the graph, and the flow is a summarized one for all instances of the business transaction. Therefore, the following flow structures between the infrastructure elements are all possible:

- ▶ Two links between two components, each link going in the opposite direction.
- ▶ A component with a self-directed link.
- ▶ A flow with several end points.
- ▶ A circular flow.
- ▶ Unconnected flow paths (this can occur when there are elements that cannot be interpreted by TransactionVision, for example, if the technology is not supported).



Flow Map Metrics

If the flow map is set to show volume, value, or latency data (according to the selections made for the **Display Data** option in the flow map toolbar), then the flow map displays these metrics, broken down by transaction state categories, along the edge of each link arrow (the information can also be viewed in the tooltip for the link). The displayed metrics are supplied by TransactionVision, and relate to the flow of transaction instances (either completed or in process, as relevant) between the two components connected by the arrow.

The metrics provide the following information:

- ▶ **Volume.** Displays a count of the transaction instances that passed/are in process between the two components.
- ▶ **Value.** Displays the total monetary value associated with the transaction instances that passed/are in process between the two components.
- ▶ **Latency.** Displays the average latency (response time) for the transaction instances that passed/are in process between the two components (in milliseconds).

For each metric, data is displayed across three transaction state categories, Successful, Late, and Failed.

For example, the following information may be displayed in the tooltip for a link:

topic://REQUEST Listener >> TradeDemo			
	Successful	Late	Failed
Volume (#)	2	0	0
Value (sum)	\$3,681.98	-	-
Latency (average)	187.5 ms	-	-

If a metric is not applicable for a link, or if there is no criteria set in TransactionVision for late status or failed status, then the relevant metric shows **N/A**.

Set Up Integration with HP TransactionVision

This task describes set up and configuration for the integration with HP TransactionVision, so that Business Transaction Management is available in Business Availability Center, and to enable drill down to the TransactionVision application.

For more information on the integration, see “Business Transaction Management - Overview” on page 242.

Note:

- ▶ There is no data upgrade if you were working with TransactionVision in previous Business Availability Center versions. You must set up the integration for Business Availability Center 7.50 as described in this task.
- ▶ Business Availability Center does not support basic authentication protocol for communication with TransactionVision.

This task includes the following steps:

- ▶ “Prerequisites” on page 263
- ▶ “Configure Integration Settings in TransactionVision” on page 264
- ▶ “Configure Integration Settings in Business Availability Center” on page 264
- ▶ “Authenticate User Credentials” on page 264
- ▶ “Modify KPI Assignments” on page 265
- ▶ “Integration Results” on page 265

1 Prerequisites

HP TransactionVision should be installed on your network.

2 Configure Integration Settings in TransactionVision

On the TransactionVision machine, define the required integration settings.

For details on the integration:

- ▶ see the *TransactionVision User Guide* for TransactionVision usability information relating to the integration with Business Availability Center.
- ▶ see the *TransactionVision Administration Guide* for TransactionVision configuration information relating to the integration with Business Availability Center.

3 Configure Integration Settings in Business Availability Center

In **Admin > Platform > Setup and Maintenance > Infrastructure Settings**, choose **Foundations**, select **Integrations with other applications**, and locate the **HP TransactionVision** table.

Click the **Edit** button for the **HP TransactionVision Host and Port** entry, and enter the host name and port for the TransactionVision machine in the format: **<protocol>://<host name>:<port number>**

For example: `http://tv.mycompany.global:9080`

4 Authenticate User Credentials

By default, both Business Availability Center and TransactionVision are set to use Lightweight Single Sign-On (LW-SSO) for communication between the applications, so you should not need to enter user authentication credentials.

In order for the drilldown from Business Availability Center to TransactionVision to function, you must configure the `lwssofmconf.xml` file in both applications. For details on configuring this file, see “LW-SSO Infrastructure Configuration” in *Platform Administration*.

For more information on LW-SSO, or on moving to a different user authentication strategy, see “Setting Up a Single Sign-On Authentication Strategy” in *Platform Administration*.

Note: Your Web browser should be set to accept cookies, for LW-SSO to function.

5 Modify KPI Assignments

Business Availability Center provides predefined KPI assignments for the monitoring CIs created in the CMDB for the TransactionVision business transactions. The KPI assignments define the default Dashboard KPIs and rules attached to the created CIs, and the selectors for assigning samples to the CIs. For details, see “KPI Assignment Management Overview” on page 418.

If required, you can modify the KPI assignments. For details, see “Edit Group Page” on page 450.

6 Integration Results

After setting up the integration, TransactionVision data and connections are available in Business Availability Center:

- ▶ Business Transaction CIs and TV Monitor CIs are created in the CMDB based on synchronization with the TransactionVision application, and assigned KPIs based on the KPI assignment information. The CIs are updated with transaction run data received in the incoming samples from TransactionVision. For details, see “Business Transaction Data in Business Availability Center” on page 244.
- ▶ The Business Transactions view is automatically populated with the Business Transaction and TV Monitor CIs, enabling you to monitor the business transactions in Dashboard, and to select business transaction CIs to include in service agreements in Service Level Management. For details, see “Business Transactions View” on page 250, and “Business Process and Business Transaction Data in Service Level Management” in *Using Service Level Management*.

- ▶ The Business Transaction Summary report is added to the list of available reports in the Dashboard Reports tab. You can also access the Business Transaction Summary and Business Transaction Over Time reports from the context menu for a TV Monitor CI in Dashboard. For details, see “Business Transaction Summary Report” on page 282 and “Business Transaction Over Time Report” on page 287.
- ▶ From Dashboard, you can open the Business Transaction Flow Map for a TV Monitor CI. Data for the flow map is provided directly from an ad hoc call to the TransactionVision machine. For details, see “Business Transaction Flow Map” on page 256.
- ▶ From Dashboard, you can drill down from a TV Monitor CI to the Transaction Tracking Report page in TransactionVision. For details, see “Business Transaction Management in Dashboard” on page 250
- ▶ In End User Management, you can drill down from certain Real User Monitor and Business Process Monitor reports to the appropriate report page in TransactionVision. For details, see “Mapping End User Management Data to Business Transactions” on page 254.

Map End-User Transactions to Business Transactions

This task describes how to map Business Process Monitor and Real User Monitor transactions in End User Management Administration, to business transactions from HP TransactionVision.

For more information, see “Mapping End User Management Data to Business Transactions” on page 254.

This task includes the following steps:

- “Prerequisites” on page 267
- “Map Business Process Monitor Transactions in the Business Process Profile Wizard” on page 267
- “Map New and Existing Transactions” on page 269
- “Results in Dashboard” on page 271

1 Prerequisites

In order to do the mapping, Business Availability Center must be integrated with TransactionVision, and there must be Business Transaction CIs in the Business Transactions view.

2 Map Business Process Monitor Transactions in the Business Process Profile Wizard

While working in the Business Process Profile Wizard to create a new Business Process profile, or to add a new transaction monitor to an existing profile, you have the option to map the Business Process Monitor transactions to business transactions.

- a** Open the Business Process Profile Wizard and define profile and transaction monitor properties. See “Business Process Profile Wizard” in *Using End User Management*.

- b** In the Set Transaction Properties Page, select the check box for the transaction you want to map. Selecting a check box enables the **Map Business Transaction** button.

Note: If more than one transaction is selected, or if the transaction is already mapped to a business transaction, then the button remains disabled.

- c** Click **Map Business Transaction** to open the Select Related Business Transaction dialog box, where you select the required Business Transaction CI.
- d** Save your selection. After mapping, the **Business Transaction** column in the Set Transaction Properties page displays the name of the Business Transaction CI mapped to the Business Process Monitor transaction.
- e** Repeat for each Business Process Monitor transaction you want to map to a business transaction.
- f** If you want to change the mapping for a transaction, you must first remove the mapping by selecting the transaction check box and clicking **Detach Business Transaction**. You can then remap the transaction to a different business transaction, as described in step c.

Example

In the following picture, the transaction ok in a transaction profile has been mapped to the Business Transaction CI Bond, and transaction tx_15 has been mapped to the Business Transaction CI Equity:

Set Transaction Properties

Enter thresholds for transaction response time—the time it takes for a transaction to be completed. Thresholds determine how HP Business Availability Center reports performance for completed transactions only. Failed transactions are not considered. Enter amounts in seconds and milliseconds as fractions (.005 = 5 milliseconds). By selecting multiple transactions, you can set the same thresholds for each selected transaction.

Ignore outlier data in reports

All	Transaction	OK	Minor	Critical	Outlier	Business Transaction
<input type="checkbox"/>	tx_10	Less than 8.0 Sec.	8.0-12.0 Sec.	Greater than 12.0 Sec.	Greater than 300.0 Sec.	
<input type="checkbox"/>	failed	Less than 8.0 Sec.	8.0-12.0 Sec.	Greater than 12.0 Sec.	Greater than 300.0 Sec.	
<input type="checkbox"/>	ok	Less than 8.0 Sec.	8.0-12.0 Sec.	Greater than 12.0 Sec.	Greater than 300.0 Sec.	Bond
<input type="checkbox"/>	tx_5	Less than 8.0 Sec.	8.0-12.0 Sec.	Greater than 12.0 Sec.	Greater than 300.0 Sec.	
<input checked="" type="checkbox"/>	tx_15	Less than 8.0 Sec.	8.0-12.0 Sec.	Greater than 12.0 Sec.	Greater than 300.0 Sec.	Equity

Edit Transactions Thresholds
Map Business Transaction
Detach Business Transaction

3 Map New and Existing Transactions

In the End User Management Administration Monitors tab, you can select a Business Process Monitor transaction already in a profile and map it directly to a business transaction. You can also map a new or existing Real User Monitor transaction to a business transaction.

- a** Access the Edit Transaction page for a Business Process Monitor transaction (see “Edit Transaction Page” in *Using End User Management*), or the New Transaction or Edit Transaction page for a Real User Monitor transaction (see “New/Edit Transaction Page” in *Using End User Management*).
- b** In the **Related Business Transaction** area, click **Map Business Transaction** to open the Select Related Business Transaction dialog box, where you select the required Business Transaction CI.

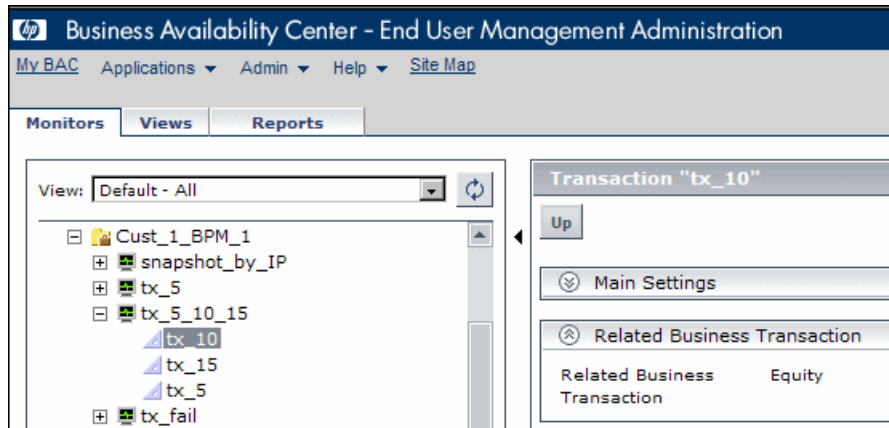
- c If you want to change the mapping for a transaction, you must first remove the mapping by clicking **Detach Business Transaction**. You can then remap the transaction to a different business transaction.

Note: The **Map Business Transaction** and **Detach Business Transaction** buttons are displayed only in **Edit** mode.

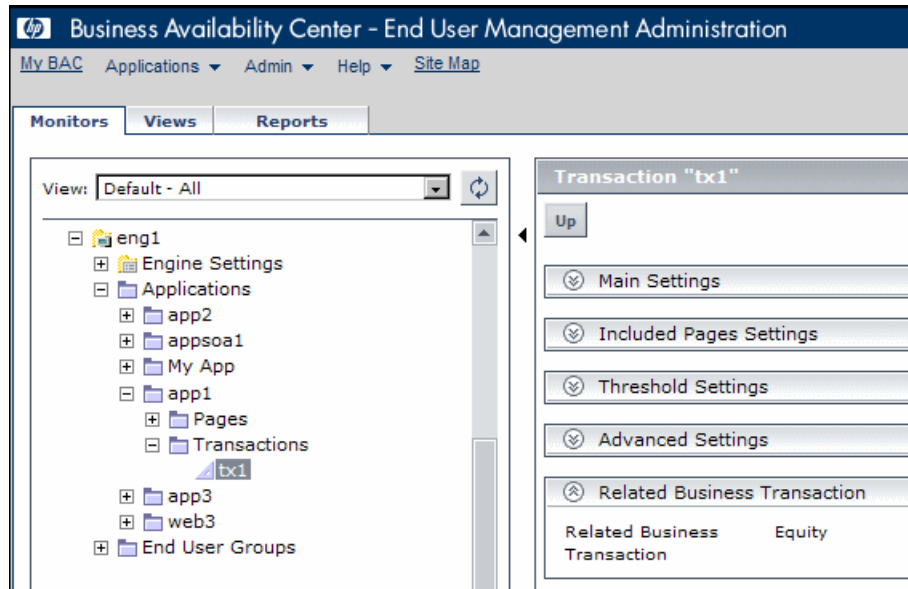
- d After mapping, the **Related Business Transaction** area displays the name of the Business Transaction CI.

Example

In the following pictures, the Business Process Monitor transaction tx_10 has been mapped to Business Transaction CI Equity:



And the Real User Monitor transaction tx1 has been mapped to Business Transaction CI Equity:



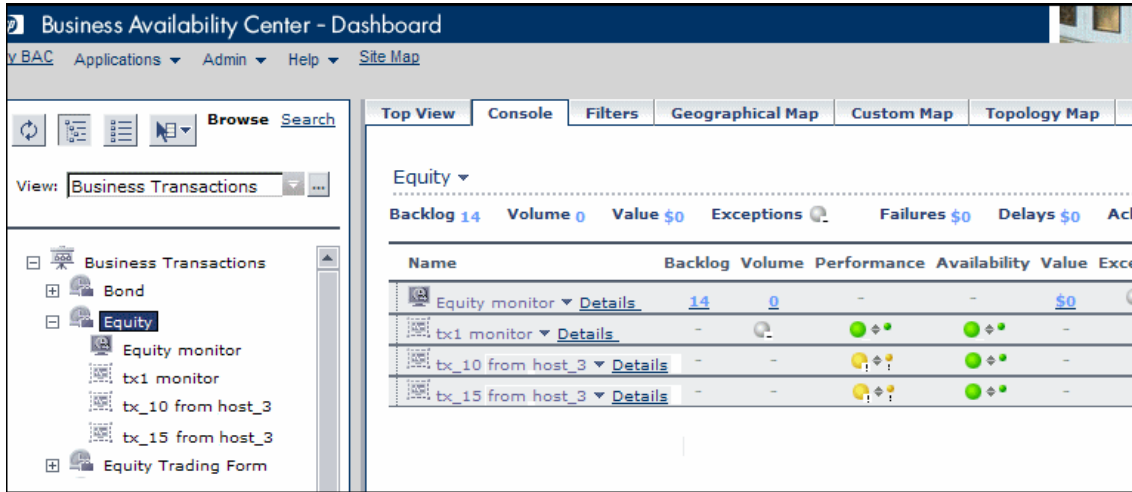
4 Results in Dashboard

After performing the mapping, you can immediately see the end-user transaction CIs added in the Business Transactions view.

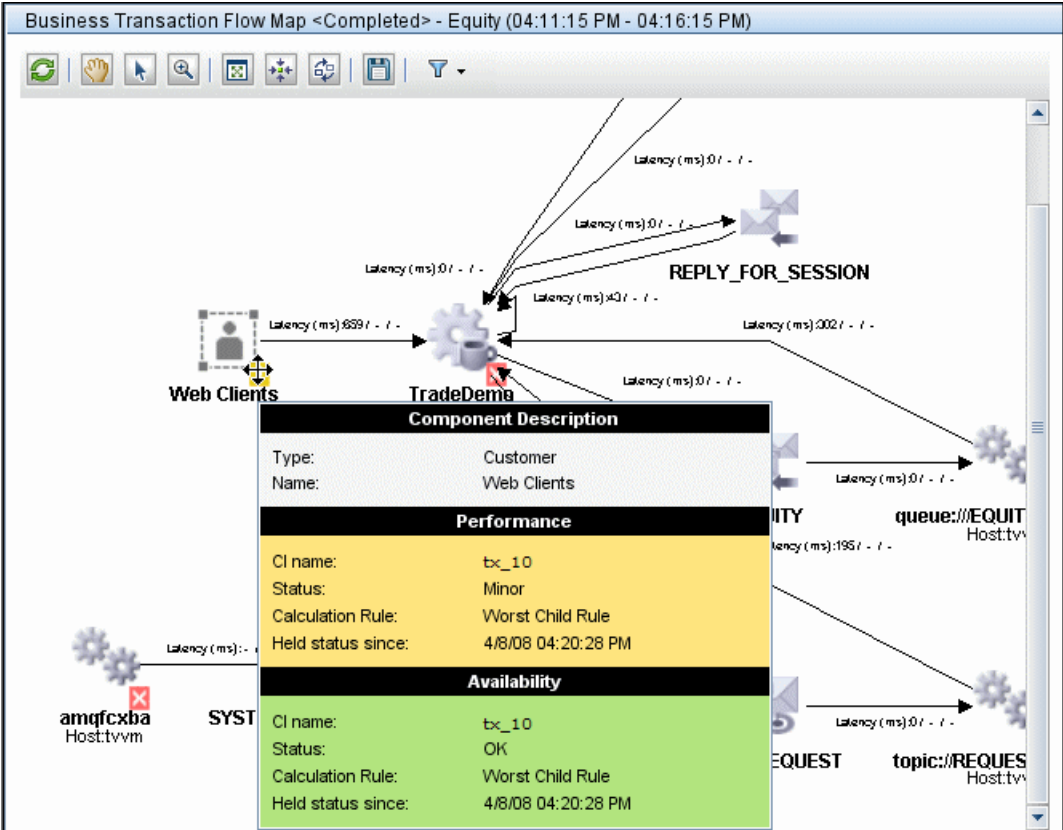
The end-user KPI information appears in the Business Transaction Flow Map only after the next sample update.

Example

In the Business Transactions view in Dashboard, you can see the end-user transaction CIs mapped to the Business Transaction CI Equity:



In the Business Transaction Flow Map for Equity, you can see worst status for the end-user Availability and Performance KPIs attached to the Web Clients component:



Business Transaction Management User Interface


This section describes:

- ▶ Business Transaction/s Dialog Box on page 274
- ▶ Business Transaction Flow Page on page 276
- ▶ Business Transaction Summary Report on page 282
- ▶ Business Transaction Over Time Report on page 287

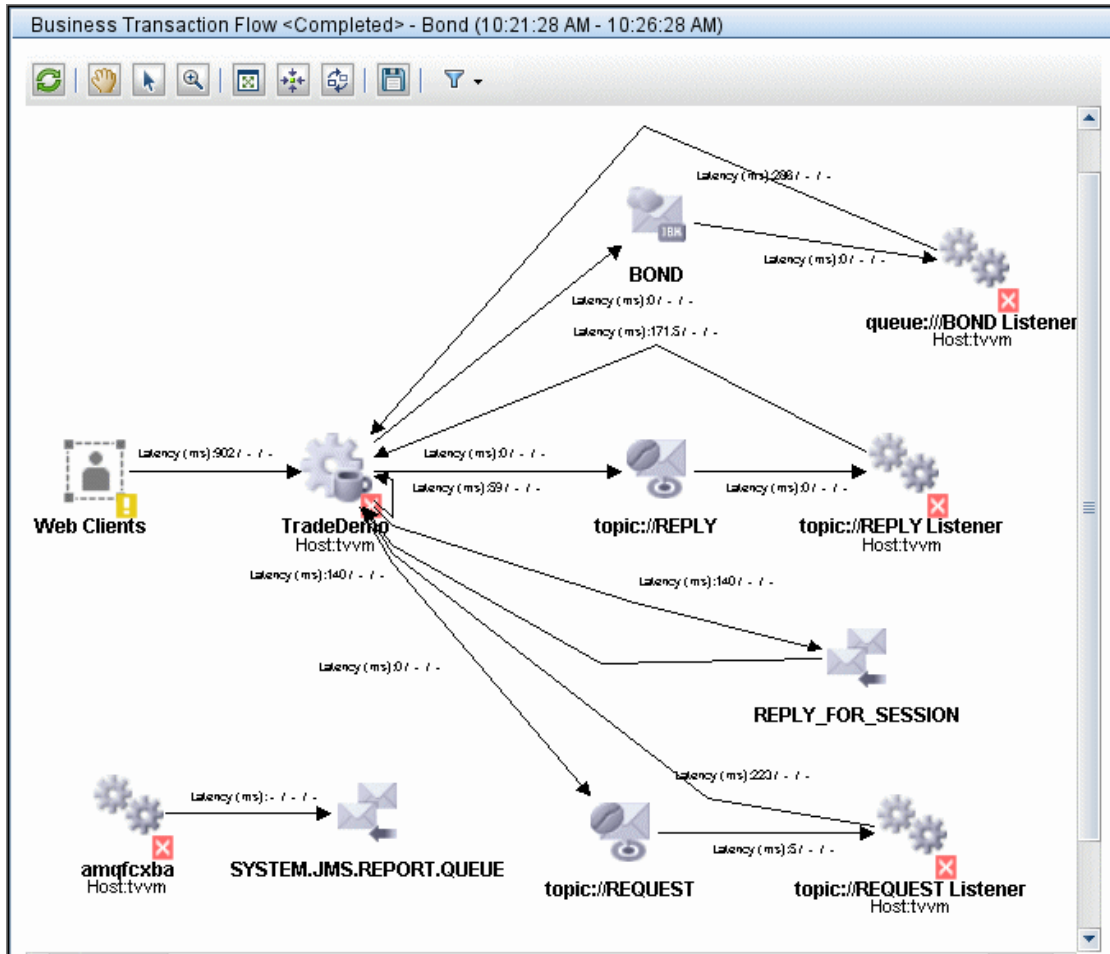
Business Transaction/s Dialog Box

Description	Enables you to select the Business Transaction CI(s) to be included in the report. To access: <ul style="list-style-type: none">▶ In the Business Transaction Summary Report, click the Business Transactions link.▶ In the Business Transaction Over Time Report, click the Business Transaction link.
Important Information	The information here applies to both the Business Transaction dialog box and the Business Transactions dialog box.

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

GUI Element (A-Z)	Description
	Not currently in use.
<CI list>	<p>Displays the CIs in the selected view. Only Business Transaction CIs can be selected.</p> <ul style="list-style-type: none"> ▶ In the Business Transactions dialog box, select the check box for every Business Transaction CI that you want to include in the report. ▶ In the Business Transaction dialog box, click the Business Transaction CI on which you want the report to be based.
View	<p>Enables you to select an alternative view to locate the required Business Transaction CIs.</p> <p>Default: Displays the Business Transactions view.</p>








Business Transaction Flow Page





<p>Description</p>	<p>Displays a flow map in a new browser page, showing a graphic representation of the flow for the selected business transaction through the target machine. The flow information is taken directly from HP TransactionVision.</p> <p>The map includes metrics for the traffic between each flow component, and associated KPI data.</p> <p>To access:</p> <ol style="list-style-type: none"> 1 In Applications > Dashboard, display the Business Transactions view. 2 Right-click a TV Monitor CI to open the context menu. 3 Select either: <ul style="list-style-type: none"> Business Transaction Flow Map > Completed (for flow of completed business transaction instances) or Business Transaction Flow Map > In Process (for flow of in-process business transaction instances)
<p>Important Information</p>	<ul style="list-style-type: none"> ➤ On opening, the flow map displays information corresponding to the active time frame. This is the time frame that matches the data collection period currently active in Dashboard. The map information is not automatically updated to reflect new data collection periods—use the Refresh button to update the data in the map. <p>For more information on how the active time frame is calculated, see “Time Frame for the Flow Map” on page 257.</p> <ul style="list-style-type: none"> ➤ The title bar includes the name of the business transaction, and the end time for the active time frame. ➤ The flow for the transaction is indicated by icons representing flow components, and arrows representing the flow links.
<p>Useful Links</p>	<p>“Business Transaction Flow Map” on page 256</p>

Toolbar Options


The following toolbar options are included:



GUI Element (A–Z)	Description
	<p>Click the Refresh button to update the flow map to show data for the most recent time frame (corresponding to the data collection period that is currently active in Dashboard).</p> <p>After refreshing:</p> <ul style="list-style-type: none"> ▶ all default settings for the flow map are restored. ▶ the title bar updates to display the end time for the active time frame.
	<p>Click the Pan button, then click and drag in the flow map to view different areas of the map.</p>
	<p>Click the Select button, then:</p> <ul style="list-style-type: none"> ▶ click an entity in the map to select it. ▶ click and drag an entity in the map to reposition it within the flow map. For example, you can click on the elbow of a link arrow and drag it to a different location. ▶ click and drag over an area to select the entities within that area. <p>Click again outside the selected area to deselect.</p>
	<p>Click the Zoom button, then click and drag in the map to zoom in and out.</p>
	<p>Click the Fit to window button to resize the map to fit the available viewing space.</p>
	<p>Click the Move selected to center button to move the currently selected items to the center of the viewing area.</p>
	<p>Click the Rearrange button to restore the map to its default appearance.</p>

GUI Element (A–Z)	Description
	<p>Click the Save as image button to open a dialog box where you define the target location and required settings for saving the flow map as an image.</p>
	<p>Click the Display Data button to open a list of data display options. Select the check box for each option that you want displayed in the flow map.</p> <ul style="list-style-type: none"> ▶ CI Additional Data. Displays the name or IP of the host running the component (when this information is available) under each relevant component icon. ▶ Value. Displays value metrics for each link, alongside each link arrow. ▶ Volume. Displays volume metrics for each link, alongside each link arrow. ▶ Latency. Displays latency metrics for each link, alongside each link arrow. <p>For more information on these options, see “Flow Map Metrics” on page 262.</p> <p>Note: If an option is not selected, you can still see the metrics information in the tooltip for the link, or the host information in the tooltip for a component.</p>

Flow Map

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

GUI Element (A–Z)	Description
<p><Flow component icon></p> <p>Example:</p> 	<p>Each flow component (for example, Application, Servlet, MQ Queue, and so forth) is represented by an icon.</p> <p>For a reference list of the icons used in the flow map, see “Flow Map Components” on page 291.</p> <p>If you selected to show CI Additional Data in the Display Data list, then the flow map displays the name or IP of the host running the component (when this information is available) under each relevant component icon.</p> <p>Tooltip: Hold the pointer over a component icon to display a tooltip containing information for the host that the component is deployed on, including KPI information.</p> <p>For the Web Clients component, the tooltip displays KPI information relating to end user transactions that are mapped to the business transaction.</p> <p>For more information on the data in the tooltips, see “Data Retrieval for the Flow Map” on page 258.</p>

GUI Element (A-Z)	Description
<p><Status indicator> Example: </p>	<p>Status indicators are displayed in the bottom-right corner of a component icon, when there is a Host CI in the CMDB that corresponds to the host that the component is deployed on. The status indicator shows the worst status held by the KPIs attached to the Host CI.</p> <p>For more information, see “Data Retrieval for the Flow Map” on page 258.</p>
<p><Link arrow> Example:</p>	<p>The link arrows, each connecting two component icons, indicate the direction of the transaction flow.</p> <p>If the flow map is set to show volume, value, or latency data (according to the selections made in the Display Data list), then the flow map displays these metrics, broken down by three transaction state categories, along the edge of each link arrow. The format <successful>/<late>/<failed> is used to display the metrics across each transaction state category, for example: Volume: 100/2/1</p> <div style="border: 1px solid black; padding: 5px;"> <p>Volume:401 / 351 / 41 Value (USD):20,117,323.5 / 18,446,297.05 / 3,354,849 Latency (ms):5.67 / 6.52 / 8.33</p>  </div> <p>For an explanation of the metrics and transaction state categories, see “Flow Map Metrics” on page 262.</p> <p>Tooltip: Hold the pointer over a link arrow to display a tooltip that shows the metrics broken down by transaction state.</p>

Business Transaction Summary Report

Business Transaction Summary 2/26/08 12:00 AM - 3/25/08 11:30 AM (GMT+02:00)Asia,Jerusalem

View: Past month From: [2/25/08 11:30 AM](#) To: [3/25/08 11:30 AM](#) ◀ ▶

[Business Transactions: Filtered\(8\)](#) Favorite Filters ★

Show: Value Count Both Generate

Value


📊 📄 📅

Business Transaction ▲	Total Value	Avg. Duration (sec.)	Avg. Backlog Value	Exceptions (%)	Failures (%)	Delays (%)
Bond (EUR)	12,700.00	0.97	0.00	1.41	1.14	2.35
Bond Trading Form (\$)	6,240.00	1.32	1.00	1.89	1.54	1.27
Equity (\$)	6,020.00	0.82	0.00	1.78	2.09	1.76
Equity Trading Form (\$)	2,960.00	0.83	1.00	0.74	1.25	3.24
Fund Transfer (\$)	12,740.00	0.94	0.00	2.37	1.66	1.42
Fund Transfer Form (\$)	6,260.00	1.51	1.00	2.08	1.47	2.01
Home Page (\$)	9,420.00	1.03	1.00	1.69	1.94	2.03
Trade Simulation Page (\$)	0.00	0.04	-	-	-	-

Description	<p>Displays metrics for selected business transactions from HP TransactionVision. The metrics (calculated by either volume or by monetary value, depending on the selected mode) are shown broken down by different transaction state categories, such as failures or delays.</p> <p>You can use this report to see summarized results for transactions during a set time period.</p> <p>To access: Applications > Dashboard > Reports > Business Transaction Summary</p> <p>Or:</p> <p>In a Dashboard tab, open the context menu for a TV Monitor CI and select Go to Report > Business Transaction Summary</p>
Important Information	<p>The report appears in the Reports list only when the integration is set up with TransactionVision. For details, see “Set Up Integration with HP TransactionVision” on page 263.</p>
Useful Links	<p>For information on the transaction state categories, see “Business Transaction Data in Business Availability Center” on page 244.</p>

Report Settings

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

GUI Element (A-Z)	Description
	<p>Click the Drilldown button to drill down to the Business Transaction Over Time report for the business transaction currently selected in the table. The Business Transaction Over Time report opens using the same report settings as selected in the Business Transaction Summary report.</p> <p>(The Business Transaction Over Time report shows monetary values if you drill down from the Value table, and volume if you drill down from the Count table.)</p>
<Common report settings>	<p>For details, see “Common Report Elements” in <i>Reports</i>.</p>
Business Transactions	<p>Displays the number of transactions selected for inclusion in the report.</p> <p>To change the selection, click the Business Transactions link, and select the required transactions in the Business Transactions dialog box.</p> <p>Default: All business transactions selected.</p>
Show	<p>Select the required radio button:</p> <ul style="list-style-type: none"> ▶ Value. Displays the Value table, showing metrics based on the monetary value for each business transaction instance. The unit and the monetary value are defined in TransactionVision. ▶ Count. Displays the Count table, showing metrics based on the volume of business transaction instances in each category. ▶ Both. Displays both the Value and the Count tables.

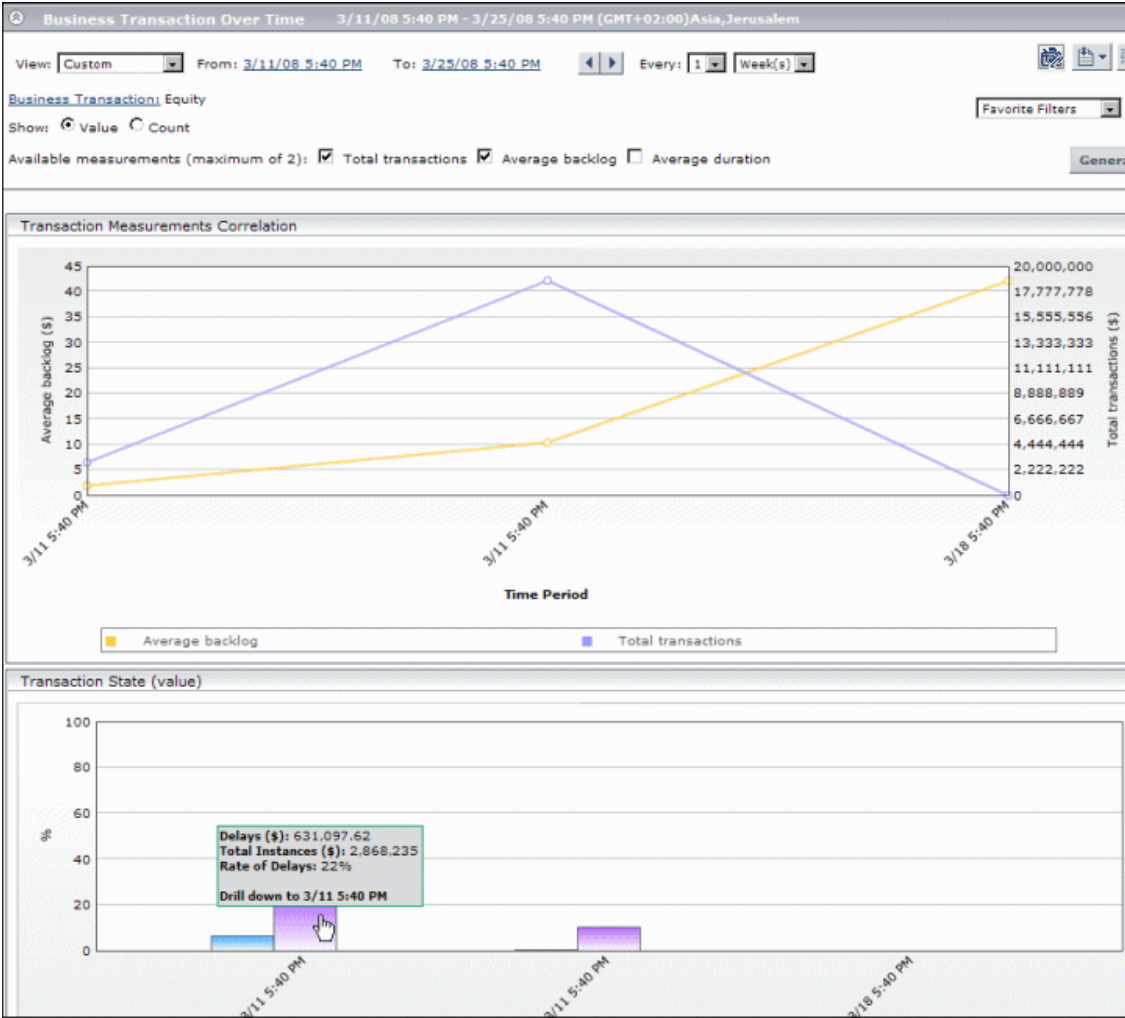
Report Content

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

GUI Element (A-Z)	Description
Avg. Backlog	(Count table) Displays the average number of backlogged (in-process) instances of the business transaction during the time range.
Avg. Backlog Value	(Value table) Displays the average monetary value of the backlogged (in-process) instances of the business transaction during the time range.
Avg. Duration	Displays the average duration (in seconds) for a successfully completed instance of the business transaction, triggered during the time range.
Business Transaction	Lists the Business Transactions CIs selected for inclusion in the report.
Delays	Displays the percentage of business transaction instances classified as late, or the percentage cost for the business transaction instances classified as late, during the time range (for both in-process and completed instances). Tooltip: The tooltip for each cell shows the values used to calculate the percentage.
Exceptions	Displays the percentage of business transaction instances classified as exceptions, or the percentage cost for the business transaction instances classified as exceptions, during the time range (for both in-process and completed instances). Tooltip: The tooltip for each cell shows the values used to calculate the percentage.

GUI Element (A-Z)	Description
Failures	<p>Displays the percentage of business transaction instances classified as failures, or the percentage cost for the business transaction instances classified as failures, during the time range (for both in-process and completed instances).</p> <p>Tooltip: The tooltip for each cell shows the values used to calculate the percentage.</p>
Total Count	<p>(Count table) Displays the total number of completed instances of the business transaction during the time range.</p>
Total Value	<p>(Value table) Displays the total monetary value for all completed instances of the business transaction during the time range.</p>

Business Transaction Over Time Report



<p>Description</p>	<p>Displays metrics over time for a selected business transaction from HP TransactionVision.</p> <p>The metrics (calculated by either volume or by monetary value, depending on the selected mode) are shown on two graphs:</p> <ul style="list-style-type: none"> ▶ Transaction Measurements Correlation. A line graph showing the correlation between two measurements (select from total transactions, backlog, and duration). ▶ Transaction State. A bar graph showing the percentage results for transaction states (exceptions, delays, failures) out of total transactions. <p>You can use this report to see the performance of a transaction over time.</p> <p>To access:</p> <p>Drill down from the Business Transaction Summary Report</p> <p>Or:</p> <p>In a Dashboard tab, open the context menu for a TV Monitor CI and select Go to Report > Business Transaction Over Time</p>
<p>Useful Links</p>	<p>For information on the transaction state categories, see “Business Transaction Data in Business Availability Center” on page 244.</p>

Report Settings

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

GUI Element (A-Z)	Description
<Common report settings>	For details, see “Common Report Elements” in <i>Reports</i> .
Available measurements	<p>Select the check boxes for either one or two measurements, to display the measurements in the Transaction Measurements Correlation graph:</p> <ul style="list-style-type: none"> ▶ Total transactions. Displays total volume or total value for completed transaction instances. ▶ Average backlog. Displays average backlog (transaction instances in-process) count or value for the time period. ▶ Average duration. Displays the average duration of completed transaction instances for the time period.
Business Transaction	<p>Displays the name of the business transaction for which results are shown in the report.</p> <p>To change the selection, click the Business Transaction link, and select the required transaction in the Business Transaction dialog box.</p>
Show	<p>Select the required radio button:</p> <ul style="list-style-type: none"> ▶ Value. The graphs display results based on the monetary value of each instance for the business transaction. The unit and the monetary value are defined in TransactionVision. ▶ Count. The graphs display results based on the volume of instances for the business transaction.

Report Content









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

GUI Element (A-Z)	Description
<Drill down>	Click a point or a bar in the graphs to drill down in the Business Transaction Over Time report to a finer granularity for the business transaction. For example, in a report showing results per week, you can drill down from a particular week to show results per day in the week. You can then drill down again from a particular day to show results per hour in that day.
Transaction Measurements Correlation graph	Displays the time period on the x-axis, and the units for the selected measurements on the y-axes. Each point on the graph shows the total or average for the preceding time period. Tooltip: Hold the cursor over a point in the graph to see the value for the measurement.
Transaction State	Displays the time period on the x-axis, and percentage on the y-axis. A separate bar is shown for each transaction state during each time period included in the graph. Tooltip: Hold the cursor over a bar in the graph to see the values for the measurement and the percentage calculation.



Flow Map Components

The following table lists the component icons that are used for the Business Transaction Flow map, described in “Business Transaction Flow Page” on page 276.

Note: The database component is not included in the table—the icon used for database varies, depending on the database type.

Icon	Component Name
	Program (software elements)
	J2EE Application
	Web Clients
	IBM WebSphere MQ Queue
	IBM WebSphere MQ Cluster Queue
	JMS Topic
	JMS Queue
	CICS Transaction

Chapter 9 • Flow Map Components

Icon	Component Name
	IMS Program
	Batch Job

Part II

Reports

10

Dashboard Reports

This chapter describes the Dashboard reports.

This chapter includes:

Concepts

- ▶ Dashboard Reports Overview on page 295

Tasks

- ▶ View KPIs Over Time Information on page 298

Reference

- ▶ Reports User Interface on page 300
- ▶ Troubleshooting and Limitations on page 327

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 321.
- ▶ **KPIs Trend.** Displays the trend for changes in KPI status over time, for selected statuses. For details, see “KPIs Trend Report” on page 324.

- ▶ **KPIs Distribution Over Time.** Displays KPI status distribution over time for selected statuses. For details, see “KPIs Distribution Over Time Report” on page 303.
- ▶ **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 306.
- ▶ **Business Process Summary, Business Process Over Time, or BPI Monitors Over Time.** Display the information needed to monitor HP Business Process Insight. For details, see “BPI Monitors Over Time Report” on page 224, “Business Process Over Time Report” on page 228, or “Business Process Summary Report” on page 233.
- ▶ **Business Transaction Summary, or Business Transaction Over Time.** Displays summarized information for selected business transactions monitored by HP TransactionVision, and information over time for specific transactions. For details, see “Business Transaction Over Time Report” on page 287, and “Business Transaction Summary Report” on page 282.

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 365. (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 about 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 298
- ▶ “Access KPIs Over Time Reports” on page 298
- ▶ “Drill Down to HP Diagnostics” on page 299
- ▶ “Access KPIs Distribution Over Time Report” on page 299
- ▶ “Access the KPIs Summary Report” on page 299
- ▶ “Access the KPIs Trend Report” on page 299

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 306. 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 Rules Repository. For details, see “Persistent Data and Historical Data” on page 365.

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 306.

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 365.

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 306.

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 303.

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 321.

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 324.

Reports User Interface

This section describes:

- Configuration Items Dialog Box on page 301
- KPIs Dialog Box on page 302
- KPIs Distribution Over Time Report on page 303
- KPIs Over Time Report on page 306
- KPIs Summary Report on page 321
- KPIs Trend Report on page 324
- Statuses Dialog Box on page 327

Configuration Items Dialog Box

<p>Description</p>	<p>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.</p> <p>To access: In a Dashboard report, click Configuration Items in the reports settings area.</p>
<p>Important Information</p>	<ul style="list-style-type: none"> ▶ 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: <ul style="list-style-type: none"> ▶ 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 365. ▶ 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 365.

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 Search to move to Search mode, where you can search for CIs. For details, see “View Explorer” in <i>Model Management</i> .
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

Description	Displays KPI status distribution over time for selected statuses. To access: <ul style="list-style-type: none"> ▶ Select Applications > Dashboard > Reports tab > KPIs Distribution Over Time ▶ Access the KPIs Distribution Over Time portlet in My BAC
Important Information	<ul style="list-style-type: none"> ▶ This report is produced only for certain CIs with historical KPI data. For details, see “Configuration Items Dialog Box” on page 301. ▶ You can add this report as a portlet in My BAC. For details, see “Add Portlets to <page_name>/Add Portlets Dialog Box” in <i>Using My BAC</i>.
Useful Links	“Configuration Items Dialog Box” on page 301

Report Settings

GUI Element (A-Z)	Description
<Common report settings>	See “Common Report Elements” in <i>Reports</i> .
Configuration Items	<p>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.</p> <p>Click the Configuration Items link to open the Configuration Items dialog box where you can select CIs.</p>
KPIs	<p>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).</p> <p>All is displayed when all available KPIs are selected.</p> <p>Click the KPIs link to open the KPIs dialog box where you can select KPIs.</p> <p>Default value: If the Application KPI is attached to any of the selected CIs, then this KPI is selected automatically.</p>
Statuses	<p>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).</p> <p>Click the Statuses link to open the Statuses dialog box where you can select statuses.</p> <p>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 327.</p>

Report Content

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

GUI Element (A-Z)	Description
<Bar chart>	<p>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.</p>
<Bar>	<p>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.</p> <p>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.</p> <p>Tooltip: Hold the pointer over a bar section to display a tooltip containing the following information:</p> <ul style="list-style-type: none"> ▶ 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	<p>Enables you to view the status or the value, over time, of selected KPIs and CIs, in table or graph format.</p> <p>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.</p> <p>To access:</p> <ul style="list-style-type: none">▶ 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 BAC
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<p>Important Information</p>	<p>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.</p> <ul style="list-style-type: none"> ▶ You can: <ul style="list-style-type: none"> ▶ Add this report as a portlet in My BAC. For details, see “Add Portlets to <page_name>/Add Portlets Dialog Box” in <i>My BAC</i>. ▶ Add this report to a custom report. For details, see “Customizing Reports” in <i>Reports</i>. ▶ Schedule when to run the report. For details, see “Report Schedule Manager Main Page” in <i>Platform Administration</i>. ▶ 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 <i>Using End User Management</i>, “Alerts and Reports” in <i>Using System Availability Management</i>, or “Trend Reports” in <i>Reports</i>. ▶ 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 365. ▶ 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.
<p>Included in Tasks</p>	<p>“View KPIs Over Time Information” on page 298</p>

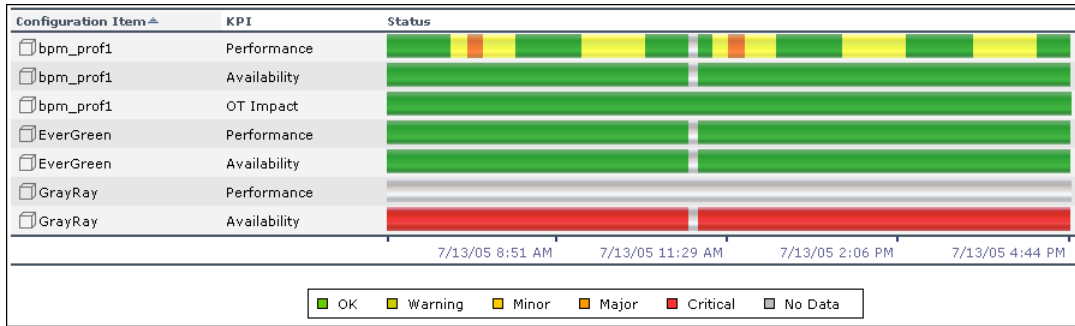
Report Settings

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

GUI Element (A-Z)	Description
<Common report settings>	See “Common Report Elements” in <i>Reports</i> .
Configuration Items	<p>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.</p> <p>To select CIs, click the Configuration Items link. For details, see “Configuration Items Dialog Box” on page 301.</p>
KPIs	<p>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).</p> <p>All is displayed when all available KPIs are selected.</p> <p>To select KPIs, click the KPIs link. For details, see “KPIs Dialog Box” on page 302.</p> <p>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.</p>


GUI Element (A-Z)	Description
Report type	<p>Select:</p> <ul style="list-style-type: none"> ▶ Statuses. To display the status information in the report. For details, see “KPIs Over Time Report with Status Data” on page 310. 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 317. 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.


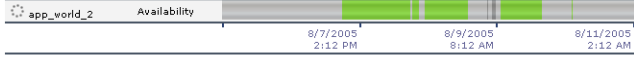
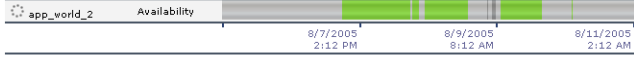
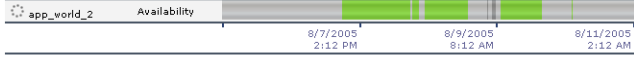
KPIs Over Time Report with Status Data













<p>Important Information</p>	<p>The report displays data only for CIs whose KPIs are persistent. For details, see “Persistent Data and Historical Data” on page 365.</p> <p>Ensure that the Save historical data for this CI option has been selected for the CI. For details, see “KPIs Page” on page 398.</p> <p>Note: The statuses are shown over time, starting with the event and ending with the next event.</p> <p>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.</p>
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The following elements are included (unlabeled GUI elements are shown in angle brackets>):

GUI Element (A-Z)	Description															
	<p>Click to display status information about the children that contribute to the status of the selected CI's KPI.</p> <p>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 <i>Using End User Management</i>, “Alerts and Reports” in <i>Using System Availability Management</i>, or “Trend Reports” in <i>Reports</i>.</p> <p>Example: A view has the following hierarchy: the <code>app_world_2</code> CI, with its <code>trx1_EUM</code>, <code>trx_General</code>, and <code>trx_SAM</code> child CIs.</p> <p>The KPIs Over Time report displays information about the status of the Performance KPI for the <code>app_world_2</code>, <code>trx1_EUM</code>, and <code>trx_General</code> CIs.</p> <p>Click the Drill to influencing children button for the <code>app_world_2</code> CI and the Performance KPI. The drilled down report displays the status of the Performance KPIs for all of the children of the <code>app_world_2</code> CI that have a Performance KPI, as shown in the graph that follows.</p> <table border="1"> <thead> <tr> <th>Configuration Item</th> <th>KPI</th> <th>Status</th> </tr> </thead> <tbody> <tr> <td><input type="checkbox"/> <code>trx1_EUM</code></td> <td>Performance</td> <td></td> </tr> <tr> <td><input type="checkbox"/> <code>trx_General</code></td> <td>Performance</td> <td></td> </tr> <tr> <td><input type="checkbox"/> <code>trx_sam</code></td> <td>Performance</td> <td></td> </tr> <tr> <td><input type="checkbox"/> <code>trx_weekly_plan</code></td> <td>Performance</td> <td></td> </tr> </tbody> </table> <p style="text-align: center;">8/7/2005 2:04 PM 8/9/2005 8:04 AM 8/11/2005 2:04 AM</p> <p style="text-align: center;"> <input type="checkbox"/> OK <input type="checkbox"/> Warning <input type="checkbox"/> Minor <input type="checkbox"/> Major <input type="checkbox"/> Critical <input type="checkbox"/> Downtime <input type="checkbox"/> No Data </p> <p>If the selected CI and KPI do not have influencing children, then the report displays the message: No influencing children found.</p>	Configuration Item	KPI	Status	<input type="checkbox"/> <code>trx1_EUM</code>	Performance		<input type="checkbox"/> <code>trx_General</code>	Performance		<input type="checkbox"/> <code>trx_sam</code>	Performance		<input type="checkbox"/> <code>trx_weekly_plan</code>	Performance	
Configuration Item	KPI	Status														
<input type="checkbox"/> <code>trx1_EUM</code>	Performance															
<input type="checkbox"/> <code>trx_General</code>	Performance															
<input type="checkbox"/> <code>trx_sam</code>	Performance															
<input type="checkbox"/> <code>trx_weekly_plan</code>	Performance															

GUI Element (A-Z)	Description						
	<p>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.</p> <p>Note: You can drill up to influenced parents only when the CIs have persistent data.</p> <p>Example: A view has the following hierarchy: the <code>trx_weekly_plan</code> CI and its parent the <code>app_world_2</code> CI. The KPIs Over Time report displays information about the Availability and Performance KPIs of the <code>trx_weekly_plan</code> CI.</p> <p>Drill up to influenced parents for the Availability KPI, the report displays the status of the Availability KPI for the <code>app_world_2</code> CI (parent of <code>trx_weekly_plan</code> CI), as shown in the graph that follows.</p> <table border="1"> <thead> <tr> <th>Configuration Item</th> <th>KPI</th> <th>Status</th> </tr> </thead> <tbody> <tr> <td>app_world_2</td> <td>Availability</td> <td>  </td> </tr> </tbody> </table> <p> <input type="checkbox"/> OK <input type="checkbox"/> Warning <input type="checkbox"/> Minor <input type="checkbox"/> Major <input type="checkbox"/> Critical <input type="checkbox"/> Downtime <input type="checkbox"/> No Data </p>	Configuration Item	KPI	Status	app_world_2	Availability	
Configuration Item	KPI	Status					
app_world_2	Availability						
	<p>If the selected CI and KPI do not have influenced parents, then the report displays the message: No influenced parents found.</p>						

GUI Element (A-Z)	Description
<Drill down>	<p>This capability is available only in graph format.</p> <p>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.</p> <p>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.</p> <p>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.</p>

GUI Element (A-Z)	Description								
<p><Drill down to Diagnostics></p>	<p>If HP Diagnostics is enabled, you can drill down to HP Diagnostics views from the KPIs Over Time report.</p> <p>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 319.</p> <div style="border: 1px solid black; padding: 5px;"> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Configuration Item</th> <th style="text-align: left;">KPI</th> </tr> </thead> <tbody> <tr> <td> Add to cart</td> <td>Performance</td> </tr> <tr> <td> Add to cart</td> <td>Availability</td> </tr> <tr> <td> Add to cart</td> <td>Application</td> </tr> </tbody> </table> <div style="border: 1px solid black; padding: 2px; margin-top: 2px;"> <p>Drill to Diagnostics</p> <p>Transactions View</p> <p>Layers View</p> </div> </div> <p>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 <i>HP Diagnostics User's Guide</i>.</p> <p>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 319.</p>	Configuration Item	KPI	 Add to cart	Performance	 Add to cart	Availability	 Add to cart	Application
Configuration Item	KPI								
 Add to cart	Performance								
 Add to cart	Availability								
 Add to cart	Application								

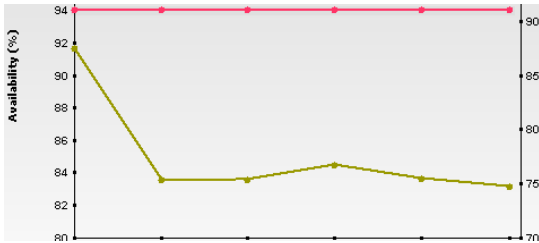
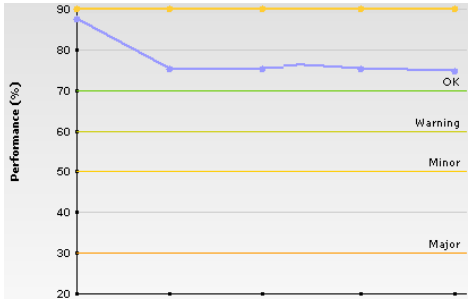
GUI Element (A-Z)	Description
<Tooltip>	<p>Move the cursor above the graph to display more information about the KPI. The background of the tooltip reflects the color of the status calculated by the rule attached to the KPI and according to the KPI's objectives.</p> <div style="border: 1px solid black; background-color: #e0ffe0; padding: 5px; margin: 10px auto; width: fit-content;"> <p style="text-align: center; margin: 0;">Details - Performance</p> <p>Configuration Item: app_world_1 edit</p> <p>Status: OK</p> <p>Start Time: 8/7/05 7:58 AM</p> <p>End Time: 8/7/05 8:14 PM</p> <p>Duration: 12:16:19</p> </div> <p>The tooltip displays the name of the KPI in the tooltip title and the following information:</p> <ul style="list-style-type: none"> ▶ 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	<p>Note: This field appears only when the report is in table format.</p> <p>The duration of the sampling period.</p>
End Time	<p>Note: This field appears only when the report is in table format.</p> <p>The time when a new event occurred, ending the sampling period of the previous event</p>
KPI	The name of the KPI.
Start Time	<p>Note: This field appears only when the report is in table format.</p> <p>The time when an event occurred, starting the sampling period for that event.</p>

GUI Element (A-Z)	Description
Status	<p>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.</p> <p>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).</p>

KPIs Over Time Report with Value Data

<p>Important Information</p>	<ul style="list-style-type: none"> ➤ To display the KPIs Over Time report ensure that: <ul style="list-style-type: none"> ➤ The Save historical data for this CI option has been selected for the CI. For details, see “KPIs Page” on page 398. ➤ The saveValuesToPersistency global attribute is set to true in all of the rules. For details, see “Global Attributes Dialog Box” in <i>CI Attribute Customization</i>. Note: If this option is selected, data on status and measurements over time for a CI is saved in the database. The persistent data is used to produce KPIs Over Time reports and Business Dashboard reports. The report displays only the values of the relevant KPIs. Those KPIs may also have statuses in CMDB but the value report does not show those statuses. ➤ Reports of this type are relevant for KPIs with business rules that calculate meaningful values, such as rules for calculating percentage, volume, financial impact, or Real User Monitor values. ➤ You can select the number of sampling points in the Every boxes. ➤ You can drill down each point in the graph to display the data in the period of time that corresponds to your selection. For example, if you have selected to display information every day for the past week, then drilling down on one point displays the detailed information for every hour of the selected day, and then drilling down on one hour displays the detailed information for 5 minutes intervals in the hour, and so on down to a minute interval.
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The following elements are included (unlabeled GUI elements are shown in angle brackets>):

GUI Element (A-Z)	Description
<Graph>	<p>Displays the value of the KPI assigned to a specific CI at the specified time (indicated by a colored line).</p> <p>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.</p>  <p>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).</p>  <p>A legend lists the name of the CI, the name of the KPI and the color used to represent the KPI value.</p>

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	<ul style="list-style-type: none"> ▶ Summary View (Probe Group Summary) ▶ Layers View (Load)
Diagnostics Probe	<ul style="list-style-type: none"> ▶ Summary View (Probe Summary) ▶ Layers View (Load)
Business Process Step	<ul style="list-style-type: none"> ▶ 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
<p>Summary View</p>	<p>Note: This option is available for all Diagnostics Probe CIs. This option is displayed only if you have installed Diagnostics.</p> <p>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.</p> <p>For more information about Diagnostics, see the <i>HP Diagnostics User's Guide</i>.</p>
<p>Layers View</p>	<p>Note: This option is available for all Business Process Monitor, and Diagnostics Probe CIs. This option is displayed only if you have installed Diagnostics.</p> <p>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.</p> <p>For more information about Diagnostics, see the <i>HP Diagnostics User's Guide</i>.</p>
<p>Transactions View</p>	<p>Note: This option is available for all Business Process Step CI. This option is displayed only if you have installed Diagnostics.</p> <p>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 <i>HP Diagnostics User's Guide</i>.</p>

KPIs Summary Report

Description	<p>Displays a summary of KPI status distribution over time for each selected KPI.</p> <p>To access:</p> <ul style="list-style-type: none"> ▶ Select Applications > Dashboard > Reports > KPIs Summary ▶ Access the KPIs Summary portlet in My BAC
Important Information	<ul style="list-style-type: none"> ▶ This report is produced only for certain CIs with historical KPI data. For details, see “Configuration Items Dialog Box” on page 301. ▶ You can add this report as a portlet in My BAC. For details, see “Add Portlets to <page_name>/Add Portlets Dialog Box” in <i>Using My BAC</i>.
Useful Links	“Configuration Items Dialog Box” on page 301

Report Settings

GUI Element (A-Z)	Description
<Common report settings>	See “Common Report Elements” in <i>Reports</i> .

GUI Element (A-Z)	Description
<p>Configuration Items</p>	<p>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.</p> <p>Click the Configuration Items link to open the Configuration Items dialog box where you can select CIs.</p>
<p>KPIs</p>	<p>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).</p> <p>All is displayed when all available KPIs are selected.</p> <p>Click the KPIs link to open the KPIs dialog box where you can select KPIs.</p> <p>Default value: If the Application KPI is attached to any of the selected CIs, this KPI is selected automatically.</p>

Report Content

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

GUI Element (A-Z)	Description
<Pie chart>	<p>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).</p> <p>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.</p> <p>Tooltip: Hold the pointer over a pie slice to display a tooltip containing the following information:</p> <ul style="list-style-type: none"> ➤ 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 <p>Functionality: Right-click a pie for animation functionality. For more information, see “Viewing Reports with Adobe Flash Player” in <i>Reports</i>.</p>

KPIs Trend Report

Description	<p>Displays the trend for changes in KPI status over time, for selected statuses.</p> <p>To access:</p> <ul style="list-style-type: none"> ▶ Select Applications > Dashboard > Reports tab > KPIs Trend ▶ Access the KPIs Trend portlet in My BAC
Important Information	<ul style="list-style-type: none"> ▶ This report is produced only for certain CIs with historical KPI data. For details, see “Configuration Items Dialog Box” on page 301. ▶ 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 BAC. For details, see “Add Portlets to <page_name>/Add Portlets Dialog Box” in <i>Using My BAC</i>.
Useful Links	“Configuration Items Dialog Box” on page 301

Report Settings

GUI Element (A-Z)	Description
<Common report settings>	See “Common Report Elements” in <i>Reports</i> .
Configuration Items	<p>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.</p> <p>Click the Configuration Items link to open the Configuration Items dialog box where you can select CIs.</p>

GUI Element (A-Z)	Description
Group by	<p>Select a radio button to determine how the data is organized:</p> <ul style="list-style-type: none"> ▶ 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	<p>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).</p> <p>All is displayed when all available KPIs are selected.</p> <p>Click the KPIs link to open the KPIs dialog box where you can select KPIs.</p> <p>Default value: If the Application KPI is attached to any of the selected CIs, this KPI is selected automatically.</p>
Statuses	<p>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).</p> <p>Click the Statuses link to open the Statuses dialog box where you can select statuses.</p> <p>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 327.</p>

Report Content

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

GUI Element (A-Z)	Description
<Chart in report>	<p>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).</p>
<Line on chart>	<p>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.</p> <p>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.</p> <p>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).</p> <p>Tooltip: Hold the pointer over a point on the line to display a tooltip containing the following information:</p> <ul style="list-style-type: none"> ▶ 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. <p>Note: When one line is on top of another, the information is the same for both lines.</p>

Statuses Dialog Box

<p>Description</p>	<p>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.</p> <p>To access: In a Dashboard report, click Statuses in the reports settings area.</p>
<p>Important Information</p>	<ul style="list-style-type: none"> ▶ 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. <p>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.</p>

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 filter(s), drilling down in reports, and so on. For details about the reports log, see “Reports Log” in *Reports*.

Part III

KPIs

11

KPIs

This chapter describes how to configure KPIs.

This chapter includes:

Concepts

- KPI Configuration Overview on page 332
- How Dashboard KPIs Work on page 333
- About Business Rules on page 336
- No Data Timeout for Transaction CIs on page 339
- KPI Objectives on page 340
- Selectors for KPIs on page 350
- KPIs for User Modes on page 352
- Understanding KPI Status on page 352
- Trend and History on page 360
- Persistent Data and Historical Data on page 365

Tasks

- Configure a KPI – Workflow on page 366
- Attach KPIs to CIs and Configure the KPIs on page 373
- Edit KPI Properties on page 374
- Set Up the Real-Time Monitoring of CI Property Changes on page 380
- Define Selectors on page 382
- Set Up User Mode Functionality on page 388

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 333.

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 by 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*.
 - ▶ 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 398.

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 KPIs Repository, as described in “List of Dashboard KPIs and Their Details” in *CI Attribute Customization*.

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 369.

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 Rules 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” in *CI Attribute Customization*.

Some business rules are specific to a particular KPI, while others can be used for a variety of KPIs. In the KPIs 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.)

When a CI is created by the source adapters in Source Manager, it is assigned KPIs and business rules according to the adapter definitions. 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.

There are two categories of business rule, **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 337
- “Group Rules” on page 338

Monitor Rules

Monitor rules (also called leaf rules) are business rules that are applied to leaf CIs of monitor type. 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**.

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 Rules 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” on page 340
- “Defining Logical Objectives” on page 343
- “Excluding Statuses” on page 344
- “Units of Measurement for Objectives” on page 347
- “Example of Defining Objectives” on page 349

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** (olive)
- **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.

- ▶ 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 Rules 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” in *CI Attribute Customization*.
- ▶ 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 339.

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 Rules 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 Rules 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 343.

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 measurements for that KPI. (This means active measurements, the objectives do not take into consideration the values given to a KPI for no data, downtime, and so on.)

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):

The screenshot shows a window titled "Objectives" with a dropdown menu set to "<=". Below it, five rows represent different status levels with their respective thresholds and units:

Status	Operator	Value	Unit
OK	<=	8000.0	Milliseconds
Warning	<=		Milliseconds
Minor	<=	12000.0	Milliseconds
Major	<=		Milliseconds
Critical	Otherwise		

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):

Status	Operator	Value	Unit
OK	>=	98.0	%
Warning	>=	98.0	%
Minor	>=	98.0	%
Major	>=	98.0	%
Critical	Otherwise		

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:

Objectives				
	Operator	<		
● OK	<	6000	Milliseconds	
● Warning	<	6000	Milliseconds	
● Minor	<	8000	Milliseconds	
● Major	<	10000	Milliseconds	
● Critical	Otherwise			

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:

Objectives				
	Operator	<=		
● OK	<=	8000	Milliseconds	
● Warning	<=	9000	Milliseconds	
● Minor	<=	10000	Milliseconds	
● Major	<=	12000	Milliseconds	
● Critical	Otherwise			

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” in *CI Attribute Customization*).

The following default units are used:

Default Unit (A-Z)	Description
<No unit>	<p>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.</p> <p> Minor >= <input type="text" value="90"/></p>
Financial (\$)	<p>This unit is used for business rules that determine financial loss for a CI, for example, the Impact Over Time Rule.</p> <p> Minor <= <input type="text" value="100"/> \$</p>
Milliseconds or Seconds	<p>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.</p> <p> Minor <= <input type="text" value="10000"/> Milliseconds</p>
Percentage (%)	<p>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.</p> <p> Minor >= <input type="text" value="50"/> %</p>

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:

Status	Operator	Value	Unit
OK	<	6000	Milliseconds
Warning	<	6000	Milliseconds
Minor	<	8000	Milliseconds
Major	<	10000	Milliseconds
Critical	Otherwise		

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

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 Service 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 440.

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 382, “Set Up User Mode Functionality” on page 388, or “Set Up User Mode Functionality” on page 388.

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.

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%.

Each user type sees the appropriate version of the KPI in the Dashboard views.

Understanding 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 (LED) 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 (olive, yellow, orange). For more details about objectives, see “KPI Objectives” on page 340.

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” in *CI Attribute Customization*.

This section includes the following topics:

- “Types of CIs” on page 353
- “Colors of KPI Statuses Used in Dashboard” on page 354
- “Status Scores” on page 356
- “Stopped/Downtime Status” on page 357
- “Statuses and Group Rules” on page 358
- “Influence of Must and Weight on Status” on page 359

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 Status.** 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 some information regarding the calculation method in use for the KPI. For details, see “Stopped/Downtime Status” on page 357.



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 with attached "X"	Critical	0	The measurement calculated for the KPI fell within the value range for the Critical objective.
	Orange with attached exclamation marks	Major	5	The measurement calculated for the KPI fell within the value range for the Major objective.
	Yellow with attached exclamation mark	Minor	10	The measurement calculated for the KPI fell within the value range for the Minor objective.

Icon	Description	Status Name	Numerical Code	Definition
	Olive with attached tilda	Warning	15	The measurement calculated for the KPI fell within the value range for the Warning objective.
	Green	OK	20	The measurement calculated for the KPI fell within the value range for the OK objective.
	Blue with attached 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 about setting the objectives, see "Objectives Area" on page 410.
	Gray with attached dash	Not up to date (Decay)	-2	<p>The following cases might be the cause of the KPI's status:</p> <ul style="list-style-type: none"> ➤ 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 gray. ➤ 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 attached dash and green outline	Stopped or Downtime	-3 (Stopped) -4 (Downtime)	The corresponding profile/group/monitor for the CI is currently disabled. For details, see “Stopped/Downtime Status” on page 357.
	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” in *CI Attribute Customization*.
 - ▶ 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 “Real-Time Changes to CI Properties” on page 23.
-

For Trend and History status, see “Trend and History” on page 360.

Status Scores

Real-time statuses can be:

0	worst
5	bad
10	middle
15	good
20	best

In most rules, only the main three statuses (0, 10 and 20) are used.

When a score has been calculated from more than one value, the scores are assigned status using the following definitions:

- 0 = worst
- $0 < \text{score} < 7.5$ = bad
- 7.5 to 12.5 (inclusive) = middle
- $12.5 < \text{score} < 20$ = good
- 20 = best

They are then assigned the colors:

worst	red
bad	orange
middle	yellow
good	olive
best	green

Note: Only relevant statuses (0-20) are taking into consideration ("gray " statuses are ignored).

Stopped/Downtime Status

If a monitor in SiteScope or Business Process Monitor is stopped (disabled indefinitely) or in downtime (disabled for a scheduled time period), Dashboard displays a **Stopped/Downtime** status icon for the corresponding CIs (gray with a green outline).



Monitor_kiosk ▾		
Performance  Availability 		
CI Name	Performance	Availability
  Access fin ... data page ▾		

When the downtime or stopped period finishes, the status icon changes to **No Data** until data is received for the CI.

You can determine whether the CI is stopped or in downtime by holding the cursor over the **Stopped/Downtime** icon for the CI. The displayed Details tooltip gives the CI status, the rule used to calculate the result, and, if the CI is in downtime, to give the date and time when downtime finishes.

Details - Performance	
CI name:	siebel 7.7 whistle cc
Status:	Minor
Calculation Rule:	Worst Child Rule
Held status since:	6/4/06 10:53:50 PM

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



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
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 about **Weight** and **Must**, see “Understanding the Percentage Rule” in *CI Attribute Customization*.

Trend and History

The following status levels are used to show historical and trend status for monitor CIs in Dashboard:

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.
	Small green with attached checkmark	Historical OK	All performance measurements fell within the OK objective level over a time period up to the present.
	Small yellow with attached 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 attached "X"	Historical Critical	At least one performance measurement fell within the Critical objective level, over a time period up to the present.

The trend status has three positions: up, down, and no change. It shows the trend of the real-time status.

The history status can display the worst status or the average status over a time period.

Note: No history or trend status is displayed for a CI if there is no relevant data, for example, if it is uninitialized or stopped, or if it is not relevant for the KPI.

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 about the tooltip, see “Trend” in *CI Attribute Customization*.

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 about the tooltip, see “History” in *CI Attribute Customization*.

For more information on how to customize your trend and history statuses and explanations about how those statuses are calculated, see “Understanding KPI Status” in *CI Attribute Customization*.

You can customize the set of Trend and History icons. For details, see “Change the KPI Status Icons” in *CI Attribute Customization*.

Note: 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 362
- “Trend Calculation” on page 363
- “Modifying the Trend and History Status Calculations” on page 363
- “Hidden Parameters” on page 364

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 Rules Repository, described in “List of Dashboard Business Rules” on page 164). 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 Rules Repository, described in “List of Dashboard Business Rules” on page 164.
- ▶ **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 363.

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” in *CI Attribute Customization*.
- ▶ 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” in *CI Attribute Customization*.

Some parameters for trend and history statuses are predefined and can be viewed and edited in the Business Rules Repository page; others are hidden, but can be manually added on the Repositories tab if you want to override the parameter default value.

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 Rules Repository (described in “Global Attributes Dialog Box” in *CI Attribute Customization*).

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.
CalculationGranularity	20	Sets the time difference, in seconds, between recalculating statuses for a view. This knowledge is shown in <HP Business Availability Center root directory> \log\EJBcontainer\TrinityStatistic.log.

The **CalculationGranularity** parameter determines how many calculations are performed for a CI in a certain period of time. During normal functioning, Dashboard or Service Level Management perform the calculation approximately every 20 seconds (~180 calculations/hour). If Dashboard or Service Level Management is running without a problem, there is no reason to change the default value.

If Dashboard or Service Level Management has a heavy calculation load, causing the calculations to take more time, Dashboard or Service Level Management 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 is 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.

Note: 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).

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 398. 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 295.

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 366
- ▶ “Set Up the User Mode for the KPI – Optional” on page 366
- ▶ “Attach KPIs to CIs” on page 367
- ▶ “Change the Default Business Logic Engine Calculation Time Interval – Optional” on page 369
- ▶ “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 370
- ▶ “Monitor CI Property Changes in Real-Time” 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 “KPIs Repository Page” in *CI Attribute Customization*.

You can edit a specific KPI. For details, see “KPI Details Dialog Box” in *CI Attribute Customization*.

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 352.

For details about the User Mode functionality, see “Set Up User Mode Functionality” on page 388.

Example

For a detailed example, see “Example – Scenario of KPI Versions for User Modes” on page 391.

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 KPIs repository.

For details about attaching a KPI to a CI, see “Attach KPIs to CIs and Configure the KPIs” on page 373.

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 390.

Example – Attaching a PNR KPI to a CI

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 180.

Perform the following procedure to view Service Level Management data in an information bar in Dashboard.

Proceed as follows to set up Dashboard to display Service Level Management data in Dashboard:

- a** 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 PNR KPI is calculated using the System Availability KPI.

- b** 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 339. During KPI creation:

The screenshot shows the 'Edit KPI' configuration window. It is divided into three main sections:

- KPI:** This section contains five dropdown menus:
 - KPI:** Set to 'PNR'.
 - Business rule:** Set to 'Dashboard PNR Rule'.
 - SLA:** Set to 'SLa1'.
 - Time interval:** Set to 'Business Hours'.
 - Tracking period:** Set to 'Hour'.
- Business Rule Parameters:** This section is currently collapsed.
- Objectives:** This section contains a table for defining objective ranges.

Operator	Value
>=	<input type="text"/>
>=	<input type="text"/>
>=	<input type="text"/>
>=	<input type="text"/>
Otherwise	

- Choose the PNR KPI.
- Select the agreement whose data is to be displayed in Dashboard.
- 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*.
- Add the objective’s ranges that Dashboard uses to calculate when unavailability time approaches breach of contract levels.

- c View the results in Dashboard: **Applications > Dashboard > Console**. Choose the view and select the CI.

CI Name	System	Performance	Availability	PNR
Infra supp ... pringfield				6M 18S
Travel ser ... pringfield				

Details - PNR	
CI name:	springfield
Status:	Major
SLA:	Sis_springfield_3rd_floor
Tracking Period:	Day
Time Interval:	24x7
Calculation Time:	9/15/05 08:00:00 AM
PNR Time Left:	6min, 18sec.
Max unavailability:	28min, 48sec.
PNR availability:	62.5%
Target availability:	98.0%

For details on the information that Dashboard displays in the Console page, see “Service Level Management Results in the Console Page” on page 120.

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 339.

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 398.

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 *CI Attribute Customization*.

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 “Real-Time Changes to CI Properties” on page 23.

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 41.

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 390.

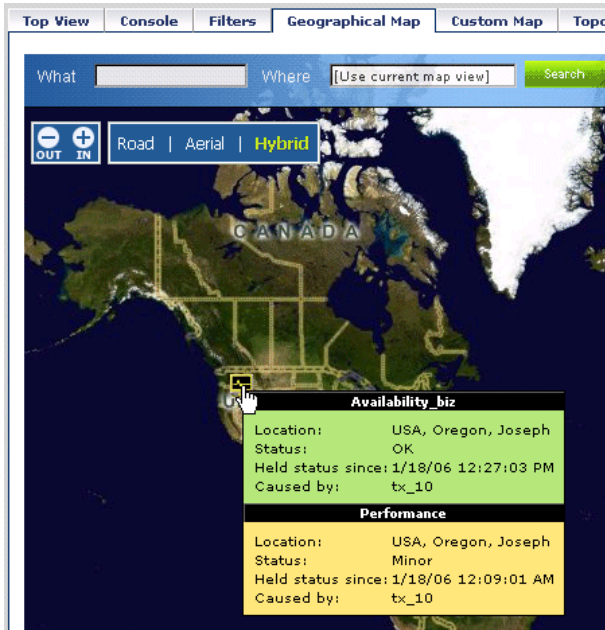
This information is in addition to the Dashboard Change Report, which shows a historical report on changes to properties for CIs over a period of time. For details, see “Change Report Page” in *Model Management*.

8 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:

bpm_profile_1 ▾				
Performance_ops 🟡⚠️⚠️ Performance_biz 🟢📈 Availability 🛑⚠️⚠️ Ack 📄				
Name	Performance_ops	Performance_biz	Availability	Ack
+ 📄 tx_10 ▾	🟡⚠️⚠️	🟢📈	🟢📈	📄
+ 📄 tx_15 ▾	🟢📈	🟢📈	🟢📈	📄

In the Geographical Map and Custom Map tabs, status at a location is based on whichever KPI versions the user sees in Dashboard:



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 KPIs repository. For details about the KPI repository, see “KPIs Repository” in *CI Attribute Customization*.

This task includes the following steps:

- ▶ “Attach a KPI to One or More CIs” on page 373
- ▶ “Define the KPI Objectives” on page 374
- ▶ “Define the KPI Selector” on page 374

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 333.

For details about attaching a new KPI to a single CI or to multiple CIs, see “How Dashboard KPIs Work” on page 333.

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 334.

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 “New KPI/Add KPI to Multiple CIs/Edit KPI/Edit KPI for Child Transaction Dialog Box” on page 406.

3 Define the KPI Selector

Use selectors to filter the samples relevant for the KPI. For details, see “Define Selectors” on page 382.

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 334.

This task includes the following steps:

- “Edit a KPI Properties” on page 374
- “Edit the KPI Properties for Multiple Transaction CIs” on page 375

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 “How Dashboard KPIs Work” on page 333.

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 333.

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 334.

Example

The following example describes editing the objective values for transaction CIs in a subtree.

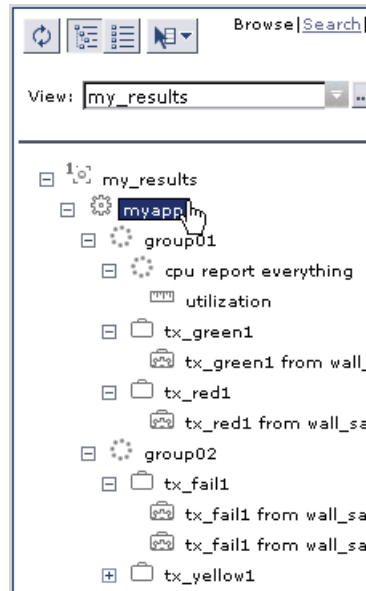
- a** In the **KPIs** tab, the Performance KPI objective values for every transaction CI in the myapp subtree appear as in the following figure. They are displayed by clicking the **Edit KPI** button for any of the transaction CIs.

The screenshot shows the 'Edit KPI' dialog box. The 'KPI' dropdown is set to 'Performance' and the 'Business rule' dropdown is set to 'Transaction Performance Rule'. The 'Objectives' section displays the following table:

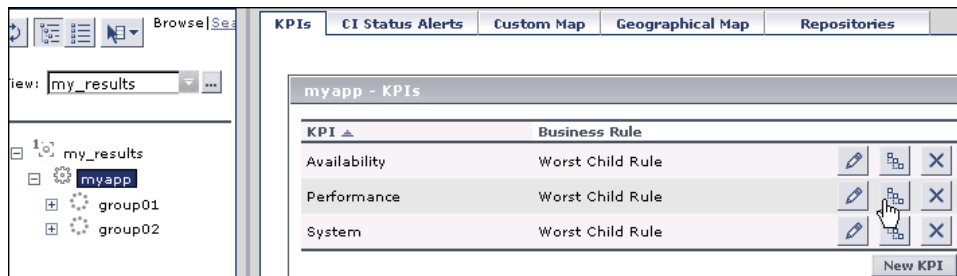
Objective Level	Operator	Value	Unit
OK	<=	8000.0	Milliseconds
Warning	<=		Milliseconds
Minor	<=	12000.0	Milliseconds
Major	<=		Milliseconds
Critical	Otherwise		

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.

Edit KPI for Child Transactions

KPI: Performance

Business rule: Transaction Performance Rule

Business Rule Parameters

Objectives

Objective	Operator	Value	Unit
OK	<=		Milliseconds
Warning	<=	10000	Milliseconds
Minor	<=	11000	Milliseconds
Major	<=	12000	Milliseconds
Critical	Otherwise		

OK Cancel Help

- e After applying the changes, all transaction CIs in the myapp subtree have the following objective values defined:

The screenshot shows the 'Edit KPI' dialog box with the following configuration:







- KPI:** Performance
- Business rule:** Transaction Performance Rule
- Operator:** <=
- Objectives:**
 - OK:** <= 8000.0 Milliseconds
 - Warning:** <= 10000.0 Milliseconds
 - Minor:** <= 11000.0 Milliseconds
 - Major:** <= 12000.0 Milliseconds
 - Critical:** Otherwise
- Selector:** (empty)


Set Up the Real-Time Monitoring of CI Property Changes

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 added to the information available in 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*.

To display real-time changes for a CI and its children, the **Monitor changes** check box must be selected for that CI in the **KPIs** tab.

KPI ▲	Business Rule			
Availability	Transaction Availability Rule			
Performance	Transaction Performance Rule			

Save KPI data over time for this CI
 Monitor changes


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.

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 overload 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 *CI Attribute Customization*.

If a change occurs in one of the significant properties for the CI or the CI children, then an icon is displayed in Dashboard beside the CI name. For more information, see “Analyze Real-Time Change Information” on page 40.

After a change occurs, the change icon is displayed for 24 hours (default value). You can change the default value. For details, see “Customize the Change Period” on page 41.

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 411.

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 382
- ▶ “Define a Custom Selector” on page 385
- ▶ “Build Complex Filters” on page 386

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.

The screenshot shows a configuration window for a KPI. The 'KPI' section is expanded, showing 'KPI:' set to 'Availability' and 'Business rule:' set to 'Transaction Availability Rule'. Below this are sections for 'Business Rule Parameters' and 'Objectives', both collapsed. The 'Selector' section is expanded, showing a list of sample types. The 'Transactions' option is selected and highlighted in blue. A mouse cursor is visible over the 'SiteScope SAP Transaction Breakdown' option.

KPI: Availability

Business rule: Transaction Availability Rule

Business Rule Parameters

Objectives

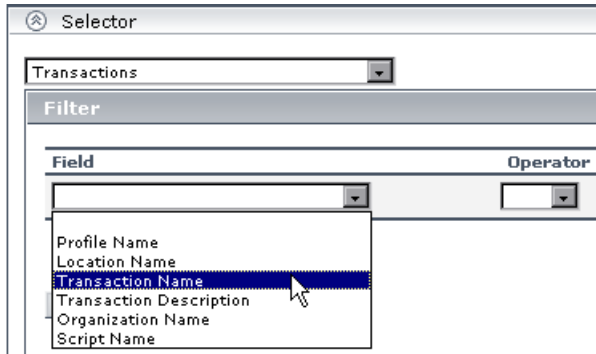
Selector

- Transactions
- Transactions
- SiteScope Measurement
- RUM Transactions
- RUM Pages
- Alerts
- SiteScope SAP Transaction Breakdown
- RUM Slowest End Users
- RUM End Users
- RUM Sessions
- Diagnostics Virtual Users Data
- KPI Values

For example, for a KPI that relates to transaction measurements, select sample type **Transactions** from the list.

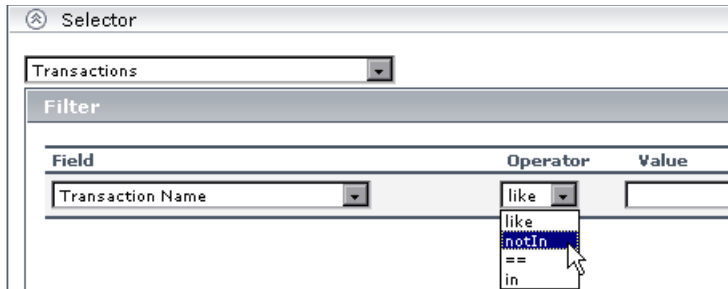
When you select a sample type from the list, all previously defined expressions for the selector are overridden, so the contents of the **Filter** box are automatically deleted.

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.

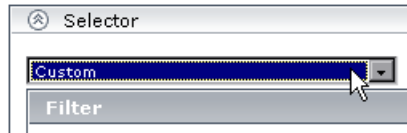
Note: The **Value** property is case sensitive and must be entered precisely as used in the data samples from the data source, or the selector fails. The recommended method is to take the values from the samples published on the bus.

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.

Field	Operator	Value
sampleType	==	"trans_t"

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 about 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	X
			X

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.

Field	Operator	Value	
Transaction Name	==	11234	X
And			
			X
And			
Add 'OR' Expression			

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.

Field	Operator	Value	
sampleType	equal	"event"	X
data_source	equal	"HP OVO"	X
And			
OR			
sampleType	equal	"ems_type"	X
u_iEMSIId	==	4.0	X

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 388
- “Define KPI Versions for the User Modes” on page 388
- “Attach KPI Versions to CIs” on page 390

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 “KPIs Repository Page” in *CI Attribute Customization*.

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” in *CI Attribute Customization*.

- e If you want to use a different version of a business rule with each KPI version, you must define the rule versions in the Business Rules 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 “Set Up/Edit a Business Rule” in *CI Attribute Customization*.

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 CI(s), 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 333.

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
<input type="checkbox"/>	2000	Availability	Dashboard	7	10	Worst Child Rule	8



- c Click the **Edit** button for 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:

Display Order:

Calculation Order:

Acknowledgement Level:

Applicable for User Mode:

Default Group Rule:

Time:

- 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**.

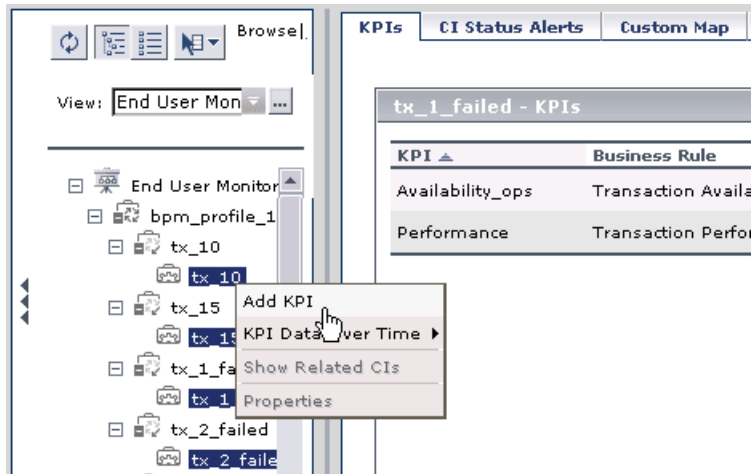
The KPI names are displayed in the **Custom KPIs** area.

Custom KPIs							
	Id	Display Label	Applicable Sections	Display Order	Acknowledgement Level	Default Group Rule	Calculation Order
<input type="checkbox"/>	2000	Availability_biz	Dashboard	7	10	Worst Child Rule	8
<input type="checkbox"/>	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.

KPI	Business Rule
Availability_ops	Transaction Availability Rule
Performance	Transaction Performance Rule

- 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.

Add KPI to Multiple CIs

KPI:

Business rule: ?

Business Rule Parameters

Objectives

Operator










- OK >= %
- Warning >= %
- Minor >= %
- Major >= %
- Critical Otherwise

Selector

Filter










Field	Operator	Value
<input type="text"/>	<input type="text"/>	<input type="text"/>

- 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** button for 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:

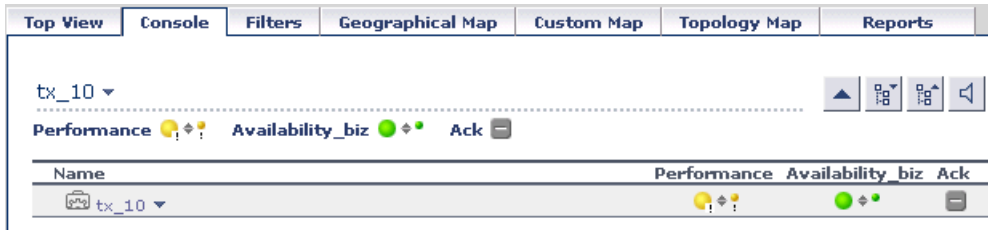
- For users assigned **Operations** mode:



The screenshot shows the 'Console' tab selected in a navigation bar. Below the navigation bar, there is a dropdown menu for 'tx_10' and several icons. The main content area displays a table with columns for 'Name', 'Performance', 'Availability_ops', and 'Ack'. The table contains one row for 'tx_10' with corresponding status icons for each column.

Name	Performance	Availability_ops	Ack
tx_10			

- 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.

KPIs User Interface

This section describes:

- Context Menus List Editor Dialog Box on page 396
- Event Details Dialog Box on page 397
- KPIs Page on page 398
- New KPI/Add KPI to Multiple CIs/Edit KPI/Edit KPI for Child Transaction Dialog Box on page 406

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 Menu box to the Active Context Menu box, and the other way around, using the arrows.

 **Event Details Dialog Box**

Description	<p>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.</p> <p>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.)</p>
Important Information	<p>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 <i>Using Dashboard</i>.</p> <p>Note: Storing last sample details may require use of a large amount of memory, slowing down Dashboard performance.</p> <p>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.</p>
Included in Tasks	“View Sample Details” on page 35

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

GUI Element (A-Z)	Description
Event Message area	<p>Displays the details for the CI (according to the KPI) at the last update.</p> <p>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.</p>
Event Source area	<p>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.</p>

KPIs Page

Description	<p>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.</p> <p>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 "View Explorer" in <i>Model Management</i>.)</p>
Included in Tasks	"Configure a KPI – Workflow" on page 366

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	<p>The KPI Selection area is displayed when you select the root CI in the view.</p> <p>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.</p>

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


GUI Element (A-Z)	Description
Business	<p>Appears only when you select the root CI in View Explorer.</p> <p>A star indicates if the KPI is defined for the Business user mode. For details about user mode, see “KPIs for User Modes” on page 352.</p>
Include in CI Status	<p>Clear the option to ensure that the KPI is displayed in the Dashboard views and in the tooltips but that it 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).</p> <p>Default value: The option is selected.</p> <p>Note:</p> <ul style="list-style-type: none"> ▶ The selection has a similar impact on the relevant My BAC portlets. For details, see “Edit Preferences <portlet_name> Dialog Box” in <i>Using My BAC</i>. ▶ 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	<p>Clear the option to ensure that the KPI is not displayed in the Dashboard views and in the tooltips, and that it 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).</p> <p>Default value: The option is selected.</p> <p>Note: The selection has a similar impact on the relevant My BAC portlets. For details, see “Edit Preferences <portlet_name> Dialog Box” in <i>Using My BAC</i>.</p> <p>Note: The Include in CI Status option is automatically cleared when the Include in View option is cleared.</p>
KPI	The name of the KPI.
Operations	<p>Appears only when you select the root CI in View Explorer.</p> <p>A star indicates if the KPI is defined for the Business user mode. For details about user mode, see “KPIs for User Modes” on page 352.</p>

KPIs area

Description	<p>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</p> <p>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.</p> <p>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.</p> <p>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 "View Explorer" in <i>Model Management</i>.)</p>
Important Information	<p>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.</p>

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

GUI Element (A-Z)	Description
	<p>Click to edit an existing KPI for a CI (or for multiple transaction CIs), as described in "How Dashboard KPIs Work" on page 333.</p>

GUI Element (A-Z)	Description
	<p>Click to edit the KPIs for the child transactions. For details, see “How Dashboard KPIs Work” on page 333.</p> <p>The Edit KPI for child transactions button is enabled for all KPIs, however:</p> <ul style="list-style-type: none"> ▶ 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. <p>Note:</p> <ul style="list-style-type: none"> ▶ 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	<p>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.</p> <p>The icons that mark the changed CIs appear in the Console and Filter pages.</p> <p>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 “Set Up the Real-Time Monitoring of CI Property Changes” on page 380</p> <p>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 <i>Model Management</i>.)</p> <p>Note: The Monitor changes option is only enabled if:</p> <ul style="list-style-type: none"> ▶ 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.
New KPI	Click to attach a new KPI to the CI. For details, see “How Dashboard KPIs Work” on page 333.

GUI Element (A-Z)	Description
<p>Save KPI data over time for a CI</p>	<p>Click to set HP Business Availability Center to save KPI data for CIs, as described in “KPIs Over Time Report” on page 306.</p> <p>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.</p> <p>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.</p> <p>(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.)</p> <p>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.</p>



Context Menu area

<p>Description</p>	<p>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</p> <p>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.</p> <p>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.</p> <p>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 "View Explorer" in <i>Model Management</i>.)</p>
<p>Important Information</p>	<p>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.</p>

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 to open the Context Menus List Editor dialog box where you select the context menus you want to assign to the CI.


New KPI/Add KPI to Multiple CIs/Edit KPI/Edit KPI for Child Transaction Dialog Box

<p>Description</p>	<p>Enables you to attach additional KPIs to any CI or to edit the properties of a CI's KPIs.</p> <p>To Access: Click the KPIs tab and select:</p> <ul style="list-style-type: none"> ➤ (Single CI) the required CI in View Explorer, and either click the New 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.
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<p>Important Information</p>	<p>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.</p> <p>You can attach one of the default KPIs provided with HP Business Availability Center, or attach a KPI that you defined in the KPIs repository (as described in “Set Up a KPI” in <i>CI Attribute Customization</i>). 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 334 before proceeding.</p> <p>For information on KPI functionality, see “How Dashboard KPIs Work” on page 333.</p> <p>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.</p>
<p>Included in Tasks</p>	<p>“Configure a KPI – Workflow” on page 366</p>

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	<p>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 336. For information on each individual rule, see “List of Dashboard Business Rules” in <i>CI Attribute Customization</i>.</p> <p>Important: After selecting a rule, the New KPI window is automatically updated to display the areas (Business Rule Parameters, Objectives, Selector, and so on) that are relevant for the selected rule.</p> <p>Note: You should only select a monitor rule if the KPI is attached to a monitoring CI. For more information, see “Monitor Rules” on page 337.</p>
KPI	<p>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 and Their Details” in <i>CI Attribute Customization</i>.</p> <p>Note: When defining a KPI for multiple CIs, the KPI list contains all KPI types.</p>
OK	If you do not define a selector for the KPI, then after clicking OK to close the New KPI window, 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	<p>If you are defining a PNR KPI, select the required values from the SLA list.</p> <p>For information on defining the PNR KPI, see “Event Details Dialog Box” on page 397.</p>
Time Interval	<p>If you are defining a PNR KPI, select the required values from the Time interval lists.</p> <p>For information on defining the PNR KPI, see “Event Details Dialog Box” on page 397.</p>
Tracking Period	<p>If you are defining a PNR KPI, select the required values from the Tracking period lists.</p> <p>For information on defining the PNR KPI, see “Event Details Dialog Box” on page 397.</p>

Business Rule Parameters Area

Description	<p>Enables you to view and modify the parameters relevant for the selected rule. All parameters have default values.</p>
Important Information	<p>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.</p> <p>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.</p> <p>For information on rule parameters and possible values, see the section for the relevant rule, as described in “List of Dashboard Business Rules” in <i>CI Attribute Customization</i>.</p>

Objectives Area

Description	<p>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.</p> <p>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.</p>
Important Information	<p>This area is displayed when necessary.</p> <p>If required, you can modify the default values for the objectives.</p> <p>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.</p> <p>For information on defining objectives, see “KPI Objectives” on page 340.</p>

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

GUI Element (A-Z)	Description
OK, Warning, Minor, Major, Critical	<p>Enter the required objective value for each status in the appropriate box. Ensure that the numbers you enter are logically ordered.</p> <p>For more information on objectives functionality and defining objectives, see “KPI Objectives” on page 340.</p>
Operator	<p>Select the required operator. This operator is applied for all objectives.</p> <p>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).</p>

Selector Area

<p>Description</p>	<p>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.</p>
<p>Important Information</p>	<p>The Selector area is displayed when necessary.</p> <p>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.</p> <p>For a detailed explanation of selector functionality and defining selectors, see “Selectors for KPIs” on page 350.</p> <p>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.</p> <p>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 382.</p>

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

GUI Element (A-Z)	Description
<box>	<p>Selector filters can be manually defined to create a custom filter, or defined using metadata (predefined sample types). If you want to use metadata for the filter, select a sample type from the list at the top of the Selector area.</p> <p>When the list displays Custom, the filter is defined manually.</p> <p>For more information, see “Set Up User Mode Functionality” on page 388.</p>
Add 'OR' Expression	<p>You can create additional expression blocks (each containing one or more selector expressions) using the Add 'OR' Expression button, to widen the filter.</p> <p>For more details, see “Build Complex Filters” on page 386.</p>
And	<p>Click 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.</p> <p>For more details, see “Build Complex Filters” on page 386.</p>
Field	<p>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 about the samples, see “Data Samples” in <i>Reference Information</i>.</p>

GUI Element (A-Z)	Description
Operator	<p>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.</p> <p>Select an option from the list. It can be:</p> <ul style="list-style-type: none"> ▶ = 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. <p>Note: It is recommended to use the suffix or notSuffix operators instead of the like and notLike operators that are performance intensive.</p>

GUI Element (A-Z)	Description
Value	<p>Enter the required value for the property.</p> <p>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.</p> <p>For more information, see “Define Selectors” on page 382.</p>

Part IV

KPI Assignments

12

KPI Assignments

This chapter describes how to manage KPI Assignments.

This chapter includes:

Concepts

- ▶ KPI Assignment Management Overview on page 418
- ▶ SiteScope KPI Assignment Group Overview on page 420

Tasks

- ▶ Manage KPI Assignment Groups on page 432
- ▶ Configure a KPI Assignment Rule on page 433
- ▶ Work with the SiteScope Assignment Group – Workflow on page 436

Reference

- ▶ KPI Assignments User Interface on page 437

KPI Assignment Management Overview

KPI assignment are mechanisms that are activated under certain conditions to incorporate specific data into HP Business Availability Center, at the monitoring level.

A KPI 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 rules that are automatically assigned to the CI when the condition occurs, and the assignment is running. Those elements are added to the configuration management database (CMDB).

Factory KPI assignment groups are pre-defined sets of KPI 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 HP Business Availability Center. For details about groups, see “Groups” on page 420.

The following factory KPI assignment groups are available:

- ▶ **HP Business Process Insight.** For details about the KPI assignments included in this group, see “KPI Assignments for HP Business Process Insight” on page 210.
- ▶ **SOA.** For details about the KPI assignments included in this group, see “SOA KPI Assignment Group Details” on page 452.
- ▶ **HP TransactionVision.** For details about the KPI assignments included in this group, see “HP TransactionVision KPI Assignment Group Details” on page 454.
- ▶ **SiteScope.** For details about the KPI assignments included in this group, see “SiteScope KPI Assignment Group Overview” on page 420.

For details about the KPI assignments user interface, see “Assignment Groups Page” on page 438.

For details about how the assignment rules work, see “Assignment Rules Mechanism and KPI Propagation” on page 419.

Assignment Rules Mechanism and KPI Propagation

The Dashboard and Service Level Management KPIs assignment rules mechanism receives notification from the CMDB about the creation of monitor CIs. The KPI assignment rules mechanism is activated when a specific attribute of the monitor CI is updated and the assignment rule conditions for that CI are based on the updated attribute. The assignment rules mechanism performs the following actions:

- 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 objectives 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.

A regular propagation mechanism propagates the assignment rule KPIs to higher levels in the model. For details, see “How Dashboard KPIs Work” in *Using Dashboard*.

The assignment rules mechanism is an HP Business Availability Center service that can be managed by Service Manager. For details, see “System Health Setup Wizard” in *Platform Administration*.

A service completes the missed assignments as soon as HP Business Availability Center is restarted, after it has been stopped.

The assignment rules mechanism is deployed on the Data Processing server.

Note: It is recommended to create assignment rules only for monitor CIs.

In EMS integration, the topology is added either when performing discovery or by the EMS Integration monitors.

For details about creating assignments, see “Define Assignment Configuration Dialog Box” on page 516.

Groups

A group is a logical feature that enables you to group KPI assignments. A group must contain at least one assignment.

Some assignment rules are created and grouped together to cover all the conditions that can be applied to a specific CI. Those assignment rules can include the rules to be applied if the sample's field has a specific value and the rules to be applied if the sample's field does not have that specific value.

Some groups include assignment rules that are applied to different CIs.

Note: It is recommended to create assignment rules only for monitor CIs.

SiteScope KPI Assignment Group Overview

Note: The feature described here is available to users working with SiteScope 9.50 or later. If you are working with SiteScope 9.00 or 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, rules, and context menus to the appropriate CIs in the configuration management database (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, 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, 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 and Service Level Management.

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 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 421
- “Hierarchies” on page 422
- “KPI Assignments” on page 424

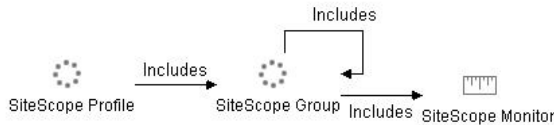
Predefined Monitoring Views

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

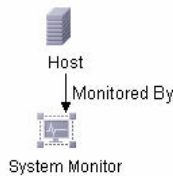
The default topology corresponding to the SiteScope monitors is included in the following views:

► **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 installed the Business Availability Center for Siebel license.

► **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 installed the Business Availability Center for Siebel license.

► **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 installed the Business Availability Center for SAP license.

► **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 installed the Business Availability Center for SAP license.

► **SOA topology:**

SiteScope creates the topology for the SiteScope Web Service monitor. For details, see “SOA Views and Reports” in *Solutions and Integrations*.

Note: The topology is created only if you have installed the Business Availability Center for SOA license.

KPI Assignments

The SiteScope assignment group includes the following assignments:

► **SiteScope Monitors:**

The KPI assignment is used to assign the System KPI, its attached SiteScope Monitor Rule, and the SiteScope Monitor Menu, to the SiteScope Monitor CI.

► **Condition:**

The table headers represent the tags used for specifying the cmdb_class (CI), property condition-name, operator, and value.

cmdb_class	property condition_name	Operator	Value
sitescope_monitor	logging_option	NOT_EQ	logOnlyStatusChanged
	managed_by	EQ	Discovery:SiteScope

► **Task:**

The table headers represent the tags used for specifying the context menu ids, KPIs, and rules that compose the assignment.

context menu id	KPI config	rule
ssMonitorMenu – SiteScope Monitor Menu	1 – System	4 – SiteScope Monitor Rule

► **SiteScope Monitors Reporting Status Changes**

The KPI assignment is used to assign the System KPI, its attached EMS Simple Rule, and the SiteScope Monitor Menu, to the SiteScope monitors that report status changes.

► **Condition:**

The table headers represent the tags used for specifying the cmdb_class (CI), property condition-name, operator, and value.

cmdb_class	property condition_name	Operator	Value
sitescope_monitor	logging_option	EQ	logOnlyStatusChanged
	managed_by	EQ	Discovery:SiteScope

► **Task:**

The table headers represent the tags used for specifying the context menu ids, KPIs, and rules that compose the assignment.

context menu id	KPI config	rule
ssMonitorMenu – SiteScope Monitor Menu	1 – System	0 – EMS Simple Rule

► **SiteScope Profile:**

The KPI assignment is used to assign the SiteScope Availability KPI, and its attached SiteScope Profile Rule, to the SiteScope Profile Monitor CIs.

► **Condition:**

The table headers represent the tags used for specifying the `cmdb_class` (CI), property condition-name, operator, and value.

cmdb_class	property condition_name	Operator	Value
sitescope_profile_monitor	managed_by	EQ	Discovery: SiteScope

► **Task:**

The table headers represent the tags used for specifying the context menu ids, KPIs, and rules that compose the assignment.

context menu id	KPI config	rule
N/A	1001 – SiteScope Availability	35 – SiteScope Profile Rule

► **SiteScope Siebel Measurements.**

The KPI assignment is used to assign the Siebel KPI, its attached SiteScope Vertical Rule, and the SiteScope Measurement Menu, to the SiteScope Siebel Measurements CIs. Those CIs correspond to measurements from the Siebel Application Server, Siebel Web Server, and Siebel Log monitors. The KPI assignment is activated when the measurement's names do not include the **No. of tasks in error** or **No. of Running Sessions** strings.

► **Condition:**

The table headers represent the tags used for specifying the cmdb_class (CI), property condition-name, operator, and value.

cmdb_class	property condition_name	Operator	Value
sitescope_measurement	monitor_type	LIKE	Siebel%
	data_name	NOT_LIKE	%No. of tasks in error
	data_name	NOT_LIKE	%No. of Running Sessions
	managed_by	EQ	Discovery:SiteScope

► **Task:**

The table headers represent the tags used for specifying the context menu ids, KPIs, and rules that compose the assignment.

context menu id	KPI config	rule
ssMeasurementMenu – SiteScope Measurement Menu	300 – Siebel	1108 – SiteScope Vertical Rule

► **SiteScope Siebel Sessions Measurements.**

The KPI assignment is used to assign the Sessions KPI, its attached SiteScope Vertical Rule, and the SiteScope Measurement Menu, to the SiteScope Siebel Sessions Measurements CIs. Those CIs correspond to measurements from the Siebel Application Server monitor. The KPI assignment is activated when a measurement's name includes the **No. of Running Sessions** string.

► **Condition:**

The table headers represent the tags used for specifying the cmdb_class (CI), property condition-name, operator, and value.

cmdb_class	property condition_name	Operator	Value
sitescope_measurement	monitor_type	EQ	Siebel Application Server
	data_name	LIKE	%No. of Running Sessions
	managed_by	EQ	Discovery:SiteScope

► **Task:**

The table headers represent the tags used for specifying the context menu ids, KPIs, and rules that compose the assignment.

context menu id	KPI config	rule
ssMeasurementMenu – SiteScope Measurement Menu	304 – Sessions	1108 – SiteScope Vertical Rule

► **SiteScope Siebel Tasks in Error Measurements:**

The KPI assignment is used to assign the Tasks in Error KPI, its attached SiteScope Vertical Rule, and the SiteScope Measurement Menu, to the SiteScope Siebel Task in Error Measurements CIs. Those CIs correspond to measurements from the Siebel Application Server monitor. The KPI assignment is activated when a measurement's name includes the **No. of tasks in error** string.

► **Condition:**

The table headers represent the tags used for specifying the `cmdb_class` (CI), property condition-name, operator, and value.

<code>cmdb_class</code>	property condition_name	Operator	Value
sitescope_measurement	monitor_type	EQ	Siebel Application Server
	data_name	LIKE	%No. of tasks in error
	managed_by	EQ	Discovery:SiteScope

► **Task:**

The table headers represent the tags used for specifying the context menu ids, KPIs, and rules that compose the assignment.

context menu id	KPI config	rule
ssMeasurementMenu – SiteScope Measurement Menu	301 – Tasks in Error	1108 – SiteScope Vertical Rule

► **SiteScope SAP Measurements:**

The KPI assignment is used to assign the SAP KPI, its attached SiteScope Vertical Rule, and the SiteScope Measurement Menu, to the SiteScope SAP Measurements CIs. Those CIs correspond to measurements from the SAP CCMS, SAP Work Processes, SAP Java Web Application Server, and SAP CCMS Alerts monitors.

► **Condition:**

The table headers represent the tags used for specifying the cmdb_class (CI), property condition-name, operator, and value.

cmdb_class	property condition_name	Operator	Value
sitescope_measurement	monitor_type	LIKE	%SAP%
	managed_by	EQ	Discovery:SiteScope

► **Task:**

The table headers represent the tags used for specifying the context menu ids, KPIs, and rules that compose the assignment.

context menu id	KPI config	rule
ssMeasurementMenu – SiteScope Measurement Menu	305 – SAP	1108 – SiteScope Vertical Rule

► **SiteScope SOA Monitors:**

The KPI assignment is used to assign the Performance KPI, its attached SiteScope WS Operation Performance Rule, the Availability KPI, its attached WS Operation Availability Rule, and the SiteScope Monitors Menu, to the SiteScope Web Service Monitor CIs. This monitor corresponds to the SiteScope Web Service monitor.

► **Condition:**

The table headers represent the tags used for specifying the `cmdb_class` (CI), property condition-name, operator, and value.

<code>cmdb_class</code>	property condition_name	Operator	Value
sitescope_webservice_monitor	managed_by	EQ	Discovery:SiteScope

► **Task:**

The table headers represent the tags used for specifying the context menu ids, KPIs, and rules that compose the assignment.

context menu id	KPI config	rule
ssMonitorMenu – SiteScope Monitor Menu	6 – Performance	1304 – SiteScope WS Operation Performance Rule
	7 – Availability	1300 – WS Operation Availability Rule

Manage KPI Assignment Groups

Note: You can partially edit factory groups:

- ▶ You can modify a 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 432
- ▶ “Manage the KPI Assignments” on page 432
- ▶ “Manage a KPI Assignment Conditions and Tasks” on page 433

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 438.

2 Manage the KPI Assignments

You can stop or start any of the KPI assignments in the group. When a KPI assignment is stopped, the task it represents is not performed.

You can create KPI assignments for custom KPI Assignment groups, or you can edit existing KPI assignments for custom or factory KPI Assignment groups.

For details, see “Edit Group Page” on page 450.

3 Manage a KPI Assignment Conditions and Tasks

You can modify a KPI assignment condition and task. For details, see “Configure a KPI Assignment Rule” on page 433.

Configure a KPI Assignment Rule

You can create or edit a KPI assignment rule 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, rules, and context menus that are to be assigned automatically to the CI when the condition occurs and the assignment is running. For details, see “KPI Assignment Management Overview” on page 418.

Note: Only users with administrator privileges can create assignments.

This task includes the following steps:

- “Access the Define Assignment Configuration Dialog Box” on page 433
- “Define the Condition” on page 434
- “Define the Task” on page 434
- “Define the Objectives and the Operator” on page 435

1 Access the Define Assignment Configuration Dialog Box

To create or edit a KPI assignment, you specify the condition, the task, the objectives, and the operator. For details, see “Define Assignment Configuration Dialog Box” on page 440.

2 Define the Condition

The condition specifies the criteria used to trigger the assignment performed by the task.

Example

If you want the assignment to be triggered when the value of the **data-name** attribute of the host **cmdb-class** that appears in the sample equals **test**, the condition that corresponds to this request is:

```
<condition cmdb-class="host">
  <property-condition name="data_name" operator="EQ" value="test"/>
</condition>
```

Example

If you want the assignment to be triggered when the **cmdb-class** is **logical_application**, the condition that corresponds to this request is:

```
<condition cmdb-class="logical_application"/>
```

3 Define the Task

The task specifies the KPIs, rules, context menus, context menu items, and tooltips to assign to the relevant CI.

Example

The **groupMenu** and **itCIs** context menus, the **Availability** KPI, the **WS Operation Availability Rule** are assigned to the CI, the default value of the **No data timeout** parameter of the rule is changed to 1200 (the type of the value is Long), and the rule calculates the KPI status when the value of the **sampleType** sample field is **ws_perf_aggr_t** and the value of the **dc_source** sample field is **RefProp:data_name**:

The objective is defined with the **LESS_THAN_EQUAL** operator and four values corresponding to the **OK**, **WARNING**, **MINOR**, and **MAJOR** types.

```

<task-config>
  <contextmenu id="groupMenu, itCIs" />
  <kpis-config>
    <kpi-config type="7">
      <rule>1300</rule>
      <rule-parameter key="No data timeout" value="1200" type="Long"/>
    </rule/>
    <trinity-selector>
      <CompositeSelector logicalOp="AND">
        <Selector key="sampleType" op="EQ" type="String" value="ws_perf_aggr_t" />
        <Selector key="dc_source" op="EQ" type="String" value="RefProp:data_name" />
      </CompositeSelector>
    </trinity-selector>
    <objective>
      <operator type="LESS_THAN_EQUAL"/>
      <threshold type="OK" value="RefProp:rank_1_from"/>
      <threshold type="WARNING" value="default"/>
      <threshold type="MINOR" value="RefProp:rank_1_to"/>
      <threshold type="MAJOR" value="default"/>
    </objective>
  </kpi-config>
</kpis-config>
</task-config>

```

4 Define the Objectives and the Operator

When the KPI assignment mechanism receives a creation notification from the CMDB, it adds the KPI objective configuration to the new CI according to the assignment configuration. 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>

```

Work with the SiteScope Assignment Group – Workflow

Note: If you are working with SiteScope 9.0 and lower, 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 436
- ▶ “Set the SiteScope Monitors to Report to HP Business Availability Center” on page 437
- ▶ “Results” on page 437

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 Entry Page” 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

When you have defined monitors for SiteScope and then you set SiteScope to report to HP Business Availability Center for the first time, the logging option of each SiteScope monitor is automatically changed to **Do not report to HP Business Availability Center**.

Use this option when you do not want the SiteScope monitors and measurements for the subject monitor to be transferred to HP Business Availability Center. Select another logging option for the monitors whose information you need. For details on this option, see “Common Monitor Settings” in *Using System Availability Management*.

Monitors that you define after you set SiteScope to report to HP Business Availability Center, by default, have the **Report everything** option set.

3 Results


You can view the topology created by SiteScope KPI Assignments in the “Hierarchies” on page 422.

KPI Assignments User Interface

This section describes:

- Add Group Dialog Box on page 438
- Assignment Groups Page on page 438
- Define Assignment Configuration Dialog Box on page 440
- Edit Group Page on page 450





Add Group Dialog Box

Description	Enables you to add a group. To access: Click  in the KPI Assignments tab.
Included in Tasks	“Configure a KPI Assignment Rule” on page 433

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





GUI Element (A-Z)	Description
Name	The name of the group. Mandatory.
Description	The description of the group. The description is displayed in the Assignment Groups dialog box.

Assignment Groups Page


Assignment Groups		
   		
Name ▲	Type	Description
HP Business Process Insight	Factory	Integrates business processes, and business process steps monitored by HP Business Process I
HP TransactionVision	Factory	KPI enrichment rules for HP TransactionVision monitoring CIs
SiteScope	Factory	KPI enrichment rules for SiteScope monitoring CIs

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: <ul style="list-style-type: none"> ▶ 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.
Included in Tasks	“Configure a KPI Assignment Rule” on page 433

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

GUI Element (A–Z)	Description
	Click to open the Add Group dialog box.
	Select a group and click the button to open the Edit Group page where you can edit the group.
	Select a group and click the button to delete the group. Note: If you select a Factory group and click the 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 to restore the table columns to their original width.
Description	The description of the assignment group.
Name	The name of the assignment group. The following factory assignment groups are listed: <ul style="list-style-type: none"> ▶ HP Business Process Insight. For details about the KPI assignments included in this group, see “KPI Assignments for HP Business Process Insight” on page 210. ▶ SOA. For details about the KPI assignments included in this group, see “SOA KPI Assignment Group Details” on page 452. ▶ HP TransactionVision. For details about the KPI assignments included in this group, see “HP TransactionVision KPI Assignment Group Details” on page 454. ▶ SiteScope. For details about the KPI assignments included in this group, see “SiteScope KPI Assignment Group Overview” on page 420.
Type	The type of the assignment group. It can be Custom or Factory .

Define Assignment Configuration Dialog Box

Description	Enables you to configure an assignment. To Access: Click the  button in the Assignment Group page.
Important Information	After you have created an assignment you cannot modify the condition. A workaround is to delete the assignment and to recreate it with a new condition.
Included in Tasks	“Configure a KPI Assignment Rule” on page 433

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 about the parameters, see “KPI Assignment Rule – Condition” on page 441. For details about creating a condition , see “Define the Condition” on page 434.
Description	The description of the assignment.
Name	The name of the assignment. Mandatory.
Run on existing CIs	Set to retroactively run the assignment on existing CIs. When you select this option, and click OK , the assignment is run retroactively on the appropriate CIs with the appropriate conditions . Note: Selecting this option does not change the status of the KPI assignment itself.

GUI Element (A-Z)	Description
Status	<p>It can be:</p> <ul style="list-style-type: none"> ▶ Assignment Configuration will be stopped after creation when you are creating a new assignment. After you configure the assignment the status of the 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 assignment you are editing.
Task	<p>The task is written in XML. It uses parameters to define the tasks used to assign the KPIs, rules, and context menus to the selected CI are listed in the following table. The task that is performed after the assignment is triggered. For details, see “KPI Assignment Rule – Task” on page 444.</p> <p>For details about creating a task, see “Define the Task” on page 434.</p>
Validate	<p>Click to validate the XML code in both the Condition and Task areas and to perform the indentation of the code.</p>

KPI Assignment Rule – Condition

Use the following format:

```
<condition cmdb_class="class_name">
  <property-condition name="name" operator="operator" value="value"/>
</condition>
```

The parameters used to define the KPI Assignment rule conditions are as follows:

Element	Description
condition	<p>A collection used to define the condition.</p> <p>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 assignment. For details about the CMDB classes, select Admin > Modeling, select the CI type, and click the Details tab.</p> <p>Note: This element is mandatory. It can contain one or more property-condition elements.</p>
property-condition	<p>An element that creates a restriction on the condition. You can use more than one property-condition. The element's attributes are:</p> <ul style="list-style-type: none"> ▶ name. Mandatory. The name of one of the attributes of the CMDB class. For details about the CMDB classes, select Admin > Modeling, select the CI Type, and click the Details tab. ▶ operator. Mandatory. The operator. For details about the possible operators, see "Property_Condition Operator" on page 442. ▶ value. Mandatory. A string that is compared to the value of the attribute of the CMDB class specified in class_attribute_name. 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.

Value	Description
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.
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.

Example: To assign different KPIs to a CI when the value of a CI attribute equals or is different from a certain value, you can create:

- An assignment with a **condition** using the **EQ** operator, the **property-condition** name and value.
- Another assignment with a **condition** using the **NOT_EQ** operator for the same **property-condition** name and value.

For example:

```
<condition cmdb-class="sitescope_monitor">
  <property-condition name="data_updated_by" operator="LIKE"
value="%SiteScope_%"/>
  <property-condition name="logging_option" operator="NOT_EQ"
value="logOnlyStatusChanged"/>
</condition>
```

```
<condition cmdb-class="sitescope_monitor">
  <property-condition name="data_updated_by" operator="LIKE"
value="%SiteScope_%"/>
  <property-condition name="logging_option" operator="EQ"
value="logOnlyStatusChanged"/>
</condition>
```

KPI Assignment Rule – Task

Use 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 the KPI Assignment rule tasks are as follows:

Element	Description
task-config	An element used to define the task.
contextmenu	<p>Optional. An element used to specify the context menu you want to add to the CI to which the assignment is attached.</p> <p>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 (.).</p> <p>For details about the context menu internal names, see "Context Menu Repository Page" in <i>CI Attribute Customization</i>.</p>
kpis-config	A collection of kpi-config elements.
kpi-config	<p>An element used to define the KPI.</p> <p>The element's attribute is type, which represents the ID number of the KPI.</p> <p>For details about the KPI number, see "KPIs Repository Page" in <i>CI Attribute Customization</i>.</p>
rule	<p>An element that specifies the number of the rule you want to attach to the KPI. For details about the rule numbers, see "Parameter Details Dialog Box (KPIs)" in <i>CI Attribute Customization</i>.</p> <p>Note: It can also be a collection of parameters when you want to override existing rule parameters or when you want to add new parameters to the rule.</p>


Element	Description
<p>rule-parameter</p>	<p>Optional. An element that defines the rule parameter. The element's attributes are:</p> <ul style="list-style-type: none"> ➤ key. The display name of the rule parameter. ➤ value. The value of the parameter. Corresponds to the Default Value in the Business Rule Repository. <ul style="list-style-type: none"> ➤ When you specify a value (not empty), the rule parameter value in the KPIs page in Dashboard Admin, is the given value. ➤ When you specify RefProp:<property_name> the rule parameter value in the KPIs page in Dashboard Admin, is the CI property value. ➤ type. The type of parameter. Corresponds to the Type of the parameter. <p>For details, see "Parameter Details Dialog Box (Rules)" in <i>CI Attribute Customization</i>.</p>
<p>trinity-selector</p>	<p>A collection of selector definitions.</p>
<p>Composite Selector</p>	<p>An element that indicates how to group logically the selectors.</p> <p>The element's attribute is logicalOp, which is the logical operator. It can be: AND, OR, NAND, or NOR.</p> <p>For example, if you want to create the following sample filter: a & b c & d, use the following set of CompositeSelectors:</p> <pre> CompositeSelector logicalOp="OR" CompositeSelector logicalOp="AND" Selector "a" Selector "b" CompositeSelector logicalOp="AND" Selector "c" Selector "d" </pre>

Element	Description
Selector	<p>An element that filter the samples relevant for the KPI. It indicates how to filter the sample fields that are used by the 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.</p> <p>The element's attributes are:</p> <ul style="list-style-type: none"> ➤ key. The name of the sample field. ➤ op. The operator can be: <ul style="list-style-type: none"> ➤ 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: <ul style="list-style-type: none"> ➤ 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
<p>objective</p>	<p>Optional. A collection of objective definitions.</p> <p>Note:</p> <ul style="list-style-type: none"> ▶ When the KPI assignment mechanism receives a creation notification from uCMDB, it adds the KPI objective configuration to the new CI, according to the assignment configuration. ▶ If the KPI Objective is not defined in the assignment, the default objectives are taken from the rule repository, according to the specified rule type. ▶ The KPI Objective configuration must include the following thresholds: OK, MINOR,WARNING,MAJOR
<p>operator</p>	<p>Optional. An element used to define the objective operator. The element's attributes is type. It can be:</p> <ul style="list-style-type: none"> ▶ default. To indicate to take the default operator value from the rules repository, according to the specified 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	<p>Mandatory. An element used to define the thresholds. The element's attribute is type. It can be:</p> <ul style="list-style-type: none"> ▶ default. To indicate to take the default threshold value from the rules repository, according to the specified rule type. The resulting threshold value is the default value according to the 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” in <i>Using Dashboard</i>. 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. ▶ <number>. A number that has a float, integer, or long format.

Edit Group Page

Description	Enables you to edit an existing group. To access: In the Assignment Groups page, select a group and click  .
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. For details, see: <ul style="list-style-type: none"> ▶ “HP Business Process Insight KPI Assignment Group Details” on page 452 ▶ “SOA KPI Assignment Group Details” on page 452 ▶ “SiteScope KPI Assignment Group Details” on page 454 ▶ “HP TransactionVision KPI Assignment Group Details” on page 454
Included in Tasks	“Configure a KPI Assignment Rule” on page 433









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. Mandatory.
Type	It can be: <ul style="list-style-type: none"> ▶ 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 an assignment rule and click to start the assignment of the rule to existing CIs when they were stopped and to new CIs. The status of the assignment rule is Running .
	Select an assignment rule and click to stop the assignment of the rule to the appropriate CI. The status of the assignment rule is then Stopped .
	Click to create an assignment rule in the Define Assignment Configuration dialog box. Note: This button is disabled for Factory assignment rules.
	Select an assignment rule and click to edit the rule in the Define Assignment Configuration dialog box.
	Select a data assignment rule and click to delete. Note: This button is disabled for Factory assignment rules.
	Select an assignment rule and click to synchronize the selected rule.
	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.

GUI Element (A-Z)	Description
Status	<p>The status:</p> <ul style="list-style-type: none"> ▶ Running. The assignment has been started and is running on the appropriate CIs. ▶ Stopped. The assignment has been stopped and is not running.

HP Business Process Insight KPI Assignment Group Details

For details about this assignment group, see “KPI Assignments for HP Business Process Insight” on page 210.

SOA KPI Assignment Group Details

The SOA KPI assignments include the following information:

▶ **Diagnostics**

The KPI assignment is used to assign the KPIs, rules, and context menu listed in the Task table to the Diagnostics Web Service Monitor CI.

▶ **Condition:**

The table headers represent the tags used for specifying the cmdb_class (CI), property condition-name, operator, and value.

cmdb_class	property condition_name	Operator	Value
diagnostics_ webservice_ monitor	-	-	-

► **Task:**

The table headers represent the tags used for specifying the context menu ids, KPIs, and rules that compose the assignment.

context menu id	KPI config	rule
diagnosticsMonitorMenu – Diagnostics Monitor Menu	6 – Performance	1301 – Diagnostics WS Operation Performance Rule
	7 – Availability	1300 – WS Operation Availability Rule
	400 – Throughput	1303 – Diagnostics WS Operation Throughput Rule

The Throughput KPI is not added to Diagnostics Web Service Monitor CI when the information is virtual; meaning that the data is collected by the SiteScope monitors.

► **BPM**

The KPI assignment is used to assign the KPIs, rules, and context menu listed in the Task table to the BPM Web Service Monitor CI.

► **Condition:**

The table headers represent the tags used for specifying the cmdb_class (CI), property condition-name, operator, and value.

cmdb_class	property condition_name	Operator	Value
bpm_ webservice_ monitor	-	-	-

► **Task:**

The table headers represent the tags used for specifying the context menu ids, KPIs, and rules that compose the assignment.

context menu id	KPI config	rule
diagnosticsMonitorMenu – Diagnostics Monitor Menu	6 – Performance	1306 – BPM WS Operation Performance Rule
	7 – Availability	1300 – WS Operation Availability Rule

SiteScope KPI Assignment Group Details

For details about this assignment group, see “SiteScope KPI Assignment Group Overview” on page 420.

HP TransactionVision KPI Assignment Group Details

The HP TransactionVision assignment group includes the following KPI assignments:

► **HP TransactionVision Common KPIs:**

This KPI assignment attaches the KPIs listed in the **KPI config** column, their rules listed in the **rule** column, and the context menu listed in the **context menu id** column in the Task table to the TV Monitor CIs.

► **Condition:**

The table headers represent the tags used for specifying the cmdb_class (CI), property condition-name, operator, and value.

cmdb_class	property condition_name	Operator	Value
tv_tx_monitor	N/A	N/A	N/A

► **Task:**

The table headers represent the tags used for specifying the context menu ids, KPIs, and rules that compose the assignment.

context menu id	KPI config	rule
tvTransaction – TransactionVision Menu	600 – Backlog	1426 – TransactionVision Backlog Rule (In-Process)
	1050 – Volume	1416 – TransactionVision Transaction Volume Rule
	1313 – Delays	1422 – TransactionVision Delayed Value Rule (In-Process Transactions)

► **HP TransactionVision Exceptions:**

This KPI assignment attaches the KPIs listed in the **KPI config** column, their rules listed in the **rule** column, and the context menu listed in the **context menu id** column in the Task table to the TV Monitor CIs.

► **Condition:**

The table headers represent the tags used for specifying the cmdb_class (CI), property condition-name, operator, and value.

cmdb_class	property condition_name	Operator	Value
tv_tx_monitor	exceptionRule Defined	IS_TRUE	N/A

► **Task:**

The table headers represent the tags used for specifying the context menu ids, KPIs, and rules that compose the assignment.

context menu id	KPI config	rule
tvTransaction – TransactionVision Menu	1310 – Exceptions	1423 – TransactionVision Exceptions Rate Rule (In-Process Transactions)

► **HP TransactionVision Failures:**

This KPI assignment attaches the KPIs listed in the **KPI config** column, their rules listed in the **rule** column, and the context menu listed in the **context menu id** column in the Task table to the TV Monitor CIs.

► **Condition:**

The table headers represent the tags used for specifying the cmdb_class (CI), property condition-name, operator, and value.

cmdb_class	property condition_name	Operator	Value
tv_tx_monitor	failureRuleDefined	IS_TRUE	N/A

► **Task:**

The table headers represent the tags used for specifying the context menu ids, KPIs, and rules that compose the assignment.

context menu id	KPI config	rule
tvTransaction – TransactionVision Menu	1312 – Failures	1429 – TransactionVision Failures Value Rule (In-Process Transactions)

► **HP TransactionVision Value:**

This KPI assignment attaches the KPIs listed in the **KPI config** column, their rules listed in the **rule** column, and the context menu listed in the **context menu id** column in the Task table to the TV Monitor CIs.

► **Condition:**

The table headers represent the tags used for specifying the cmdb_class (CI), property condition-name, operator, and value.

cmdb_class	property condition_name	Operator	Value
tv_tx_monitor	valueRuleDefined	IS_TRUE	N/A

► **Task:**

The table headers represent the tags used for specifying the context menu ids, KPIs, and rules that compose the assignment.

context menu id	KPI config	rule
tvTransaction – TransactionVision Menu	1311 – Value	1425 – TransactionVision Value Rule (In-Process Transaction)

Part V

External Display

13

Dashboard Ticker

This chapter describes the Dashboard Ticker.

This chapter includes:

Concepts

- ▶ Dashboard Ticker Overview on page 461

Tasks

- ▶ View Data in Dashboard Ticker on page 465
- ▶ Control Dashboard Ticker on page 467
- ▶ Set Ticker Preferences on page 468

Reference

- ▶ Ticker User Interface on page 469

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” on page 462
- “Ticker Window” on page 463
- “Message Window” on page 464

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 about installing the Ticker, see “Install Dashboard Ticker” on page 465.

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 about the **Update interval** parameter, see “Ticker Preferences Dialog Box” on page 471.

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.

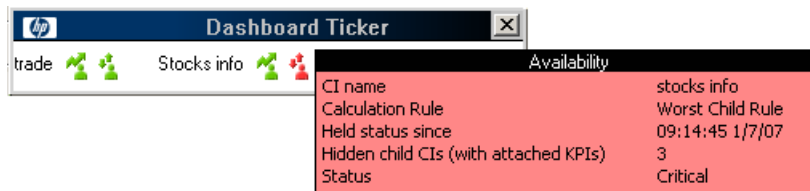
Every KPI in the selected view is checked. Any KPI with an error status is checked against the information already in HP Dashboard Ticker. If it is the first time this KPI appears in the view, or if the KPI's status has changed to an error status, it is displayed in the Message Window and/or the Ticker 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.

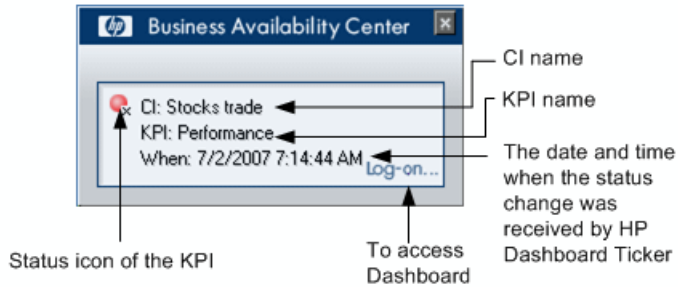


For details, see “Ticker Window” on page 469 in the user interface section.

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 470 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 461.

This task includes the following steps:

- “Install Dashboard Ticker” on page 465
- “Launch Dashboard Ticker” on page 465
- “Meet the Requirements” on page 466
- “Control Ticker Behavior” on page 466
- “Set the Ticker Preferences” on page 466
- “View Dashboard Information in Dashboard Ticker” on page 467

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.

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 471.

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.

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 467.

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 468.

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 about the Ticker Window, see “Ticker Window” on page 463.

For details about the Message Window, see “Message Window” on page 464.

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 462.

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 464.
- **Show Ticker.** To display the Ticker Window. For details, see “Ticker Window” on page 469.
- **Log On.** Opens the default Web browser, connects to the HP Business Availability Center server, and displays the view in Dashboard. For details, see “Console Page” on page 125.
- **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 471.
- **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 about the steps to follow to view data in Dashboard Ticker, see “View Data in Dashboard Ticker” on page 465.

For details about setting the Ticker preferences, see “Ticker Preferences Dialog Box” on page 471.

Ticker User Interface

This section describes:

- Ticker Window on page 469
- Message Window on page 470
- Ticker Preferences Dialog Box on page 471

Ticker Window

Description	<p>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.</p> <p>To Access: Set up Dashboard Ticker.</p>
Important Information	<ul style="list-style-type: none"> ➤ 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 471. ➤ 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 471.
Included in Tasks	“View Data in Dashboard Ticker” on page 465


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 112.
<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 463.

Message Window

Description	<p>Conveys that a KPI's status has changed to error/poor/worst.</p> <p>To Access: Setting up Dashboard Ticker.</p>
Important Information	<ul style="list-style-type: none"> ▶ The window is displayed either automatically or manually. For details on how to set this option, see “Ticker Preferences Dialog Box” on page 471. ▶ 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 about the Preferences dialog box, see “Ticker Preferences Dialog Box” on page 471.
Included in Tasks	“View Data in Dashboard Ticker” on page 465

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 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 465

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 if you want 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: <ul style="list-style-type: none">▶ 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 about the Ticker Window, see “Ticker Window” on page 469.
Play incoming message sound alert	<p>To automatically sound an alert when a new message arrives.</p> <p>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.</p> <p>Note:</p> <ul style="list-style-type: none"> ▶ 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. <p>To use another alert sound, access (if you are a user with administrative permissions) <HP Business Availability Center 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.</p>

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 about the Message Window, see “Message Window” on page 464.

14

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 477

Tasks

- ▶ View Data on a Mobile Device on page 478

Reference

- ▶ Mobile Device User Interface on page 479

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 478.

For details about Dashboard data displayed on a mobile device, see “Mobile Device Page” on page 480.

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:

- “Pre-Requisites” on page 478
- “Access the Server URL” on page 478
- “Navigate to the View and Display the Data” on page 479
- “Change Display Characteristics – Optional” on page 479

1 Pre-Requisites

- 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 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 480.

4 Change Display Characteristics – Optional

The display characteristics of the mobile console are controlled by an XSL file. If you want 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 that feature.

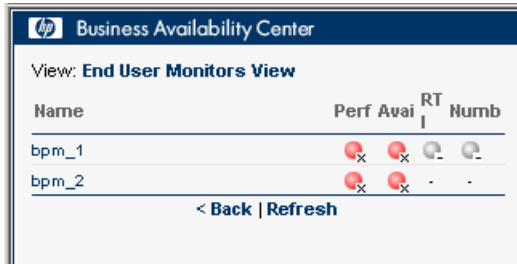
Note: The characters used for KPI names depend on the user’s locale and not on the browser’s locale.

Mobile Device User Interface

This section describes:

- ▶ Mobile Device Page on page 480

Mobile Device Page



Description	<p>Enables you to display a view on a mobile device.</p> <p>To Access: Enter the appropriate information in the login screen, and select a view.</p>
Important Information	<ul style="list-style-type: none"> ▶ 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. <p>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:</p> <p>\AppServer\webapps\site.war\mobile\dash\console.xsl</p> <p>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</p> <p>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.</p>
Included in Tasks	<p>"View Data on a Mobile Device" on page 478</p>

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 “Understanding KPI Status” on page 352.
Back	Click to go back to the login page.
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 to refresh the view.
View	The name of the view you selected in the login page.

Index

A

- acknowledge utility
 - setting for CI 36
- Acknowledgment
 - CI menu option 62
- Acknowledgment Details
 - CI menu option 62, 114
- Acknowledgment History and Details dialog
 - box 58
- Acknowledgments Details
 - dialog box 59
- Active Filter
 - create or customize 137
- active filters
 - filters list 137
 - setting 133
- Add Group dialog box 438, 450
- Add KPI to Multiple CIs dialog box 406
- applet
 - maps 161
- Application Mapping
 - CI menu option 63
- Assignment Groups page 438
- Assignment rule
 - define 433
- assignment rule
 - condition 441
 - task 444
- assignment rules mechanism 419

B

- BPI Monitors Overtime report 224
- Business Logic Engine
 - changing default time interval 369
- Business Process Insight
 - portlets in My BAC 219

- Business Process Monitor
 - hierarchy structure 162
 - mapping to business transactions 254, 267
- Business Process Over Time report 228
- Business Process Summary report 233
- Business Processes view 207
- business rules
 - group rule type 338
 - monitor rule type 337
 - working with KPIs 336
- Business Transaction Flow Map 256
 - CI menu option 63
 - component icons 291
- Business Transaction Management 241
 - data 244
 - Flow Map 256
 - in Dashboard 250
 - integration with TransactionVision 263
 - mapping End User Management data 254, 267
- business transactions
 - properties 247
 - samples 246
 - select 274
- business user mode 352

C

- Calculation Granularity 364
- calculation of group status 352
- Change
 - CI menu option 67
- change
 - real-time change to CI properties 23

Index

- Change Control Management 43
 - requirements for integrating 43
- Chinese characters
 - Infrastructure settings 99
 - Top View 99
- CI levels
 - changing in Top View 101
- CI menu option
 - Acknowledgment 62
 - Acknowledgment Details 62, 114
 - Application Mapping 63
 - Business Transaction Flow Map 63
 - Change 67
 - Completed 63
 - Configuration Item Status Alerts 68
 - Cross-Performance 71
 - Dashboard 24, 62
 - Diagnostics Web Service Topology 68
 - Drill to Diagnostics 64
 - End User Summary 68
 - Event Count Over Time 68
 - Event Summary 69
 - Event Summary (Error Monitor) 69
 - Expand more levels 114
 - Filter Subtree 66
 - Filter Subtree Monitors 66
 - Filters 66
 - Find Visible and Hidden Child CIs 50, 66
 - Go to BPI 66
 - Go to Problem Isolation 76
 - Go to Report 67
 - Go to Siebel Diagnostics 74, 75, 76
 - HP Service Center 77
 - In-Process 63
 - KPIs Over Time 69
 - Layers View 64
 - Open in new window 115
 - Operations Health 70
 - Problem Isolation 63
 - Properties 77
 - SAP Transaction Changes 70
 - SAP Transport Changes 70
 - Server Requests 64
 - Server Summary 71
 - Session Analyzer 71
 - Set/Unset Acknowledgment 62, 115
 - Show Complete Subtree 66
 - Show Events 77
 - Show Impact 63
 - Show in Top View 78
 - Show Path to Root 78
 - Show Problematic Subtree 79
 - Show Processes 74
 - Show Related CIs 77
 - Show Running Tasks 75
 - Show Service Impact 77
 - Show Subtree Monitors 66
 - Show Tasks in Error 75
 - Siebel Database Breakdown 76
 - Siebel SARM 76
 - SiteScope 76
 - SiteScope Quick Report 72
 - SiteScope Server Centric Report 72
 - Summary View 65
 - Systinet Web Service Data 72
 - Top View 78
 - Transaction Analysis 72
 - Transactions View 65
 - Trend 73
 - Triage 73
 - Web Services Health 73
- CI name
 - modify length 54
- CI property change
 - real-time monitoring 380
- CI status
 - selecting statuses displayed in map 173
- CIs
 - acknowledge utility for performance problems 36
 - assign geographical location 163
 - Event Details window 35
 - history statuses 360
 - modify maximum number displayed CIs 54
 - modify number of CIs monitored for real-time change 370
 - selectors 350

- trend statuses 360
 - types 353
 - columns
 - setting Console page 124
 - Completed
 - CI menu option 63
 - Configuration Item Status Alerts
 - CI menu option 68
 - Configuration Items dialog box 301
 - configuring infrastructure settings 43
 - connecting lines
 - Google Earth 170
 - Console page 123, 125
 - add Details link to CIs 124
 - Dashboard 117
 - display and customize view
 - information 120
 - display children section expanded 123
 - displaying columns 124
 - drilling down 123
 - modify background color 124
 - modifying the number of levels 123
 - overview 117
 - Console tab 125
 - Context Menu List Editor dialog box 396
 - Cross-Performance
 - CI menu option 71
 - current view
 - searching for CIs in Filters tab 134
 - Custom Map
 - add CIs 189
 - creating 188
 - customize 198
 - display a view 188
 - display view 198
 - displaying view 190
 - using tab 186
 - Custom Map tab 192
 - Dashboard 185
- D**
- Dashboard
 - Business Transaction Management 250
 - CI menu options 24, 62
 - configuring KPIs 331
 - Console tab 123
 - customization, process flowchart 30
 - display data 34
 - general information 15
 - how Dashboard works 20
 - notes and tips 25
 - overview 16
 - reports 295
 - Top View tab 89
 - troubleshooting and limitations 87
 - understanding topology map 197
 - view data 26
 - view on mobile console 477
 - viewing last sample 35
 - Dashboard Administration
 - logs 56
 - Dashboard application components
 - in Service Report 24
 - Dashboard Console tab 117
 - Dashboard display
 - customizing 55
 - Dashboard repositories 22
 - Dashboard tabs
 - description 18
 - modify refresh rate 54
 - data collection process
 - EMS 432
 - third-party data 432
 - Define Assignment Configuration
 - dialog box 440
 - Defining Filters dialog box 141
 - desktop tray bar
 - Ticker icons 462
 - Diagnostics
 - drilling down to HP Diagnostics 299, 319
 - Diagnostics Web Service Topology
 - CI menu option 68
 - downtime
 - status 357
 - drill down
 - Layers View 299, 319
 - Summary View 299, 319

Index

- to HP Diagnostics 299, 319
- Transactions View 299, 319

Drill to Diagnostics

- CI menu option 64

dynamic URL parameters 105

E

Edit Group dialog box 438, 450

Edit KPI for Child Transaction dialog box 406

Editing Filters dialog box 141

EMS

- process flowchart 432

EMS integration application

- overview 418

EMS integration tool

- HP Business Process Insight 215, 219

End User Monitoring CIs 342

End User Summary

- CI menu option 68

Enterprise Management Systems

- overview 418

Event Count Over Time

- CI menu option 68

Event Details dialog box 397

Event Summary

- CI menu option 69

Event Summary (Error Monitor)

- CI menu option 69

exclude statuses 344

Expand more levels

- CI menu option 114

F

Filter Name dialog box 147

Filter Subtree

- CI menu option 66

Filter Subtree Monitors

- CI menu option 66

Filters

- CI menu option 66

filters

- predefined 144

Filters tab 148

- add Details link to CIs 133
- customize 132
- Dashboard 131
- filtering results 133
- overview 132
- search CIs 133
- setting active filters 133
- view data 132

Find Visible and Hidden Child CIs

- CI menu option 50, 66

Find Visible and Hidden Child CIs dialog box 60

G

geographical location

- CIs 163

geographical map 155

- assign to view 165
- display technology 164
- for Dashboard 156
- navigating 177
- refining 167
- tips 171
- using applet 180
- view real-time status indicators 162
- working with applet 161

Geographical Map tab 176

Go to BPI

- CI menu option 66

Go to Problem Isolation

- CI menu option 76

Go to Report

- CI menu option 67

Go to Siebel Diagnostics

- CI menu option 74, 75, 76

Google Earth 165

- connecting lines 170
- display geographical map 168
- importing location status 168
- indicators by status 170
- refresh rate 170
- understanding 159
- working with 182

green icon 354

grey icon 354

group rules 338

groups

calculation of status 352

KPI Assignment 420

H

hidden child 50

hidden parameters

for business rules 364

history icon

calculating status 362

history status 363

history statuses

changing the icons 360

for CIs 360

HP Business Process Insight

access from HP Business Availability

Center 219

Business Processes view 207

integration using EMS integration

tool 215, 219

overview 206

portlets in My BAC 219

sample decay 215

topology 208

HP Dashboard Ticker 461

control 467

data 465

icons 462

installation 465

launching 465

Message Window 464

overview 461

preferences 468

requirements 466

Ticker Window 463

HP Dashboard Ticker Window

Dashboard Ticker 463

HP Diagnostics

drilling down 299, 319

HP Service Center

CI menu option 77

I

icon

green 354

grey 354

olive 354

orange 354

red 354

yellow 354

icons

changing icon set 55

indicator size

modifying 172

In-Process

CI menu option 63

integration

TransactionVision 263

invisible child 50

J

Japanese characters

infrastructure settings 99

Top View 99

K

KPI

configure 366

numerical code of KPI status 354

status name 354

KPI Assignment

groups 420

KPI assignment rule

condition 441

task 444

KPI icons

Top View 112

KPI propagation 419

KPI Status icons

changing 99

KPI versions

attach to CI 390

for user mode 388

KPIs

attaching new to CI 367, 373

business rules functionality for 336

Index

- configuring 331
- define and edit 366
- editing properties for 374
- how Dashboard KPIs work 333
- objectives for
 - objectives, for KPIs 340
- PNR for Dashboard 367
- selectors for 350
- status and objectives 340
- user mode 366
- KPIs configuration
 - overview 332
- KPIs dialog box 302
- KPIs Distribution Over Time report 303
 - access 299
- KPIs Over Time
 - CI menu option 69
 - view 298
- KPIs Over Time reports 306
 - accessing 298
 - collecting data 365
 - drill down to HP Diagnostics 299, 319
 - save KPI status information 298
- KPIs Summary report 321
 - access 299
- KPIs tab 398
- KPIs Trend report 324
 - access 299

L

- Layers View
 - CI menu option 64
 - drill down 299, 319
- limitations
 - Dashboard 87
- location status
 - importing into Google Earth 168
 - information 157
- location tooltip
 - maximum number of CIs displayed 175
- log files
 - for user sessions 57
- logs
 - Dashboard Administration 56

M

- map
 - indicator size 172
 - location tooltip 175
 - statuses to be displayed in 173
 - time delay 173
- map applet 161, 164
 - customize 174
 - refresh rate 174
- map levels
 - navigating between 201
- mapping to business transactions 254, 267
- maps
 - for Dashboard 156
 - Virtual Earth 172, 174
- menu options
 - Top View 114
- Message Window 470
 - HP Dashboard Ticker 464
- mobile console
 - view Dashboard 477
- Mobile Device
 - display 480
- mobile device
 - view data on 478
- modifying 363
- monitor rules 337
- monitoring service views 421
- multiple views
 - searching for CIs in Filters tab 136
- Must
 - influence on status 358, 359

N

- New KPI dialog box 406
- No data timeout
 - Transaction CIs 339
- No Data Timeout value
 - change 369
- Node Details dialog box 80
- numerical code 354

O

- objectives
 - blank 345
 - defining 343
 - example of defining 346, 349
 - repeated 345
 - units of measurement 347
- olive icon 354
- Open in new window
 - CI menu option 115
- Operations Health
 - CI menu option 70
- operations user mode 352
- orange icon 354

P

- performance
 - monitoring 21
- performance problems
 - monitoring 20
- permissions
 - Source Manager 436
- PNR KPI 367
- predefined filters 144
- Problem Isolation
 - CI menu option 63
- problem management
 - task to isolate a problem 466
- Properties
 - CI menu option 77

Q

- Quick Filter 139

R

- Real User Monitor 254, 267
- real-time changes
 - analyze information 40
 - CI properties 23
- real-time monitoring
 - CI property change 380
- real-time status 356
- red icon 354

- refresh rate
 - Google Earth 170
 - map applet 174
 - modify Dashboard tabs 54
- Related Change Request reports 42
 - display 44
- Related Change Requests reports 81
- reports
 - Dashboard 295
 - Service Impact 45
- repositories
 - Dashboard 22
- roles of selector 350

S

- samples
 - viewing details for Dashboard CIs 35
- SAP Transaction Changes
 - CI menu option 70
- SAP Transport Changes
 - CI menu option 70
- scores, for calculating status 356
- search
 - CIs in Filters tab 133
- selectors
 - defining 382
 - for KPI 350
 - role 350
- Server Requests
 - CI menu option 64
- Server Summary
 - CI menu option 71
- Service Impact
 - modify KPIs and rules 46
- Service Impact report 83
 - access 45
 - send as a URL 48, 49
 - view 45
- Service Level Management
 - results in Dashboard 120
- Service Report
 - Dashboard application components 24
- service-level agreements
 - monitoring 21

Index

- Session Analyzer
 - CI menu option 71
- Set/Unset Acknowledgment
 - CI menu option 62, 115
- Show Complete Subtree
 - CI menu option 66
- Show Events
 - CI menu option 77
- Show Impact
 - CI menu option 63
- Show in Top View
 - CI menu option 78
- Show Path to Root
 - CI menu option 78
- Show Problematic Subtree
 - CI menu option 79
- Show Processes
 - CI menu option 74
- Show Related CIs
 - CI menu option 77
- Show Running Tasks
 - CI menu option 75
- Show Service Impact
 - CI menu option 77
- Show Subtree Monitors
 - CI menu option 66
- Show Tasks in Error
 - CI menu option 75
- Siebel Database Breakdown
 - CI menu option 76
- Siebel SARM
 - CI menu option 76
- SiteScope
 - CI menu option 76
 - hierarchies 422
- SiteScope host discovery 437
- SiteScope monitor
 - set to report to HP Business Availability Center 437
- SiteScope Monitoring CIs 341
- SiteScope Quick Report
 - CI menu option 72
- SiteScope Server Centric Report
 - CI menu option 72
- SiteScope source adapter
 - work with 436

- SLAs
 - monitoring 20
- Source Manager
 - overview 420
 - permissions 436
- status
 - calculating for history icon 362
 - calculating for trend icon 363
 - calculations 356
 - calculations for KPIs 354
 - calculations for monitor CIs 352
 - downtime 357
 - for geographical locations 156
 - stopped 357
- status icons
 - changing the status icons 354
- status indicators
 - Google Earth 170
- status name
 - KPI 354
- status of KPI 354
- Statuses dialog box 327
- stopped status 357
- Summary View
 - CI menu option 65
 - drill down 299, 319
- Sun JRE plug-in 162
- system usage, monitoring 57
- Systinet Web Service Data
 - CI menu option 72

T

- table
 - setting Console page 124
- task
 - isolate a problem 466
- task to isolate a problem
 - problem management 466
- third-party data
 - process flowchart 432
- Ticker 461
 - overview 461
 - set preferences 466
 - view Dashboard information 467
- Ticker Preferences dialog box 471

- Ticker Window 469
 - time delay
 - for maps 173
 - Time Interval
 - changing for Business Logic Engine 369
 - time zones
 - settings 25
 - timestamp 25
 - tooltips
 - customizing border and header 55
 - for geographical maps 158
 - in IT Universe topology map 202
 - Top View
 - access external application 94
 - change color of CI bar with OK status 102
 - change fonts 100
 - change number of displayed CI levels 101
 - change number of expanded CI levels 101
 - change text color 99
 - Chinese and Japanese characters 99
 - CI menu option 78
 - customize background image 103
 - display and customize view 92
 - display weight in tooltip 104
 - hide view bar when single root CI 102
 - KPI icons 112
 - layout hierarchy customizing 96
 - menu options 114
 - overview 90
 - Top View tab 89, 108
 - Topology Map
 - Dashboard 197
 - topology map
 - overview 197
 - Topology Map tab 199
 - Transaction Analysis
 - CI menu option 72
 - Transaction CIs 369
 - No data timeout 339
 - Transactions View
 - CI menu option 65
 - drill down 299, 319
 - TransactionVision
 - Flow Map 256
 - in Business Availability Center 241
 - integration 263
 - KPIs and rules 252
 - samples 246
 - Trend
 - CI menu option 73
 - trend icon
 - calculating status 363
 - Trend Rate 364
 - trend status
 - modifying 363
 - trend statuses
 - changing the icons 360
 - for CIs 360
 - Triage
 - CI menu option 73
 - troubleshooting
 - Dashboard 87
- U**
- URL
 - dynamic parameters 105
 - user modes 388
 - assigning 388
 - define KPI versions 388
 - for kpis 352
 - KPIs 366
 - users
 - monitoring users in system 57
 - UTF8 162
- V**
- view
 - assign geographical map 165
 - Business Processes for HP Business Process Insight 207
 - views
 - pre-defined monitoring service views 421
 - working with 22
 - Virtual Earth 164
 - adjusting map 172, 174

Index

- customizing 172
- understanding 160

visibility levels 132

W

Web Services Health

- CI menu option 73

Weight

- influence on status 358, 359

Y

yellow icon 354