OPTIMIZE

MERCURY BUSINESS AVAILABILITY CENTER™

Using Dashboard

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BUSINESS TECHNOLOGY OPTIMIZATION

Mercury Business Availability Center

Using Dashboard

Version 6.1

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Mercury Business Availability Center, Version 6.1
Using Dashboard

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Welcome to Using Dashboard

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

How This Guide Is Organized

The guide contains the following chapters:

Chapter 1 Introduction to Mercury Business Availability Center Dashboard

Introduces the Dashboard concept and describes how Dashboard fits into the Mercury Business Availability Center architecture.

Chapter 2 Working with Dashboard

Describes how to work with Dashboard and the Dashboard views.

Chapter 3 Dashboard Top View

Describes how to use the Top View tab to display a top-down perspective of the health of your applications and business processes in an interactive graphical interface.

Chapter 4 Dashboard Console

Describes how to use the Console tab to view the operational status for mission-critical applications, and how to drill down to view the underlying IT infrastructure.

Chapter 5 Dashboard Filters

Describes how to use the Filters tab to view the operational status of system components on one level, how to filter the items displayed in the tab, and how to use the acknowledgment utility to manage performance issues.

Chapter 6 Dashboard Geographical Map

Describes how to use the geographical map that displays real-time status indicators showing the worst operational status at different geographical locations.

Chapter 7 Dashboard Custom Map

Describes how to use the custom map that contains a custom picture or diagram that can represent one of your organization's views, combined with Dashboard real-time data.

Chapter 8 Dashboard Topology Map

Describes how to use the topology map to view real-time status for CIs in single-level or multi-level maps.

Chapter 9 Dashboard Reports

Describes how to view the Configuration Item Status Alerts, KPIs Over Time, Raw Data Over Time, and SLAs Summary reports.

Chapter 10 Mercury Dashboard Ticker

Describes how to use Mercury Dashboard Ticker to display Dashboard information about the status of the CIs you are monitoring in a non-intrusive manner on your desktop either via a Ticker Window or a Message Window without opening Dashboard.

Chapter 11 Real User Monitor Views in Dashboard

Describes the content and structure of the Real User Monitor views.

Chapter 12 Using Mercury Business Availability Center for SAP

Describes the specific tasks involved in using Mercury Business Availability Center for SAP.

Chapter 13 Working With Deep Transaction Tracing

Describes the Deep Transaction Tracing data available in Dashboard. Deep Transaction Tracing provides a monitoring layer for collecting information about the behavior of transactions within the target machine.

Who Should Read This Guide

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

- Mercury Business Availability Center administrators
- Mercury Business Availability Center end users

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

Getting More Information

For information on using and updating the Mercury Business Availability Center Documentation Library, reference information on additional documentation resources, typographical conventions used in the Documentation Library, and quick reference information on deploying, administering, and using Mercury Business Availability Center, refer to *Getting Started with Mercury Business Availability Center*.

1

Introduction to Mercury Business Availability Center Dashboard

Mercury Business Availability Center Dashboard enables you to monitor the system performance of your organization's IT universe and to view the results in several formats.

This chapter describes:	On page:
About Dashboard	1
How Dashboard Works	3

About Dashboard

Mercury Business Availability Center Dashboard is an interactive digital tool that enables you to assess real-time system performance and availability in a business context. Dashboard provides extensive infrastructure monitoring under a single umbrella, giving you a consolidated view of the current operational status of your organization.

Dashboard utilizes data collected by Mercury 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. Mercury Business Availability Center collects metrics about the end-user experience from a range of environments, including ERP, CRM, Web, and Citrix, and about system performance from a range of back-end infrastructure components, including Web, application, database, and firewall servers.

The collected and aggregated data is used by the Dashboard KPIs (Key Performance Indicators) to provide quantifiable measurements that help you monitor how well your business is achieving its 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 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 forth.

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 allowing you 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 may be in breach in the near future.

How Dashboard Works

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

You view the CIs in Dashboard in service views. 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 at that point in time.

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 flowing into Mercury Business Availability Center, and KPI status for these CIs is calculated from that data. For all 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 business logic the KPI is using).

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 the 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
- Monitoring Service Level Agreements

Monitoring Performance Problems

When a 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 Mercury Business Availability Center to view reports for problematic components, measurement data over time, and general monitoring data.

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

Monitoring Service Level Agreements

You use Service Level Management to operate your applications and infrastructure according to the service contracts you have with your 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.

2

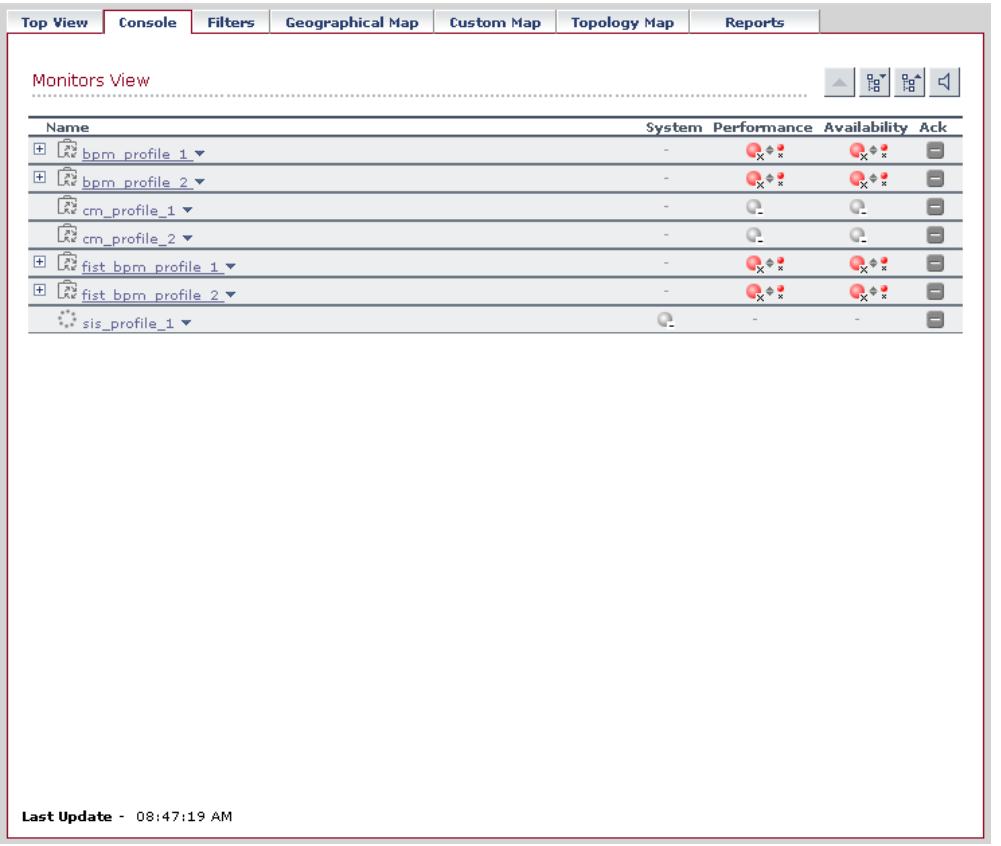
Working with Dashboard

This chapter describes how to work with Dashboard tabs, views, and configuration items (CIs).

This chapter describes:	On page:
Overview of Dashboard	6
Working with Views	8
Understanding KPI Status	9
Viewing Additional Information for CIs	17
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Overview of Dashboard

You access the Dashboard application by selecting **Applications** > **Dashboard**.



Dashboard contains the following tabs:

- **Top View tab** – displays the components of the active view in a hierarchical, top-down graphic.
- **Console tab** – displays the components of the active view arranged in a hierarchical tree.
- **Filters tab** – displays a filtered list of CIs, according to the selected filter option.

- **Geographical Map tab** – displays an association between geographical locations and status indicators using a maps applet.
- **Custom Map tab** – displays icons representing CIs in the view on a custom image.
- **Topology Map tab** – displays the results of pattern views or instance views.
- **Reports tab** – displays the Dashboard reports: Configuration Item Status Alerts report, KPIs Over Time report, Raw Data Over Time report, Change report, and SLAs Summary report.

  Each tab contains a **Last Update** time, showing the time that the information in the tab was last updated.

Notes and Limitations

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 according to the viewing permissions specified for the user. If you cannot see a view, contact your administrator.
- The first time that you access Dashboard, you may experience a short delay while Dashboard compiles the page.

See Also...

- "Configuring User Permissions" in *Platform Administration*.

Working with Views

The CIs and relationships produced by the various CI-generating tools that operate within Mercury Business Availability Center are stored in the CMDB.

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 *IT Universe Administration*.) Each CI has only one instance in the CMDB. Different views can look at the same CI.

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 (that is, all CIs that may act as a parent CI to other CIs). CI names are either taken from the external source, or as defined by the administrator in "Creating a New CI" in *IT Universe Administration*.

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.

In addition, changes made within Mercury Business Availability Center, by changing the profiles in Monitor Administration, or by manually updating CIs in CMDB Administration, are also automatically deployed to Dashboard.

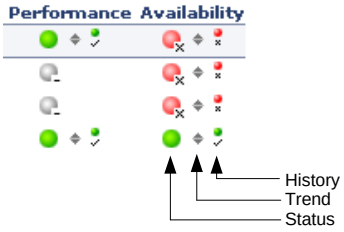
Key Performance Indicators (KPIs) are assigned by default to monitor CIs and propagate up the hierarchy. You can manually assign additional KPIs to CIs in Dashboard Administration. For each CI, one or more Key Performance Indicator (KPI) columns are displayed, for example, for Availability, System, Performance, and so forth. For a list of the KPIs used in Dashboard, see "Dashboard KPIs Details" in *Application Administration*.

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 9.

The views may also contain dynamic hierarchies generated by the Dynamic Node Factory definition file. These hierarchies are created in Dashboard in 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 "Working with Dynamic Node Factory" in *IT Universe Administration*.

Understanding KPI Status

For each CI, Dashboard displays real-time status in one or more KPI columns used in the view. 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 may contain additional icons showing trend and history for the CI under that KPI.



For explanations about trend and history icons, see "Trend and History Statuses" on page 14.

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" in *Application Administration*.

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 "Dashboard Business Rules Details" in *Application Administration*.

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 "Viewing Additional Information for CIs" on page 17.

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 will still be red.

This section includes the following topics:

- "Statuses Used in Dashboard" on page 11
- "Trend and History Statuses" on page 14

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	Status Definition
	Red with attached "X"	Critical	The measurement calculated for the KPI fell within the value range for the Critical objective.
	Orange with attached exclamation marks	Major	The measurement calculated for the KPI fell within the value range for the Major objective.
	Yellow with attached exclamation mark	Minor	The measurement calculated for the KPI fell within the value range for the Minor objective.
	Olive with tilda	Warning	The measurement calculated for the KPI fell within the value range for the Warning objective.
	Green	OK	The measurement calculated for the KPI fell within the value range for the OK objective.
	Gray with attached dash	Uninitialized	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.
	Gray with attached dash	Not up to date (Decay)	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.

Icon	Description	Status	Status Definition
	Gray with attached dash and green outline	Stopped or Downtime	The corresponding profile/group/monitor for the CI is currently disabled. For details, see "Stopped/Downtime Status" on page 13.
	Gray with white center	Not applicable for this CI	This KPI is not applicable for the CI.

Note the following specialized status icon information:

- Change icons indicate when a change was made to a specific static attribute of a specific CI in the Mercury Universal CMDB. For details, see "Viewing Real-Time Changes to CI Properties" on page 38.
- If all members of a group have **Uninitialized** status, the group status is Uninitialized, regardless of which calculation method is in use. A group will also have Uninitialized status if it has no children.
- As long as there are one or more children in a group that have a colored status, then one of the group business rules will be used to define status for the group, regardless of the number of children that have Uninitialized, Stopped, or Downtime status.

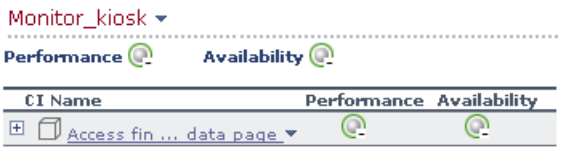
  For Trend and History status, see "Trend and History Statuses" on page 14.

  This section includes the following topics:

- "Stopped/Downtime Status" on page 13
- "Influence of Must and Weight on Status" on page 14

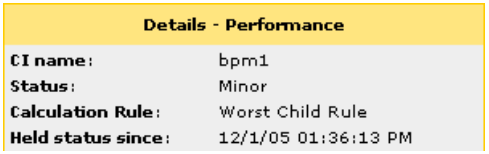
Stopped/Downtime Status

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).



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 that was used to calculate the result, and, if the CI is in downtime, to give the date and time when downtime finishes.



The following applies for the status of groups containing Stopped or Downtime status CIs:

- If at least one child has a status other than Stopped, Downtime, or Uninitialized, then the status for the group is calculated in the usual way, as described in “Understanding KPI Status” on page 9.
- If all the children have either Stopped, Downtime, or Uninitialized status, the group has Uninitialized status.
- If all the children have Stopped status, the group also has Stopped status.
- If all the children have Downtime status, or there is a combination of Stopped and Downtime, the group has Downtime status, and its Details tooltip displays the earliest time given for the end of downtime for all children in the group.

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



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 *Application Administration*.

Trend and History Statuses

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.

Icon	Description	Status	Status Definition
	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.

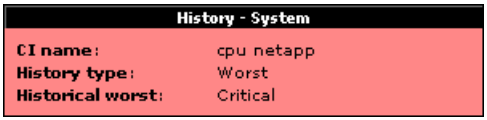
Trend status tooltips display the following information:



➤ **Trend** followed by the name of the KPI

- **CI name** – the name of the CI
- **Trend** – the trend of the KPI in the selected time period

History status tooltips display the following information:

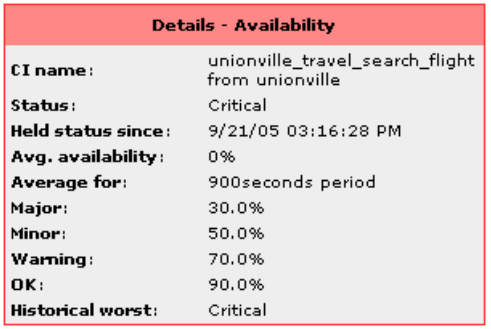


- **History** followed by the name of the KPI
- **CI name** – the name of the CI
- **History type –** the history calculation type to be used when calculating history status. Values can be: **Worst**, **Average**, or **None** (no history status displayed). The value of the parameter is assigned to the **HistoryType** rule global parameter. For details, see "Configuring the Rules Global Parameters" in *Application Administration*. If the value is **none**, the historical information is not displayed.
- **Historical <worst|average|none>** – the worst or average status of the KPI in the selected time period. The information that is displayed depends on the value assigned to the **HistoryType** rule global parameter.

  For more information on how to customize your trend and history statuses and explanations about how those statuses are calculated, see "Status Calculations" in *Application Administration*.

Viewing Additional Information for CIs

You can view additional information for a CI in a **Details** tooltip by holding the cursor over the status icon for the CI. Details tooltips provide additional textual information for the CI, such as the current status, how long the icon has held the current status, the thresholds used to calculate the status, and the historical worst value.



Details - Availability	
CI name:	unionville_travel_search_flight from unionville
Status:	Critical
Held status since:	9/21/05 03:16:28 PM
Avg. availability:	0%
Average for:	900seconds period
Major:	30.0%
Minor:	50.0%
Warning:	70.0%
OK:	90.0%
Historical worst:	Critical

The **Critical** threshold is defined by values lower than the **Major** threshold; for example, in the above tooltip the Major threshold is 30%, so any value lower than 30% means that the KPI is at **Critical** status.

For more information on all status calculations methods, see “Status Calculations” in *Application Administration*.

Note:

- Dashboard uses the timestamp of the database machine hosting the Mercury Business Availability Center database. The times displayed in the tooltips reflect the time zone setting on that machine. If you customize the time zone setting in Mercury Business Availability Center using the **Admin** > **Personal Settings** > **General Settings** option, then the customized time zone is also used in Dashboard.
- When Dashboard is not receiving 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 that no data has arrived.

The parameters displayed in the Details tooltips vary, depending on factors such as the CI type (group or monitor), KPI, and business rule. For details, see "Tooltips Repository" in *Application Administration*.

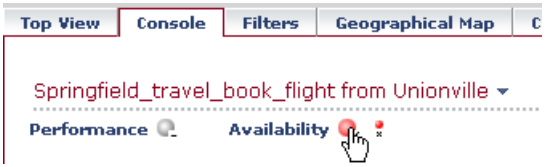
Viewing Sample Details

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

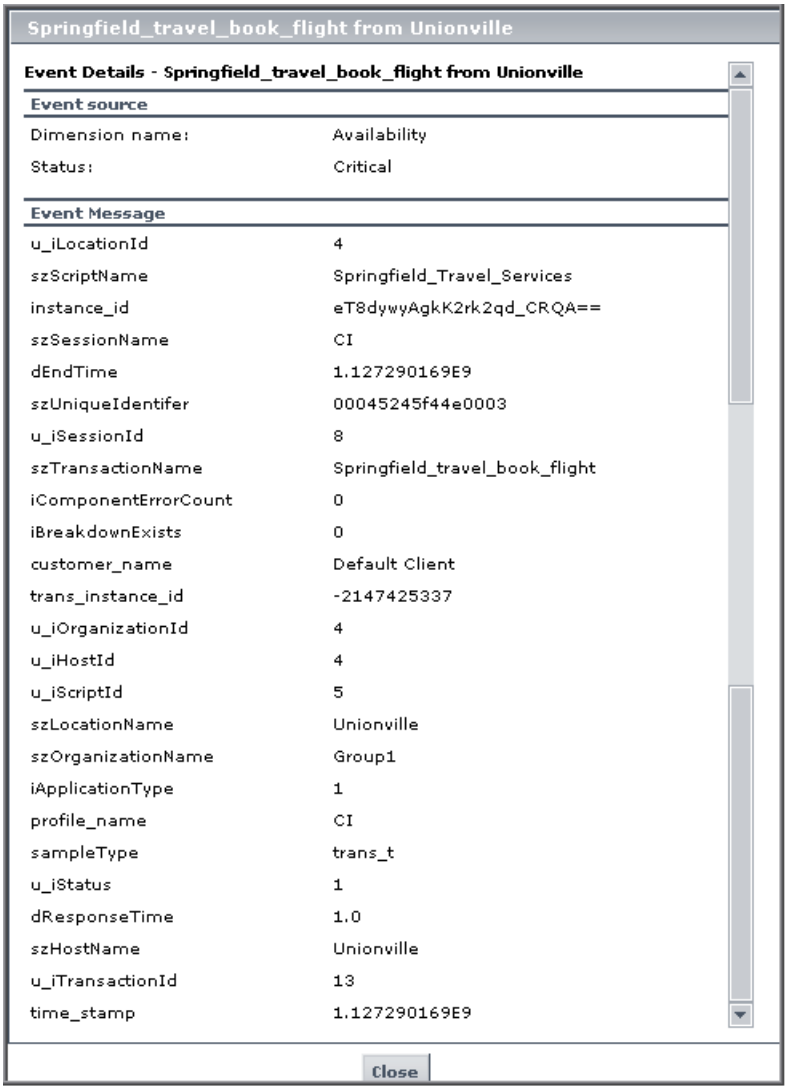
To view the Event Details window for CIs, you must configure Dashboard to save the last sample for the CI. You can configure this per KPI rule (so that you will only see sample details for a monitor CI under that KPI), or for all rules. For details on how to do this, see "Last Sample Details Definitions" in *Application Administration*.

Note: Storing last sample details may require use of a large amount of memory, slowing down Dashboard performance.

After setting Dashboard to save the CI samples, the Event Details window can be opened from the Console or Filters tabs in Dashboard by clicking the status icon for a monitor CI. (If there is an associated Event Details window for a CI, then the cursor changes to a hand when you hold the cursor over the status icon for the CI.)



The Event Details window is as follows:



The **Event Source** area in the window 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.

The **Event Message** area displays the details for the CI (according to the KPI) at the last update. Note that the Event Details window is not automatically refreshed when there is a new update for the CI. You can refresh by right-clicking in the window (outside of the **Event Message** panel) and selecting **Refresh**, or by closing and reopening the window.

You can open as many Event Details windows as required; if you move to another application or administration page in Mercury Business Availability Center, any open Event Details windows are closed.

3

Dashboard Top View

The Top View tab provides you with a top-down view of the health of your applications and business processes. 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.

This chapter describes:	On page:
About the Top View Tab	24
Working with the Top View Tab	25
Network Operations Center View	32
Monitoring the Connection to Tomcat	32

About the Top View Tab

The Top View tab 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.

By presenting an integrated, single view of essential applications and business processes, the Top View tab is able to provide 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.

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. For details, see below.

You can display the top view tree in a separate window to be used by a Network Operations Center (NOC). For details, see "Network Operations Center View" on page 32.

The **Last Update** message in the bottom-right corner of the tab shows connectivity with the Dashboard servlet running on the Tomcat servlet engine. For details, see "Monitoring the Connection to Tomcat" on page 32.

Working with the Top View Tab

To access the Top View tab, select **Applications** > **Dashboard** and click the **Top View** tab.

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

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.

You can change the default setting for the number of levels of CIs that are displayed in Top View, on the Infrastructure Settings page. For details, see "Modifying the Number of Levels in the Console Tab" in *Application Administration*.

You can also change the default setting for the number of levels of CIs that can be expanded in Top View, on the Infrastructure Settings page. For details, see "Modifying the Number of Levels in the Console Tab" in *Application Administration*.

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 9.



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.

A CI may have one of the following icons:

Icon	Description
	Availability KPI (with OK status)
	All other KPIs (with uninitialized status)
	Customer KPI (with Critical status)
	HP System KPI (with OK status)
	OT Impact KPI (with OK status)
	Other KPI (with OK status)
	Performance KPI (with OK status)
	PNR KPI (with OK status)
	RT Impact KPI (with OK status)
	System KPI (with OK status)
	The CI has been acknowledged
	User KPI (with OK status)

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

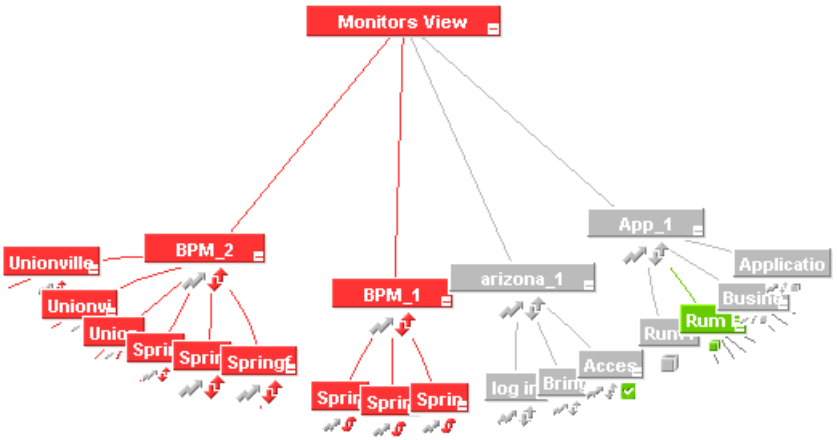
For a list of the KPIs used in Dashboard, see “Dashboard KPIs Details” in *Application Administration*.

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 Tab Functionality" on page 29.

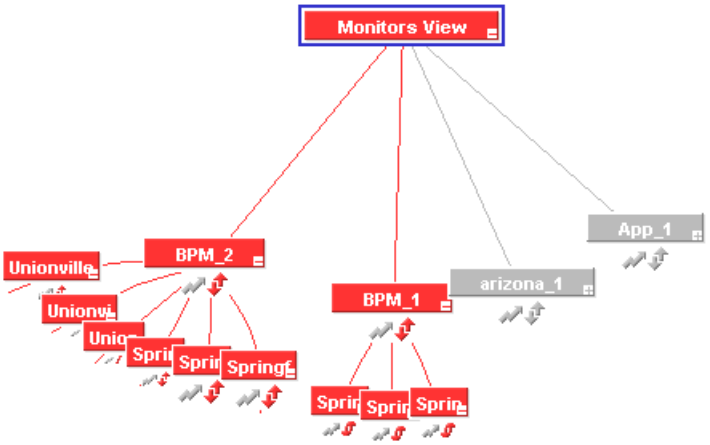
Right-click a CI bar to display the following menu options:

- **View in Console** – to view the CI's branch in the Console tab.
- **Expand to problem** – to collapse the branches where CIs do not have critical or major statuses.

  For example, if in the Mercury Tours Business view, you see that Infra support is red, you might want to display the lower levels of the view to get a better idea of the problem.



Right-click Infra support and select the **Expand to problem** option, to collapse the non-problematic branches.



- **Expand more levels** – to open a number of levels (7 by default) below the selected level.
- **Set/Unset Acknowledgment** – to set or clear the CI acknowledgment. For details, see "Setting or Unsetting Acknowledgments" on page 48.
- **Acknowledgment Details** – to display acknowledgment information for the CI. For details, see "Viewing Acknowledgment Details" on page 46.
- **Open in new window** – to open a popup 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.

Note: Some Top View tab functionality can be customized by users with administrative permissions. For details, see "General Administration for Dashboard" in *Application Administration*.

This section includes the following topics:

➤ "Top View and View Explorer" on page 29

➤ "Top View Tab Functionality" on page 29

➤ "Notes and Limitations" on page 31

Top View and View Explorer

When you select a CI in View Explorer, Top View displays the selected CI centered in the tree with all its sub-branches expanded.

If you select a CI in the Top View tree, it is highlighted in the View Explorer.

Top View Tab Functionality

You can manipulate the Top View graphic to display any area of the tree, to display expanded branches or collapsed branches, and to change the overall panorama of the graphic, by using the following actions:

➤ Click a bar to move the bar to the center of the graphic.

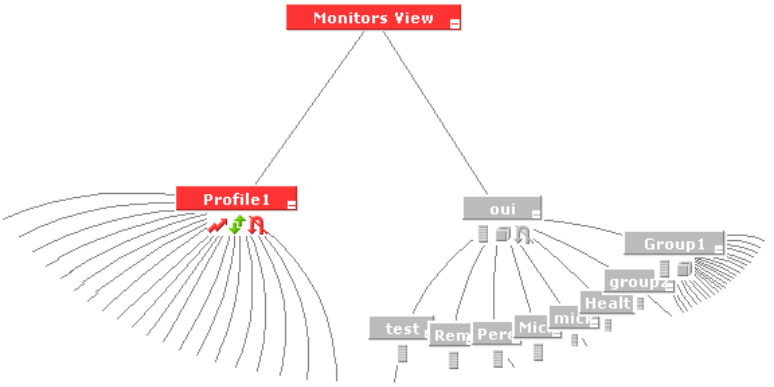
➤ Click anywhere in the tab to change the emphasis of the graphic. The graphic rotates to display the components of the subtree for the nearest bar.

➤ Click and drag anywhere in the tab to move and rotate the graphic around that point.

➤ Expand and collapse the branches of a subtree by clicking the expand (+) or collapse (-) symbols, displayed in the bottom right corner of the bar.

➤ Increase or reduce the gap between each branch by holding down the ALT button on the keyboard and dragging in the tab.

- If there are branches that do not fit on the screen, the Top View graphic 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.



Holding the cursor over a bar enables the following functionality:

- The bar is outlined in grey.
- If the CI has a long name, the bar expands to display the full name.
- A tooltip is displayed, providing status and performance data in each KPI for the item. For an explanation of the tooltips, see “Viewing Additional Information for CIs” on page 17.

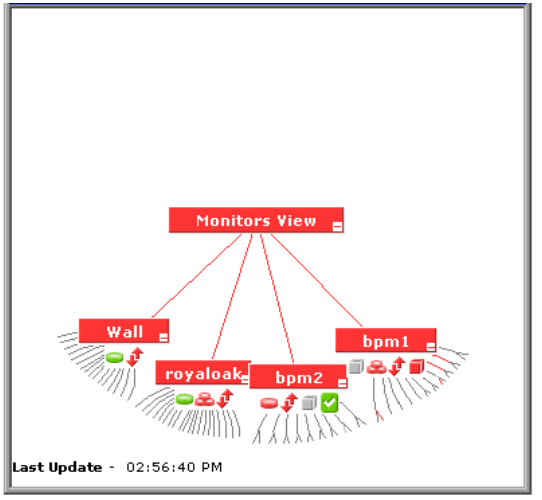
Note: When you open the Top View tab, it displays by default the active view at the root level, centered around the view name bar. Any manipulation you do to the graphic is not saved; if you move to another tab, then when you open the Top View tab again it reverts to the default display format.

Notes and Limitations

- When you open the Top View tab for a view tree with a large infrastructure, you may experience a short delay while Dashboard builds the view.
- The top view is refreshed every 30 seconds. If no change was made to the view, the top view remains the same. If many changes have been made to a view, or if CIs have been deleted from the view, that view's top view 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. For details, see "General Administration for Dashboard" in *Application Administration*.
- If the Top View tab does not display Chinese or Japanese characters properly, make sure that the Top View Font Name setting has been set to: Arial Unicode MS in the Infrastructure Settings. For details, see "Enabling Chinese or Japanese Characters in Top View" in *Application Administration*.
- 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 browser window, then close any other open Mercury Business Availability Center browser windows, and reopen Mercury Business Availability Center.

Network Operations Center View

You can display the top view tree in a separate window to be used by a Network Operations Center (NOC).



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.

To display the top view in the NOC View standalone window, click **NOC View** at the bottom right corner of the Top View tab. To return to the Top View tab, close the Top View standalone window.

Monitoring the Connection to Tomcat

The **Last Update** message in the bottom-right corner of the tab shows connectivity with the Dashboard servlet, running on the Tomcat servlet engine. The **Last Update** message text displays the time the information in the tab was last updated.

4

Dashboard Console

The Console tab presents your views in tree format, indicating status for each CI under each KPI.

This chapter describes:	On page:
Working with the Console Tab	34
Viewing Real-Time Changes to CI Properties	38
Menu Options for CIs	39
Service Level Management Results in Dashboard	42
Acknowledging Performance Problems	45
Show Path to Root	45
Show Problematic Subtree	49

Working with the Console Tab

The Console tab shows the components of the active Dashboard view organized into the same hierarchy tree format that you defined for the CIs in Dashboard Administration. For details, see "Working with CIs in IT Universe Manager" in *IT Universe Administration*.

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

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). Note that 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" in *Using Dashboard*.

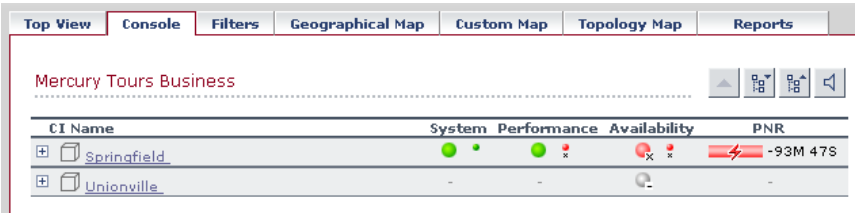
Tip: Hold the cursor over the entry in the **CI Name** column to display the full name of a CI in a tooltip.

This section includes the following topics:

- "Navigating in the Tree" on page 35
- "Tooltips" on page 36
- "Sound Alert for Critical Status" on page 37

Navigating in the Tree

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). When you first access the view, if there is only one parent, you see the two highest levels: Mercury Tours Business (parent) and Springfield and Unionville (children).



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



You can expand each CI individually to show the children for that CI, or you can use the **Expand All**/**Collapse All** buttons to expand all CIs in the view (so that you see children for all CIs). Note that these buttons are shown only when one or more of the currently displayed CIs can be expanded or collapsed.

Once a CI is expanded using either of these methods, it remains expanded for as long as the browser window is open, even if you move to another Mercury Business Availability Center application.

If you move from another tab to a CI in the Console tree pane (for example, by clicking a CI name in the Filters tab, or by selecting an option from a CI options menu), then the relevant CI name is shown highlighted in the tree (and in the View Explorer), and the CI is shown expanded. However, CIs expanded in this way do not retain the setting and are collapsed again when you move away from that level of the view.

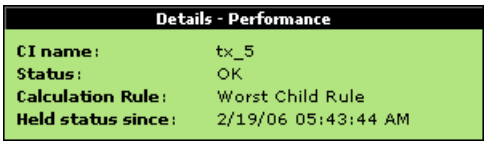
To view the CIs two levels down from the current CIs, you click a drill-down link (linked CI name). CIs are displayed as drill-down links if there is at least one level below the CI, or if there is at least a CI with children within the same branch. In the above example, the CIs Springfield and Unionville are shown as drill-down links because Mercury Tours Business is a CI with children. Click Springfield to display the CI's children. The view of the tree changes; Springfield is shown as the parent CI and the level under the selected CI is displayed.



The CIs at the new level are by default shown collapsed; however, if the displayed level contains only one parent CI, or if you have previously expanded CIs, then the children are shown for the relevant CIs.

Tooltips

Hold the cursor above the icon to display a tooltip that provides more information about the change:



The tooltip includes the following information:

- **CI Name** – The name of the CI.
- **Status** – The status of the CI (calculated according to one of the status calculation methods). It may also display:
  - **Not up to date** for decayed CIs, indicating that the CI has passed its timeout period. (For a SiteScope CI, this status is displayed after a SiteScope monitor is disabled.)

- **Stopped** when a Business Process profile is stopped.

- **Calculation Rule** – The name of the rule that calculates the KPI status or value.
- **Held Status Since –** The date and time since which this CI has held its current operational status.
- **Invisible Children –** Might not appear. The number of children CIs belonging to other views, which are connected to this CI but do not belong to this view – "Editing CI Properties" on page 65 in *IT Universe Administration*.

Sound Alert for Critical Status

Dashboard provides the option to have a sound play when a CI changes status to **Critical** (red), to provide an aural notification of the change in status.



The Sound On/Off button is displayed in the top right corner of the Console tab. Click the button to toggle the sound on or off.

The icon tooltip indicates the action you will perform if you click the button.

When the sound is switched on, a sound alert is played when the Console 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.

Note the following additional conditions:

- 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.

Note: The alert sound is a **.wav** file downloaded by the browser. If you are using Mozilla, you must download a plug-in for playing **.wav** files, otherwise no sound will be heard.

The default alert sound can be changed by users with administrative permissions.

Viewing Real-Time Changes to CI Properties



Change icons are displayed in the Console tab report and in the Filters tab report, between the name of the CI and the down arrow to indicate that changes were made to the CI's or KPI's history-sensitive properties, in real time.

To display real-time changes for a CI and its children, the **Monitor changes** check box must be selected for the CI. For details, see "Real-Time Monitoring of CI Property Changes" in *Application Administration*.

A limited number (twenty by default) of CIs (and their children) can be monitored for real-time changes at any one time. This number can be customized.

By default the Change icon is displayed for 24 hours (default value) after a change has occurred. This time period can be customized.

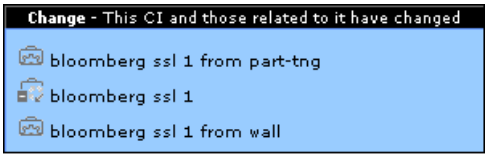
Note: To view the real-time change icons you must have the Shared CMDB feature installed. For details, see "Real-Time Monitoring of CI Property Changes" in *Application Administration*.

Changes made to other CIs are displayed in the Change report. For details about the Change report, see "Change Report" on page 135.

The Change icons are:

- left-pointing arrow and star indicate that at least one history-sensitive property of CI itself has changed.
- down-pointing arrow and star indicate that at least one history-sensitive property of the CI's children have changed.
- both left-pointing and down-pointing arrows and star indicate that at least one history-sensitive property of the CI and at least one history-sensitive property of the CI's children have changed.

Hold the cursor above the icon to display a tooltip that provides more information about the change:



- The tooltip header indicates whether the change was made to the CI, the CI's children, or both.
- The tooltip body lists the CIs that were changed.

Menu Options for CIs

You click the down arrow to the right of a CI name to access the menu options for that CI. The available options vary, depending on the CI type and on the context menu defined for the CI. If no context menu is defined for the CI, then it will not have a menu arrow. If one of the menu options is not supported for the selected CI, that option is shown disabled.

The menu options are available for CIs in the Console and Filters tabs. For information on the various menu options, see "Context Menus Repository" in *Application Administration*.

The menu options available for a CI may include the following functionality:

- Enable you to move to other Mercury Business Availability Center applications or SiteScope to view information and reports related to the CI; for example, you can view a trend report on the End User Management page, containing measurement data for the CI over a specified time period.
- Enable you to move to the Filters tab to view CIs for a CI's subtree. You can select an option to filter the subtree CIs and monitor CIs, in which case the CIs are filtered according to the current active filter selected in the Filters tab.

Some of the menu options are:

- **Drill to Diagnostics** – opens the Diagnostics application. This option is displayed only if you have installed Diagnostics. For more information about Diagnostics, refer to *Mercury Diagnostics Installation and User's Guide*.
- **Goto Report:**
  - **Trend Report** – opens the trend report for the CI. For details about the report, see "Trend Report Manager" in *Application Administration*.
  - **Transaction Analysis** – opens the Transaction Analysis report for the CI. For details about the report, see "Transaction Analysis Report" in *Using End User Management*.
  - **SiteScope** – opens the appropriate monitor page in SiteScope.
  - **Cross-Performance Report** – opens the Cross-Performance report for the CI. For details about the report, see "Cross-Performance Report" on page 15.
  - **Configuration Item Status Alerts** – opens the Configuration Item Status Alerts report for the CI. For details about the report, see "Configuration Item Status Alerts" on page 100.
  - **KPIs Over Time Report** – opens the KPIs Over Time report for the CI. For details about the report, see "KPIs Over Time Report" on page 107.

- **Change Report** – opens the Change report for the CI. For details about the report, see "Change Report" on page 135.
- **Raw Data Over Time** – opens the KPIs Over Time report for the CI. For details about the report, see "Raw Data Over Time Report" on page 120.

- **Filters –** displays a list of filters you can use to display subsets of the selected CI's children on the Filters page. For details, see "Menu Options in the Filters Tab" on page 67.
- **Show in Top View** – opens the Top View tab with the view's tree centered on the selected CI. For details about the Top View tab, see "Dashboard Top View" on page 23.
- **Show Path to Root** – opens a Top View page that displays the path from the selected CI to the root CI. For details, see "Show Path to Root" on page 49.
- **Show Problematic Subtree** – opens a Top View window that displays all the children CIs with **Critical**, **Major**, or **Minor** status. For details, see "Show Problematic Subtree" on page 49.
- **Acknowledgment** – select one of the following:
  - **Acknowledgment Details** – opens the Acknowledgment details page to view information about the CI's acknowledgment. For more details, see "Viewing Acknowledgment Details" on page 46.
  - **Set/Unset Acknowledgment** – opens the Set/Unset Acknowledgments page to set or clear the CI's acknowledgment. For details, see "Setting or Unsetting Acknowledgments" on page 48.

  Additional options are available in the SAP_Systems view (for details, see Chapter 12, "Using Mercury Business Availability Center for SAP"), in the Deep Transaction Tracing view (for details, see "Working With Deep Transaction Tracing" on page 193), and in the Real User Monitor views (for details, see "Real User Monitor Views in Dashboard" on page 151).

Service Level Management Results in Dashboard

You 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 may 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).

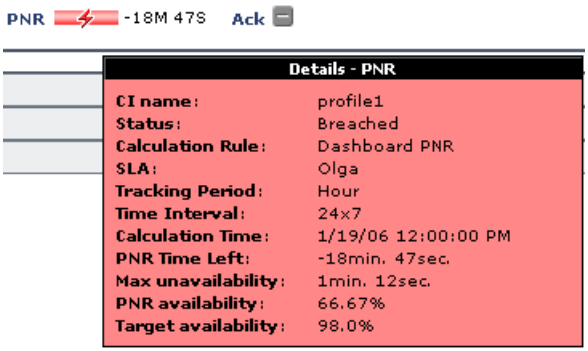
For details on attaching a PNR (point of no return) KPI to a CI to view data in Dashboard, see "Attaching a PNR KPI to a CI" in *Application Administration*.

This section includes the following topics:

- "PNR Details" on page 42
- "How Dashboard Calculates Unavailability" on page 44

PNR Details

The following example shows the PNR of an SLA:



- **CI name** – the name of the CI that is attached to the SLA.

- **Status** – the status of the SLA as defined in the Edit KPI window. For details, see "Defining Objectives" in *Application Administration*.
- **Calculation Rule** – the name of the rule that was used to calculate the value of the PNR.
- **SLA** – the name of the SLA.
- **Tracking Period** – the time period by which Service Level Management filters the calculation (in this example, Hour).
- **Time Interval** – the actual period of time for which Service Level Management calculates data.
- **Calculation Time** – the date and time from when Service Level Management begins calculating the SLA. In this example, the time period being measured is 1/19/06 12:00:00 PM to 1/19/06 01:00:00 PM.
- **PNR Time Left** – the time remaining before the service level agreement (SLA) contract is breached (in this example, 18 minutes and 47 seconds).
- **Max Unavailability** – the maximum time that a KPI may be unavailable (in this example, 1 minute and 12 seconds) without breaching the SLA contract.
- **PNR Availability** – the availability percentage of the KPI at the last time data was polled. PNR availability is calculated from the start of the time range (by default, at 00:00) till the current time.
- **Target Availability** – the percentage of time that the KPI must be available, according to the SLA. For an example of unavailability, see the next section.

Note: The PNR KPI takes the score of the worst result from the lower levels of the SLA (the worst child result).

How Dashboard Calculates Unavailability

Service level agreements regularly include a clause covering unavailability, that is, the period of time that a system may be down. For example, if availability must be 98.5%, then a system may be unavailable 1.5% of the time.

The Dashboard PNR Rule (the rule always assigned to the PNR KPI) calculates unavailability according to the target availability for the CI (the time that the component must be available, according to the SLA). This calculation is also based on the measurements for the Service Level Management Availability KPI that is attached to the CI when creating the SLA.

The following example shows how Dashboard calculates the time a system may be unavailable:

The start of the week is Monday, 8 Aug 05 00:00 AM.
Today is Friday 12 Aug 05 10:15 AM.
The time range is Week to Date.
The time interval is Business Hours, that is, 8:00 AM to 5:00 PM, Monday to Friday.
The time that has passed for this time range is:
4 whole days (Monday to Thursday) = 4 x 9 = 36 hours.
Part of a day (Friday) = 8:00 AM - 10.15 AM = 2.25 hours.
Total time = 38.25 hours.
Availability (as defined in SLA) = 98.5%
Availability, therefore, must be 98.5% x 38.25 = 37.68 hours.
Maximum unavailability = 38.25-37.68 = 0.57 hours.

If unavailability reaches above this limit, Dashboard changes the status icon colors in the SLM tab.

Acknowledging 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.

You acknowledge a problem by selecting the **Ack** check box for a node in the Top View, Console, and Filters tabs (you can clear the acknowledgement by selecting the check box again). In the Console and Filters tabs you can set/unset the acknowledgement by clicking the icon. You can also set/unset acknowledgement and view the CI acknowledgment history by using the context menu in the Top View, Console, and Filters tabs.

After a problem node is acknowledged, or the acknowledged status is cleared, you can view the history in the Acknowledged Details window.

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).

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



➤ By default, the **Ack** column is displayed. It can be hidden by users with administrative permissions (for details, see "Hiding or Showing the Ack Column" in *Application Administration*). The Acknowledgment-related right-click options remain available.

This section includes the following topics:

➤ "Viewing Acknowledgment Details" on page 46

➤ "Setting or Unsetting Acknowledgments" on page 48

Viewing Acknowledgment Details

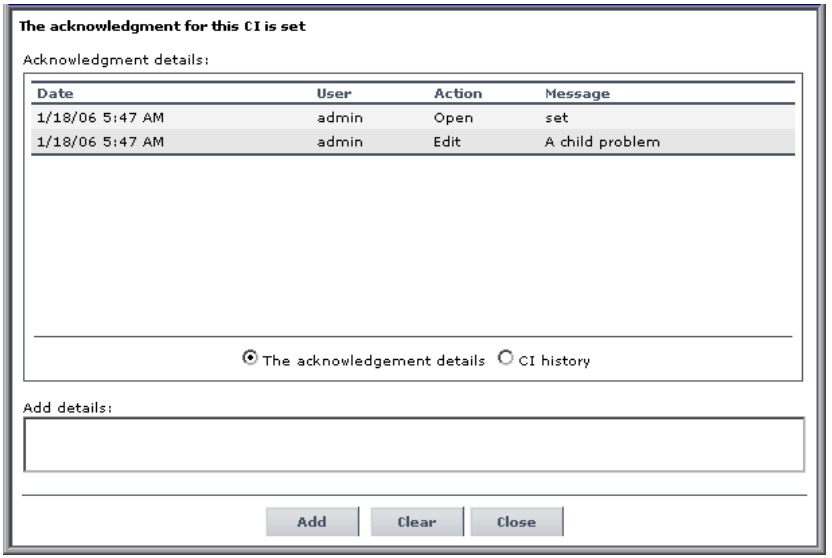
After a problem CI is acknowledged, you can view the details of the current acknowledgment or the acknowledgment history of the CI in the Acknowledged Details window.

To view acknowledgement details:

1 Click the down arrow to the right of a CI and select one of the following options:

➤ **Acknowledgment details** – the **Acknowledgment details** box displays the details of the currently opened acknowledgment.

➤ **CI history** – the **Acknowledgment details** box displays the details of all the acknowledgments over time.



The information displayed in the **Acknowledgment details** box is:

Field	Description
Date	The date and time when the acknowledgment status was modified.
User	The name of the user who modified the status.
Action	The type of action that was performed: ➤ **Clear** – when the acknowledgment history was cleared ➤ **Unset** – when the acknowledgment was unset ➤ **Info** – details were added to the acknowledgment without changing the acknowledgment status ➤ **Open** – when the acknowledgment was set ➤ **Edit** – when details were added to the acknowledgment
Message	Displays the status of the acknowledgment or the information that was entered in the **Add details** box.

2 In the **Add details** box, 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**.

3 Click:

- **Add** to add the information you entered in the **Add details** box to the acknowledgment history.
- **Clear** to clear the acknowledgment history. All acknowledgment details are deleted and a new note is added to indicate that the history was cleared.
- **Close** to close the window. If you changed something in the window and you click **Close**, a message is issued indicating that data will not be saved.

Setting or Unsetting Acknowledgments

You acknowledge a problem by selecting the **Set/Unset Acknowledgment** right-click option for a CI (you can unset the acknowledgement by selecting the same option and clicking **OK**).

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).

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

To set or unset acknowledgement:

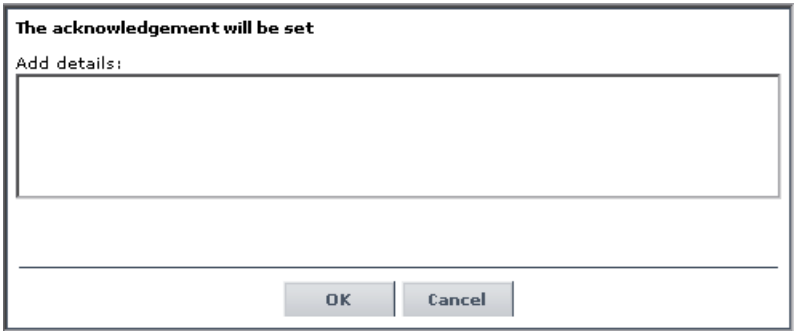


1 Click the down arrow to the right of a CI and select **Acknowledgment** > **Set/Unset Acknowledgment** to open the Set/Unset Acknowledgment window or click the **Ack** icon to the right of the CI.

Note: The window is a toggle window. If you have acknowledged the CI, the top line in the window is: **The acknowledgment will be unset**. If you have not acknowledged the CI, the top line in the window displays: **The acknowledgment will be set**.

---

2 In the Add details box, enter information about the acknowledgment.



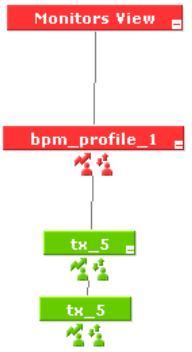
3 Click **OK** to set or unset the acknowledgment depending on the previous status of the window.

Show Path to Root

The purpose of the **Show Path to Root** option in the Filters or Console tab is to open a Top View window and display the path to the root CI from the selected CI.

For example, right-click the arrow to the right of the CI for which you want to display the path to root, and select **Top View** > **Show Path to Root**.

A Top View window opens and displays the path to the root.



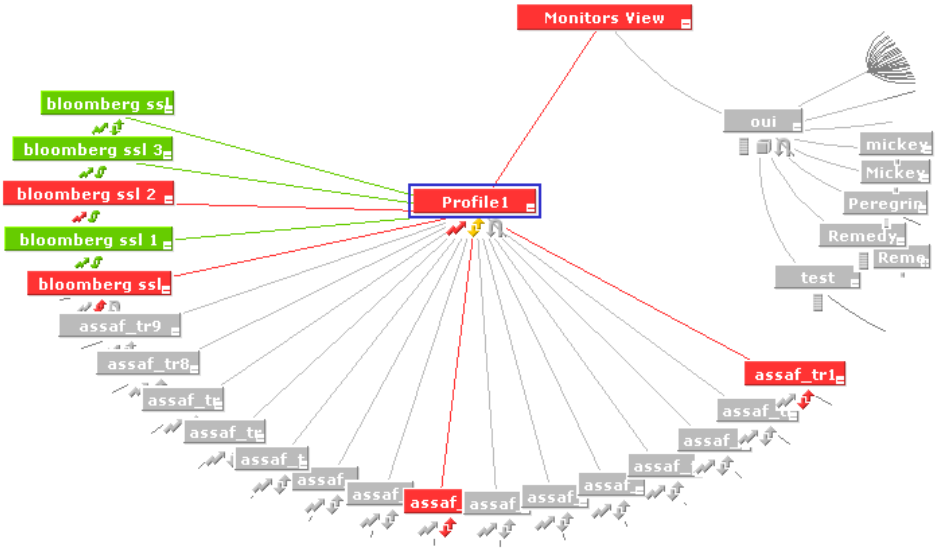
Show Problematic Subtree

The purpose of the **Show Problematic Subtree** option is to enable you to find the problematic child CI that causes the parent CI that you selected to have a status other than **OK**.

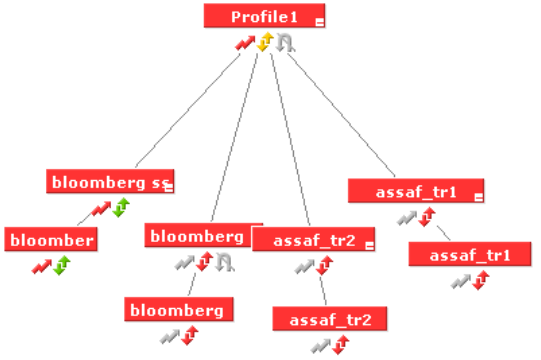
The **Show Problematic Subtree** option is enabled only for CIs that have at least one KPI with a status other than **OK**.

When you select the **Show Problematic Subtree** option, a Top View window opens to display the subtree of the selected CI with the children CIs that have at least one KPI with a status other than **OK**.

For example, the Profile1 CI has the following children:



If you select the **Top View >Show Problematic Subtree** option for Profile 1, the following children are displayed:



5

Dashboard 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.

This chapter describes:	On page:
Understanding the Filters Tab	52
Setting Active Filters	54
Searching for Specific CIs and Filtering the Results	60
Quick Filter	64
Menu Options in the Filters Tab	67

Understanding the Filters Tab

The Filters tab displays a filtered list of CIs and the current operational status in each Key Performance Indicator (KPI) for each CI. The displayed CIs belong to the selected subtree. All CIs in the Filters tab are shown at the same level (non-hierarchically).



If none of a CI's KPI statuses match the filter, the CI is not listed.

The Filters tab contains the following components:

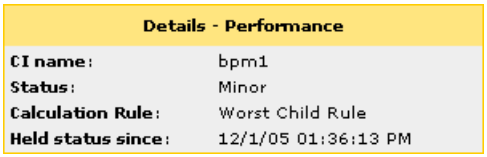
- **Active Filters** link – define or modify active filters in the Defining/Editing Filters window. For more information, see "Setting Active Filters" on page 54.
- List of existing filters – select a filter from the **Active Filters** list. The filter can be one of the predefined filters or a custom filter.
- **Quick Filter by Statuses** – select a combination of KPI statuses in the **Quick Filter** bar. For details, see "Quick Filter" on page 64. You can also use one of the options in the list to further filter the results:
  - **All –** to display all types of CIs whose KPIs match the selected combination of KPI statuses selected in Quick Filter
  - **Monitors only –** to display only the monitor CIs whose KPIs match the selected combination of KPI statuses selected in Quick Filter
  - **All excluding monitors –** to display all types of CIs, except the monitor CIs, whose KPIs match the selected combination of KPI statuses selected in Quick Filter
- Click **Apply** to apply the Quick Filter selection to the display.
- **Sound On/Off** – enables a sound to be played when a CI changes status to error/worst (red), to provide an aural notification of the change in status. For more information, see "Sound Alert for Critical Status" on page 37
- The table of filtered CIs includes the following information:
  - **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 "Menu Options in the Filters Tab" on page 67.

    For details about the Console tab, see "Dashboard Console" on page 33.
  - 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" in *Using Dashboard*.
  - **Held Status Since** – The time and date when the KPI status changed to the current status.

➤ **Ack** – displays an icon that represents the CI Acknowledgment status. For details, see "Acknowledging Performance Problems" on page 45.

A Details tooltip for each status icon provides some information regarding the calculation method in use for the KPI.



For details, see "Viewing Additional Information for CIs" on page 17.

Tips

You can sort the information displayed in the Filters tab according to the entries in any column by clicking the column header. You can toggle between ascending and descending order by clicking the header again.

If you select (in the 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.

Setting Active Filters

You use the **Active Filters** capability 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.

The currently active filter is displayed in the Active Filters box in the Filters tab. You select an alternative 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 have defined (shown as black text strings).

You can also create your own filters or modify existing filters.

This section includes the following topics:

- "Visibility" on page 55
- "Predefined Filters" on page 56
- "Defining or Customizing Filters" on page 57
- "Deleting a Filter" on page 60

Visibility

The following levels of visibility are available:

- **Global** – The global active filters are pre-defined and built-in. They are available for all users of all customers. The global active filters cannot be modified. You can use the global active filters 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 56.
- **Public** – Administrators or users with the appropriate permissions can build public active filters. The public active 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.
- **Private** – Users can build their own private active filters. The private active filters are available only to the user who created them. You can use the global and public active filters as templates to build private active filters. Their names have the following syntax: **private:<name>**. They appear in the list of active filters as black text strings.

  For each user name used when logging on to Mercury Business Availability Center, Dashboard creates an associated filters file. When you log on to Mercury Business Availability Center using a specific user name, you can only view and modify the filters contained in the associated filters file. The file is updated with the filter modifications made by each user who logs in under this user name, so any changes you make to the filters may overwrite modifications made by previous users.

➤ **Temporary** – Another type of private active filter. These filters are created when you select statuses in the Quick Filter and click **Apply** or when you use the **Filter subtree - Monitors only** option in a CI context menu. The name of the temporary filter is **temp: Quick Filter**. For details, see "Quick Filter" on page 64. You cannot save temporary filters.

Note:

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

➤ The information displayed in the Filters tab is not refreshed while the Defining/Editing Filters window is open. (This also applies when the Defining/Editing Filters window is not in focus.)

Predefined Filters

Dashboard includes several predefined filters. Each predefined filter is used to include or exclude CIs according to their type, and KPIs according to their status. These filters cannot be modified or deleted. The predefined filters are as follows:

➤ **global: Show All** – displays all 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

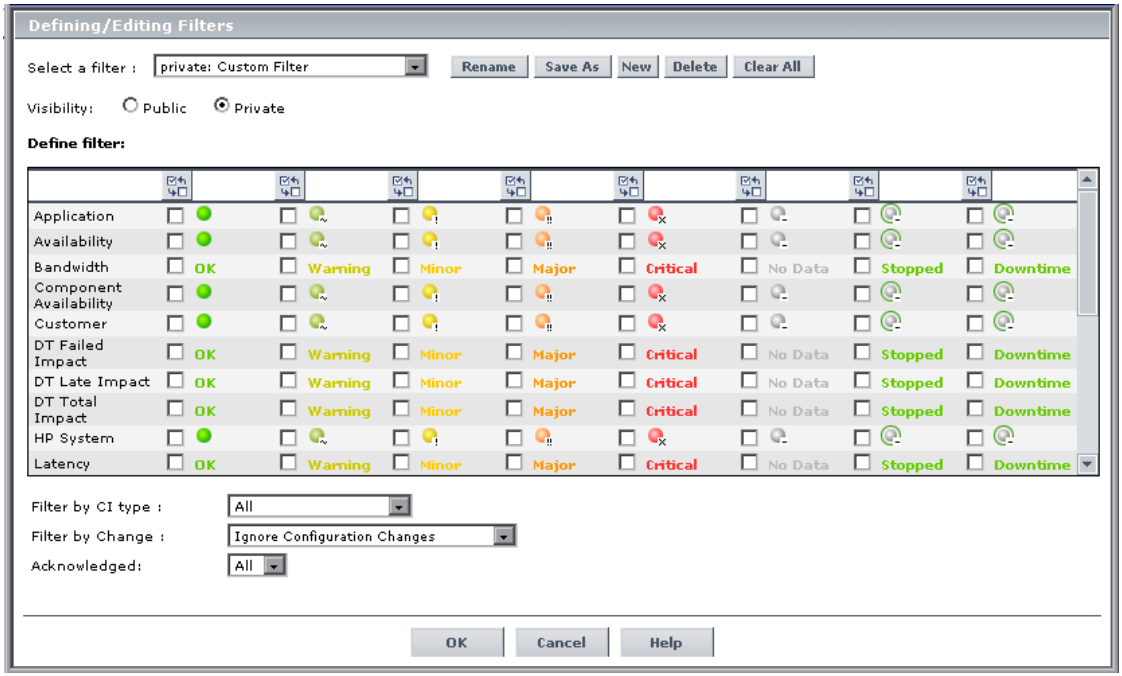
By default, a filter is called Custom Filter when you create a filter without assigning it a name.

Defining or Customizing Filters

You can define new filters or customize existing filters.

To define or customize filters:

1. Select **Application** > **Dashboard**, and click the **Filters** tab.
2. Select the view in the View Explorer.
3. Click the **Active Filters** link. The Defining/Editing Filters window opens.



4 Select one of the following options:

- To define a completely new filter, click **New**. All the KPIs' statuses are cleared.
- 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 KPIs' statuses that were selected for the filter you are using as a model are still selected.
- To modify an existing filter, select it in the **Select a filter** list.

5 The **Filter Name** dialog box opens. Enter a name for the new filter (this must be a unique name). This creates the new filter and adds it to the active filters list. Click **OK** to save the filter to the active filters list.



6 Select the required **Visibility** option:



- **Private** if you want to create a private filter
- **Public** if you want to create a public filter

Note: Visibility is displayed only to the administrator or to a user with the appropriate permissions.

---

7 Enter the appropriate information in the **Define filter** area. You can specify any combination of the filter criteria listed in that area. The filter displays the CIs that meet **all** the selected criteria, as follows:

➤ Select the check box for each KPI status type that you want to include in the filter.

Note: If no status is selected for a KPI then all statuses are included in the filter.



To invert the selection use the **Invert Selection** button.

➤ In the **Filter by CI type** list, select one of the following options:

- **All** – all the types of CIs are included (monitor and non-monitor CIs)
- **All excluding monitors** – all the types of CIs are included except for monitor CIs that are excluded
- **Monitors only** – all the types of CIs are excluded except for monitor CIs that are included

➤ In the **Filter by Change** list, 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 "Change Report" on page 135:

- **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

➤ In the **Acknowledged** list, select one of the following options:

- **All** – to display all 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

8 Click **OK** to save your changes to the currently displayed filter and to close the Defining/Editing Filters window.

Click **Cancel** to exit the Defining/Editing Filters window without saving your changes to the filter criteria for the currently displayed filter. The filter you created is saved and will appear in the **Active Filters** list.

Deleting a Filter

You can delete filters.

To delete a filter:

1 Click the **Active Filters** link. The Defining/Editing Filters window opens.

2 Select the name of the filter you want to delete from the **Select a filter** list. Filters that can be deleted are shown as black text strings.

3 Click **Delete**. Dashboard displays a confirmation message.

4 Click **OK** to delete the filter from the **Active Filters** list.

5 Click **OK** or **Cancel** at the bottom of the Defining/Editing Filters window to close the window.

Searching for Specific CIs and Filtering the Results

You can search for a specific CI using the View Explorer search function to filter the list of CIs that Mercury Business Availability Center displays. For more details about the Search feature, see "Locating a Configuration Item by Searching" in *Working with the CMDB*. 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 Filter 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 Filter tab.

This section includes the following topics:

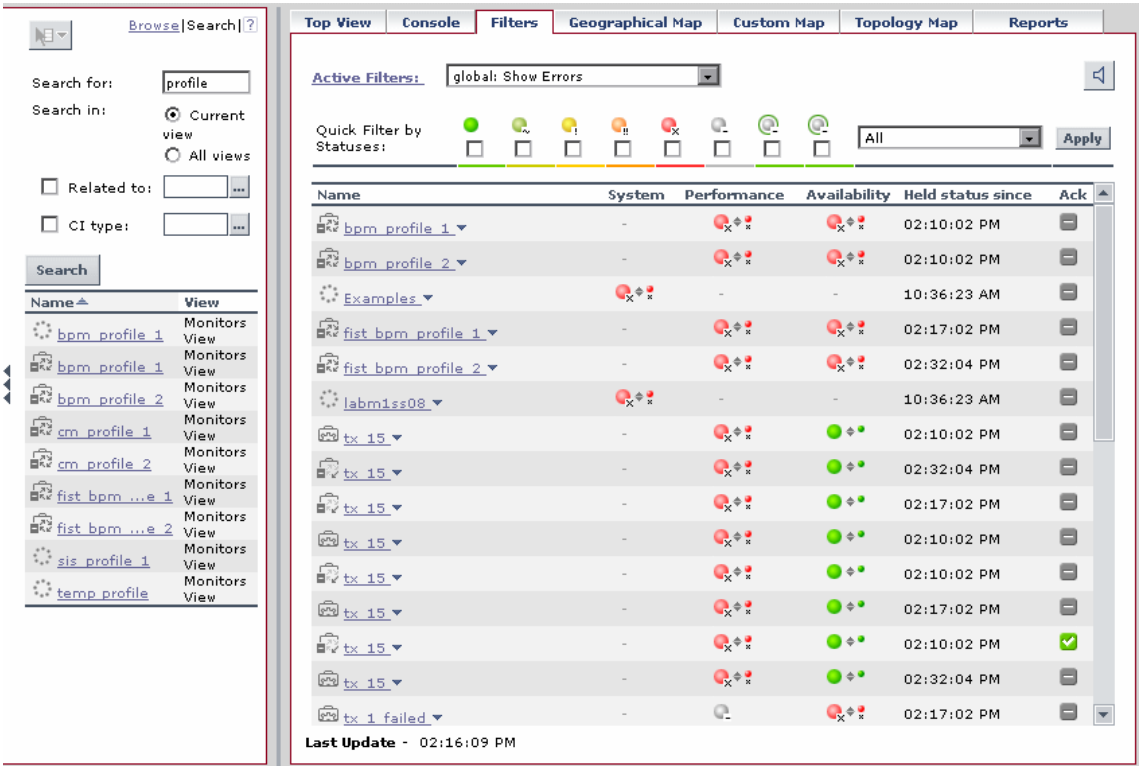
➤ "Searching For CIs in the Current View" on page 61

➤ "Searching for CIs in More Than One View" on page 63

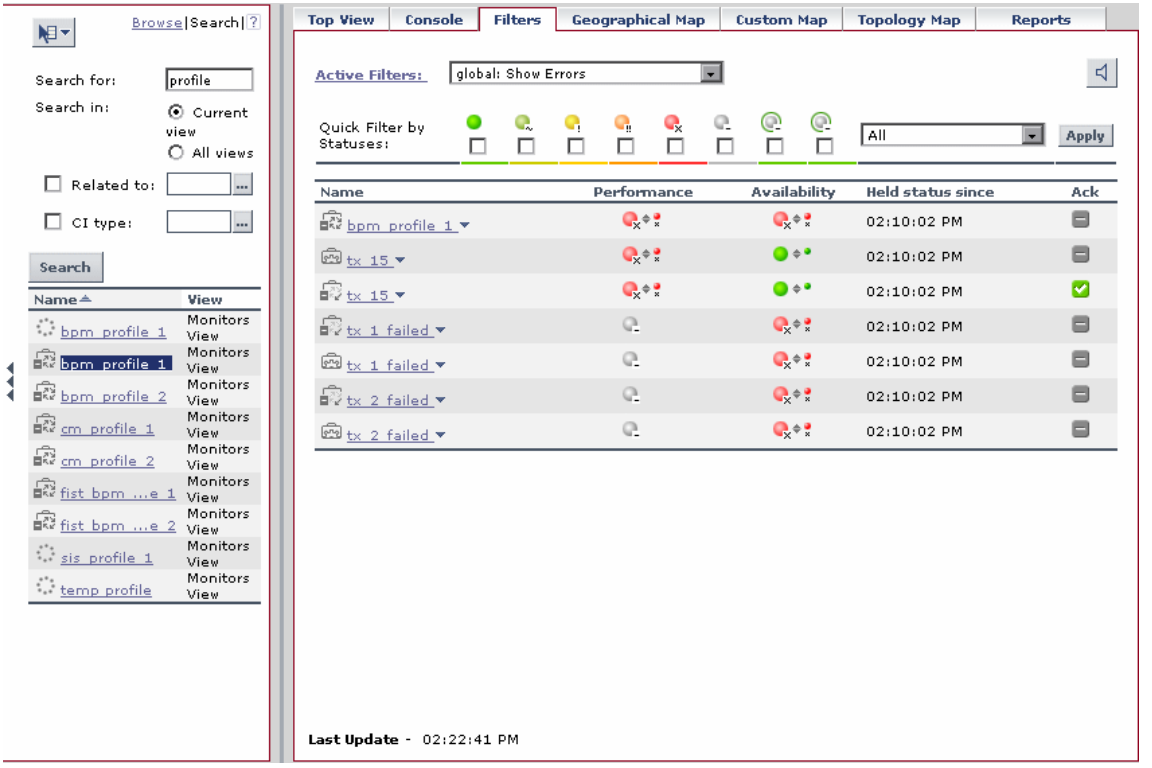
Searching For CIs in the Current View

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

The result is a list of all 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 one of those CIs.



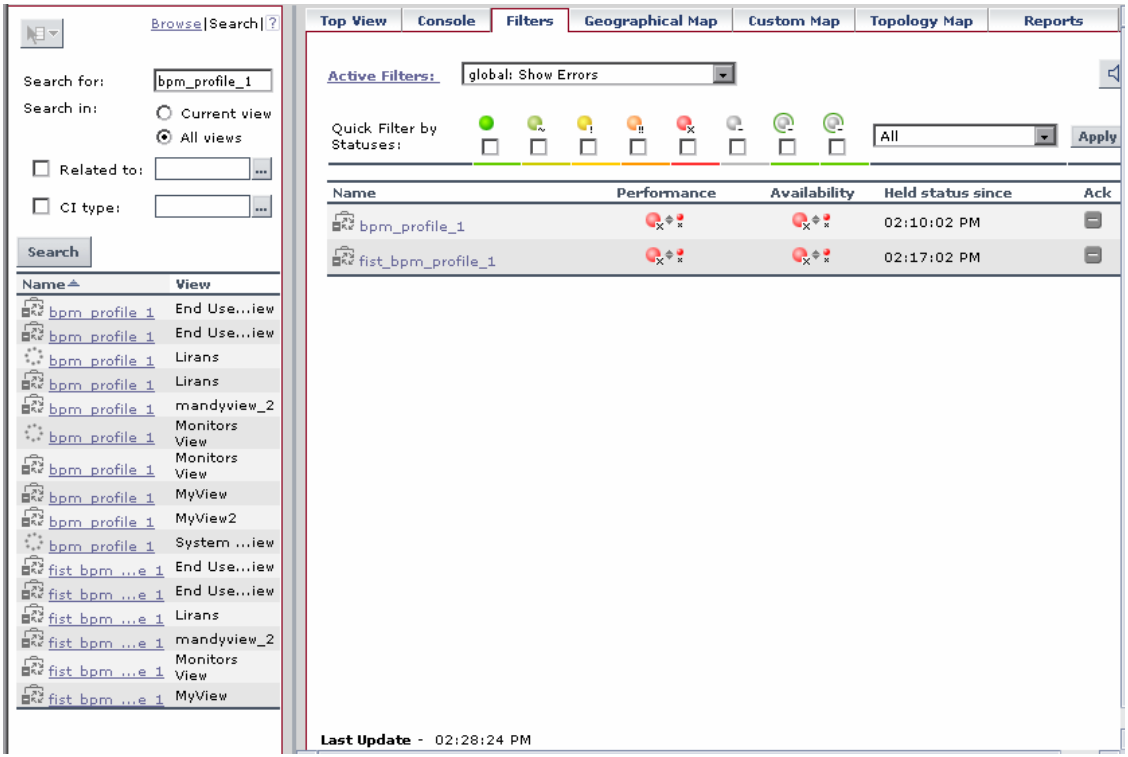
If the search result is a single CI, or if you click one of the CIs in the results of the search list, the Filters tab displays the selected CI and the CI's children CIs filtered by the active filter, and the current operational status in each KPI for each of those CIs.



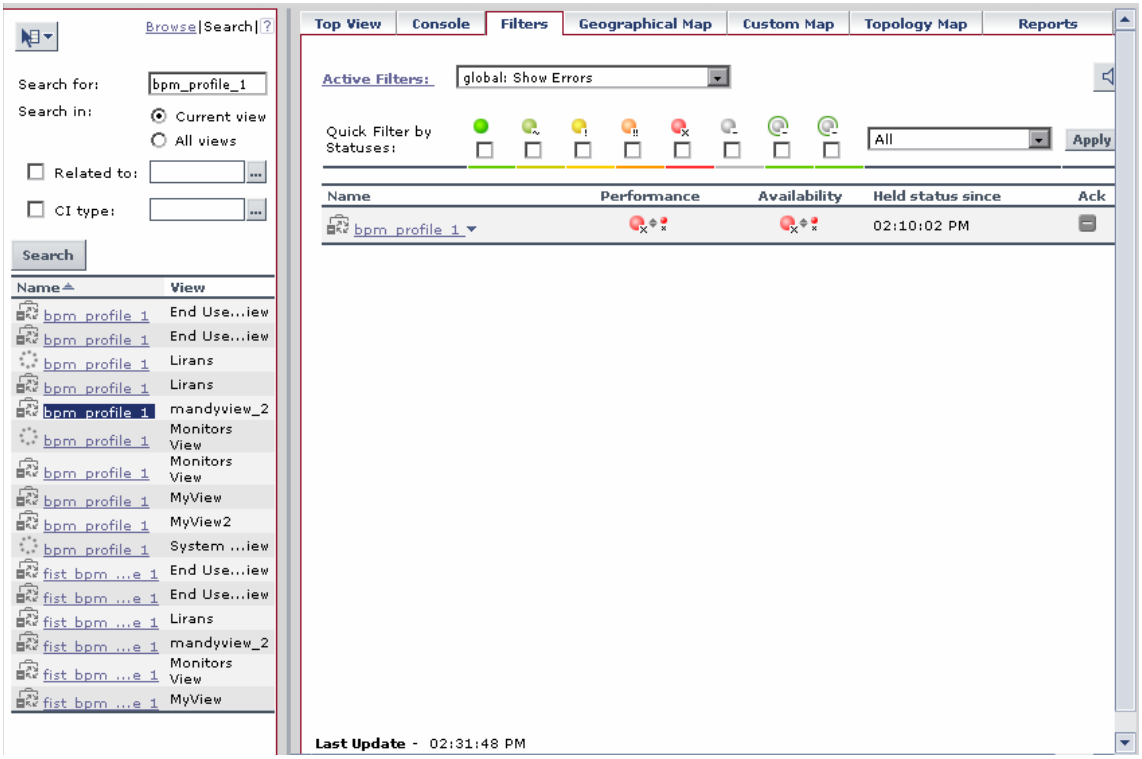
Searching for CIs in More Than One View

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

The result is a list of all the CIs and the views in which they are included, 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 those CIs.



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



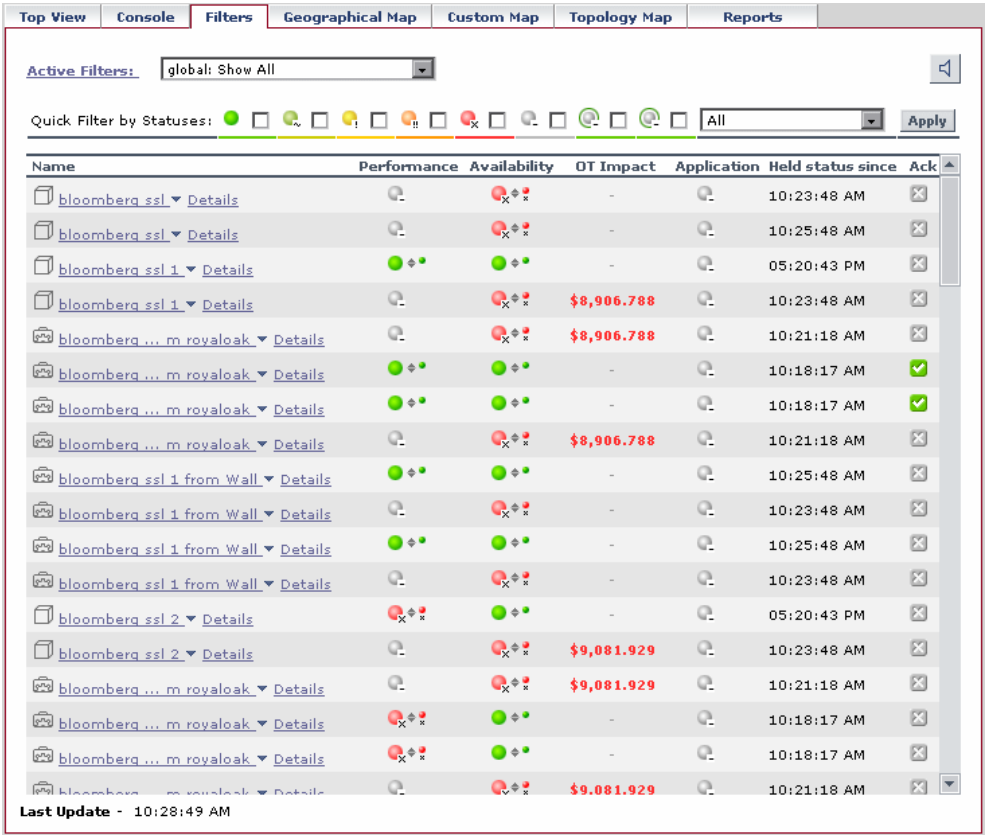
Quick Filter

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

Once 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.

Note: You cannot save the settings you selected in Quick Filter, but you can create a similar filter using Active Filter. For details, see "Setting Active Filters" on page 54.

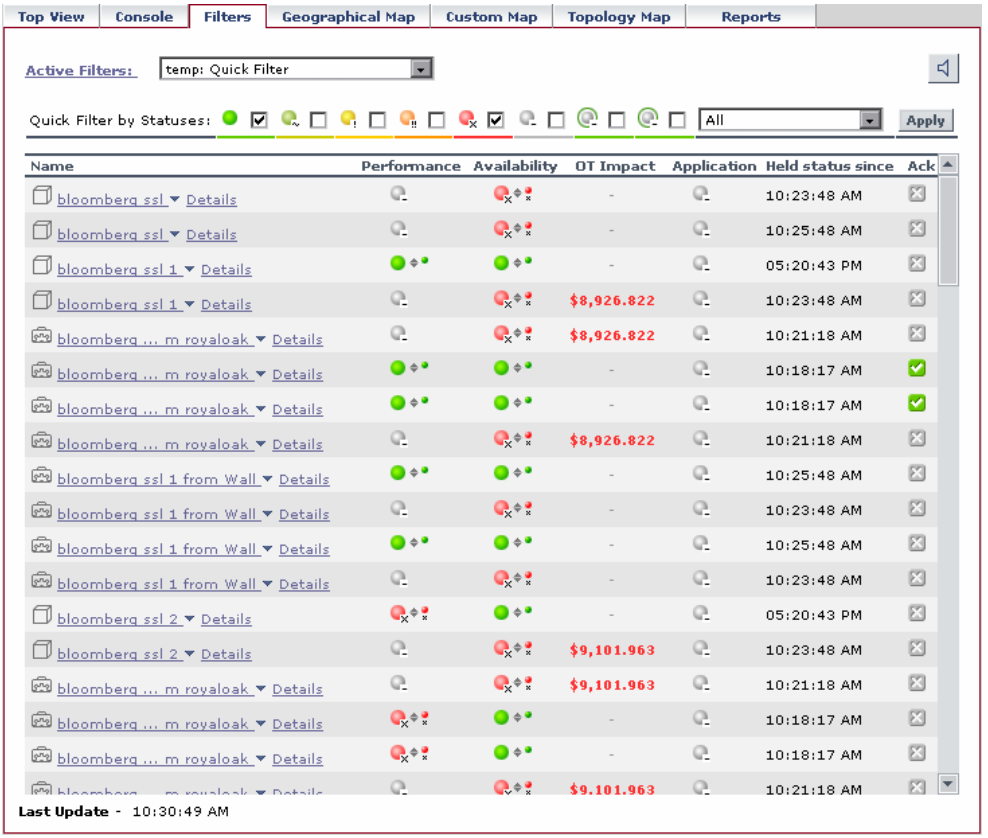
For example, the report is as follows:



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



The following filtered report is displayed:



To display a combination of statuses:

1. Select **Application** > **Dashboard**, and click the **Filters** tab.
2. Select the view in the View Explorer.
3. Select the filter in the **Active Filter** list and select one of the **Filters** options from the options list.
4. Click **Apply** to display the report.
5. Select one or more statuses in the Quick Filter by Statuses bar and click **Apply**.

Menu Options in the Filters Tab



Click the down arrow for a CI in the Filters page to select one of the following options:

- **Drill to Diagnostics** – opens the Diagnostics application. This option is displayed only if you have installed Diagnostics. For more information about Diagnostics, refer to *Mercury Diagnostics Installation and User's Guide*.
- **Goto –** opens different reports depending on the CI. For details, see "Menu Options for CIs" on page 39.
- **Filters** – when you select a filter in the **Active Filters** list and then click the down arrow for a specific CI in the list, depending on the **Filters** option you select, the page displays different information. When you select:
  - **Show Complete Subtree –** the Filters page 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 –** the Filters page 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.
  - **Filter Subtree –** the Filters page displays the selected CI subtree filtered by the active filter.
  - **Filter Subtree Monitors –** the Filters page displays the monitor CIs in the subtree of the selected CI filtered by the active filter.
- **Show in Top View** – opens the Top View tab with the view's tree centered on the selected CI. For details about the Top View tab, see "Dashboard Top View" on page 23.
- **Show Path to Root** – opens a Top View page that displays the path from the selected CI to the root CI. For details, see "Show Path to Root" on page 49.
- **Show Problematic Subtree** – opens a Top View window that displays all the children CIs with red, yellow, or orange status. For details, see "Show Problematic Subtree" on page 49.

- **Acknowledgment** – select one of the following:
  - **Acknowledgment Details** – opens the Acknowledgment details page to view information about the CI's acknowledgment. For more details, see "Viewing Acknowledgment Details" on page 46.
  - **Set/Unset Acknowledgment** – opens the Set/Unset Acknowledgments page to set or clear the CI's acknowledgment. For more details, see "Setting or Unsetting Acknowledgments" on page 48.

6

Dashboard Geographical Map

The Geographical Map tab enables you to view an association between geographical locations and status indicators using a map applet, or Virtual Earth.

This chapter describes:	On page:
Overview of Geographical Maps	70
Working with the Virtual Earth Geographical Map	73
Working with the Geographical Map Applet	77

Overview of Geographical Maps

Dashboard displays, for a specific view, the corresponding geographical map with real-time status indicators showing the worst status at different geographical locations.

The CI location is determined either by the location defined in Dashboard for the data collector host from which the CI originated, or by locations defined individually for the group or leaf (monitor) CIs in a view.

Each location in the map may represent one or more CIs from the view.

For details on how to define locations and configure map settings, see "Configuring the Geographical Map" in *Application Administration*.

Note: The maps applet requires that Sun JRE plug-in 1.4.2_08 be installed on the client machine. If an earlier version is installed, then Mercury Business Availability Center automatically tries to download JRE 1.4.2_08 when you access the maps applet.

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 was specified for them.

If you search for a specific CI in the 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 the browser mode. It shows only the selected CI and the CI's children status indicators if a location was specified for them.

You specify the CI location when you define a new CI or when you edit a CI's properties. For details, see "Configuration Item Properties" in *IT Universe Administration*. If you do not specify a geographical location for at least one CI in the view, the Geographical Map tab displays only the map.

If you select another view, the geographical map reloads automatically to show the view's CI status indicators.

Geographical maps are displayed using Virtual Earth (for details, see "Working with the Virtual Earth Geographical Map" on page 73) or a maps applet (for details, see "Working with the Geographical Map Applet" on page 77).

Location Status Information

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" in *Using Dashboard*.



The round icon represents the status of a location with group CIs.



The square icon represents the status of a location with monitor CIs.

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

In addition to the overall worst status for each location, you can view the worst status for all KPIs associated with the location in the location tooltip (for details, see below). A KPI is associated with a location if that KPI is assigned to at least one of the CIs attached to the location.

Geographical Map Tooltips

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

Performance	
Location:	USA, New York, New York
Status:	Critical
Held status since:	8/23/05 01:16:34 PM
Caused by:	bpm_profile_1
Availability	
Location:	USA, New York, New York
Status:	Critical
Held status since:	8/23/05 01:16:34 PM
Caused by:	bpm_profile_1

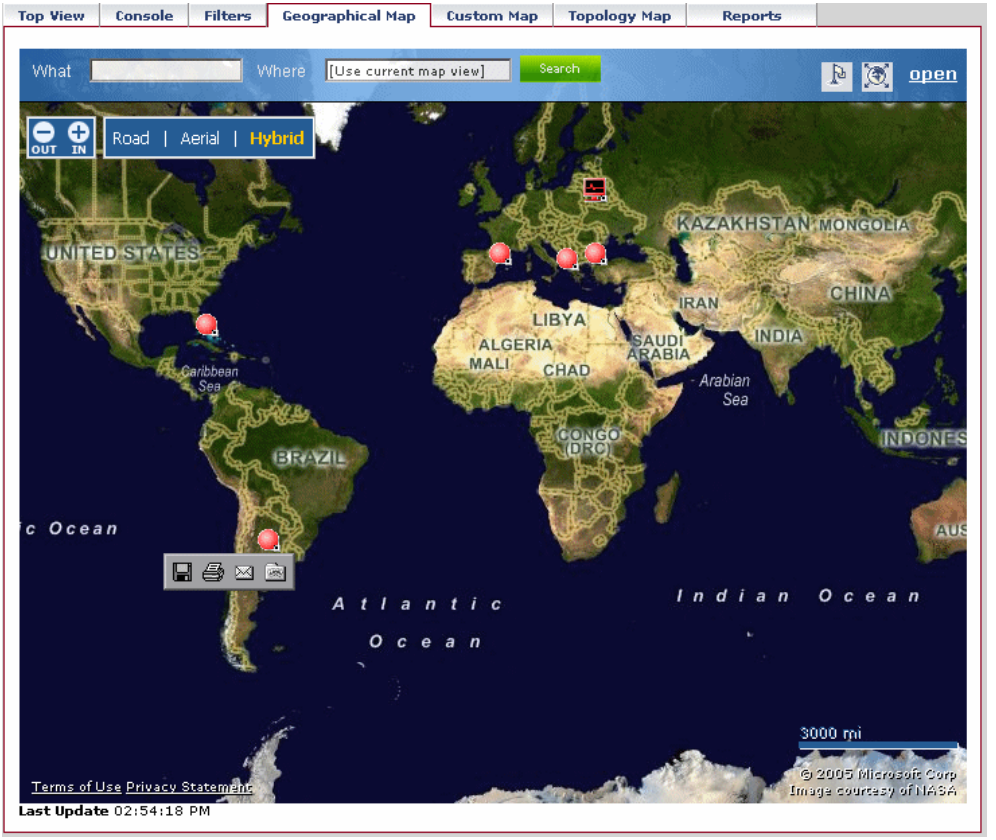
The tooltip includes the following information:

Item	Description
KPI Name	The name of the KPI. The color of the header indicates the overall 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.

The city names use UTF8 format. If Mercury Business Availability Center is working with MS-SQL Server, or an Oracle Server that is not configured for UTF8 support, then when the name of a city includes non-English characters (for example, é), these characters are displayed as empty square brackets [].

Working with the Virtual Earth Geographical Map

You can use the geographical map of a view to display the worst status at each geographical location and detailed information about the CI's KPIs. If you have an Internet connection you can display the geographical map using Virtual Earth.



Virtual Earth geographical maps are MSN-based and use dynamic HTML.

To view the map applet, a user with the appropriate permissions must have set the **Use Virtual Earth** parameter to **true**. For details, see "Selecting the Type of Display Used for Geographical Maps" in *Application Administration*.

This section includes the following topics:

➤ "Displaying the Virtual Earth Geographical Map for a View" on page 74

➤ "Displaying Additional Information about the CIs at the Location" on page 75

➤ "Adjusting a Virtual Earth Map" on page 75

Displaying the Virtual Earth Geographical Map for a View

You can display the Virtual Earth geographical map for a view.

To display the Virtual Earth geographical map for a view:

1 Select **Applications** > **Dashboard**.

2 Select a view in the View Explorer.

3 Click the **Geographical Map** tab to open the geographical map page for the selected view.

4 You can then:

- view the status indicators to see the worst status at each geographical location. For details, see "Location Status Information" on page 71.
- display tooltip details for each location. For details, see "Geographical Map Tooltips" on page 71.
- display additional information about the CIs for each location. For details, see below.
- navigate the map to display other locations or to zoom into some locations. For details, see "Adjusting a Virtual Earth Map" on page 75.
- open the map in a standalone page by clicking **open**.

Displaying Additional Information about the CIs at the Location

Click the status indicator in a specific location to open the KPIs Over Time report for all the CIs at the location. For details, see "KPIs Over Time Report" on page 107.

Adjusting a Virtual Earth Map

By default, a map displayed in the Geographical Map tab has a focus area (center of map) and a magnification that have been set by a user with the appropriate permissions. For details, see "Adjusting a Virtual Earth Map" in *Application Administration*. The adjusted map is displayed when you click the Geographical Map tab for the view in Dashboard.

You can also zoom in and out to enlarge or shrink the map using one or more of the following options:



- Click the flag button to shift center of map to the nearest CI.
- Click the map and drag to move the map in the window.
- Double-click on the map to zoom in.



- Click the Maximum Zoom Out button to zoom out completely.
- Click the Open in full screen button to open the map on a standalone page. Close the page to return to Dashboard.

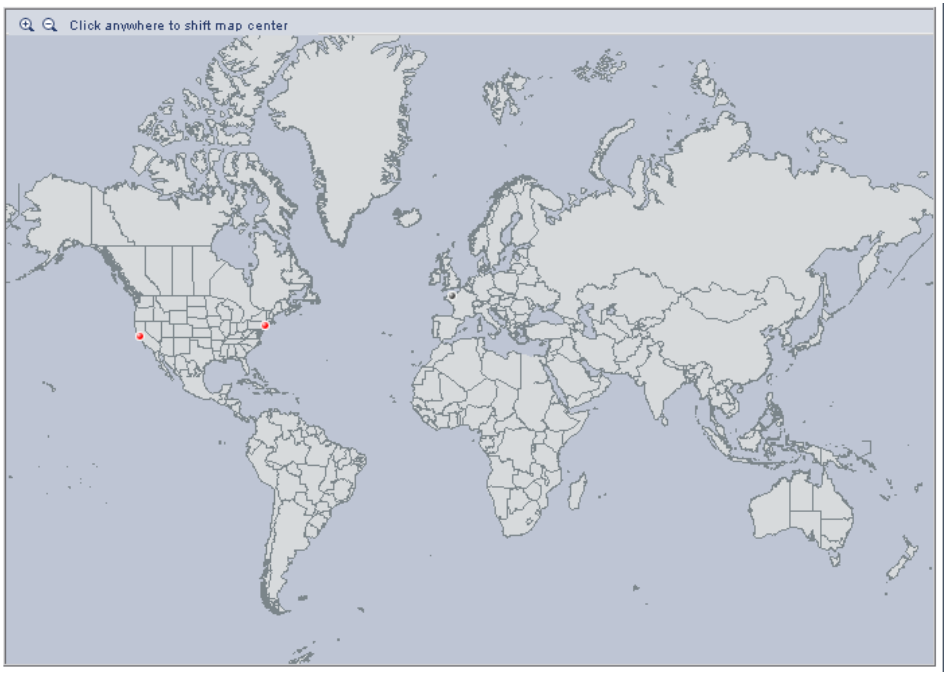
You can also select how you want to display the map.



- click **Road** – to display the map with the country borders
- click **Aerial** – to display the map with the topographical features
- click **Hybrid** – to display the map with both the country borders and the topographical features

Working with the Geographical Map Applet

If you do not have an Internet connection 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.



To view the map applet, a user with the appropriate permissions must have set the **Use Virtual Earth** parameter to **false**. For details, see "Selecting the Type of Display Used for Geographical Maps" in *Application Administration*.

This section includes the following topics:

➤ "Displaying the Geographical Map Applet for a View" on page 78

➤ "Navigating the Geographical Map Applet" on page 78

Displaying the Geographical Map Applet for a View

You can display the geographical map for a view using the maps applet.

To display the geographical map applet for a view:

1. Select **Applications** > **Dashboard**.
2. Select a view in the View Explorer.
3. Click the **Geographical Map** tab to open the geographical map page for the selected view.
4. You can then:
   - view the status indicators to see the worst status at each geographical location. For details, see "Location Status Information" on page 71
   - display tooltip details for each location. For details, see "Geographical Map Tooltips" on page 71
   - navigate the map to display other locations or to zoom into some locations. For details, see "Navigating the Geographical Map Applet" on page 78

Navigating the Geographical Map Applet

By default, a map displayed in the Geographical Map tab has a focus area (center of map) and a magnification that have been set by a user with the appropriate permissions. For details, see "Adjusting a Map Applet" in *Application Administration*. The adjusted map is displayed when you click the Geographical Map tab for the view in Dashboard.

You can:

- click the area that interests you. The map shifts to make the location you clicked the new center of the map.
- zoom in and out to enlarge or shrink the map using the **Zoom In** and **Zoom Out** buttons in the top-left corner of the map pane.



7

Dashboard Custom Map

The Custom Map tab enables you to view the association between a custom image that represents a view and real-time data.

This chapter describes:	On page:
Overview of Custom Maps in Dashboard	79
Using the Custom Map Tab	80

Overview of Custom Maps in Dashboard

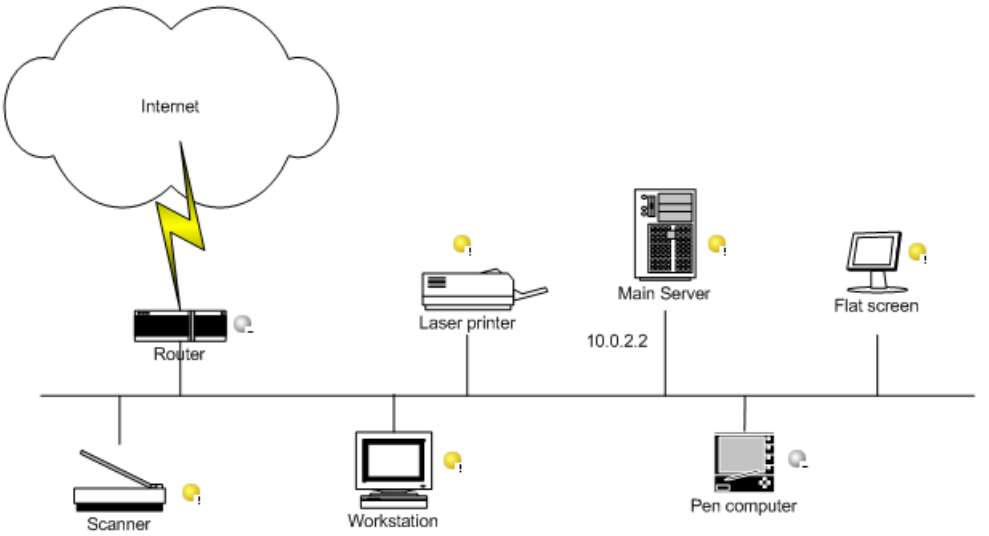
The Custom Map tab contains a diagram or a picture that represents a view combined with Dashboard real-time status indicators.

The diagram can represent, for example, a logical network diagram, business logic, or any other graphical representation of a view used by your organization.

Using the Custom Map Tab

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.

An element of the image may be associated with a status indicator representing the status of a CI. The color of the status indicator indicates the worst status (worst of all KPIs) of the CI. When you place the cursor over the status indicator, a tooltip shows the name of the associated CI, and KPI details. For details about tooltips, see “CI Status Indicator Tooltip” on page 82.



When you click a status indicator, the corresponding CI in the View Explorer is highlighted. If necessary, the View Explorer will automatically expand to show the selected CI.

Note: The tab displays the image centered in the image pane. If the image is larger than the image pane, use the scroll bars.

Note: 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.

This section includes the following topics:

➤ "Displaying a View's Custom Map" on page 81

➤ "CI Status Indicator Tooltip" on page 82

Displaying a View's Custom Map

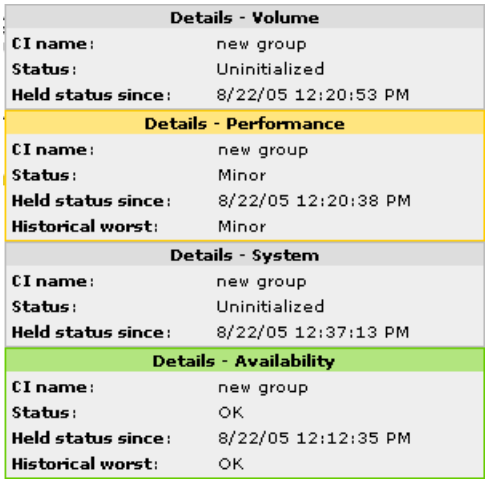
You can display the custom map for a view.

To display a view's custom map:

1. Select **Applications** > **Dashboard**.
2. Select a view in View Explorer.
3. Click the **Custom Map** tab to open the custom map page for the selected view.

CI Status Indicator Tooltip

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 9.



The tooltip can display any of the following information, depending on the KPI:

- the header of each section displays **Details** followed by the name of the KPI
- **CI name** – the name of the CI
- **Status** – the status of the KPI
- **Held status since** – the date and time when the status changed to the current status
- **Historical worst** – the tooltip of the historical status of the CI. For details, see "Trend and History Statuses" on page 14

8

Dashboard Topology Map

This chapter describes how the Dashboard topology map enables you to view the results of either an instance view or a pattern view defined in the View Manager.

This chapter describes:	On page:
Understanding the Dashboard Topology Map	84
Displaying a Topology Map in Dashboard	84
Understanding Topology Map Functionality	85
Using the Topology Map Toolbar	89
Printing the Topology Map	91
Understanding Layer Setup	92

Understanding the 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 pattern views, see Chapter 4, "Working with Pattern Views" in *View Manager Administration*. For information on instance views, see Chapter 3, "Working with Instance Views" in *View Manager Administration*.

The topology map shows the results of the currently selected view in the View Explorer, and consists of CIs and relationships that are defined in the view you created in the View Manager. You can change the way the maps are displayed by selecting one of the view layouts (**Hierarchical, Symmetric, or Orthogonal**). For details, see "Modifying Layer Layout Options" on page 97 in *View Manager Administration*. You can also modify the values of the default layer layouts, as described in "Defining a Layer's Layout" on page 95 in *View Manager Administration*.

Displaying a Topology Map in Dashboard

This section describes how to display a topology map in Dashboard.

To display a topology map in Dashboard:

1. Select **Applications** > **Dashboard** and select the **Topology Map** tab.
2. In the View Explorer, select the required view from the **View** list.

   For more information about the displayed view, see "Presentation Options for Views" in *View Manager Administration*.

Understanding Topology Map Functionality

This section describes topology map functionality:

- "Understanding CI Icon Composition" on page 85
- "Selecting Multiple CIs" on page 86
- "Simultaneous Selection" on page 86
- "Tooltips" on page 87
- "CI Icon Colors" on page 87
- "Navigating Between Different Map Levels" on page 87
- "Viewing the Selected CI in the Console Tab" on page 88

Understanding CI Icon Composition

The icon that represents each CI in the topology map is defined by the administrator in the CI Type Manager. For information on how to assign an icon to a CIT, see "Assigning an Icon to a CIT" in *CI Type Manager Administration*.

CI icons are made up of the following components:



- An icon.



- The group to which it belongs. For example, Network or SAP System, appears in the upper left-hand corner.



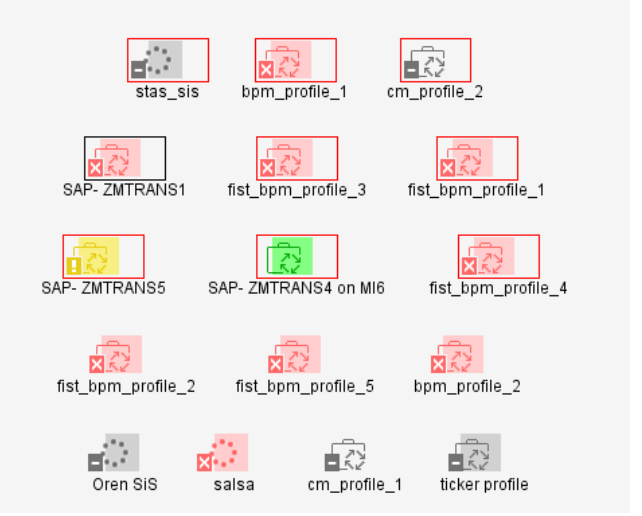
If an icon appears with a shadow, it means that there is an additional CI layer beneath it, created by a parent or child organization rule defined in the View Manager. For information on how to set up organization rules, see "Adding Organization (Folding) Rules to Relationships" in *View Manager Administration*. For information on how to navigate between layers, see "Navigating Between Different Map Levels" on page 87.

Selecting Multiple CIs

In the topology map, you can select multiple CIs.

To select multiple CIs:

Hold down the CTRL button and click the CIs or drag the mouse diagonally along the CIs as shown in the following figure:



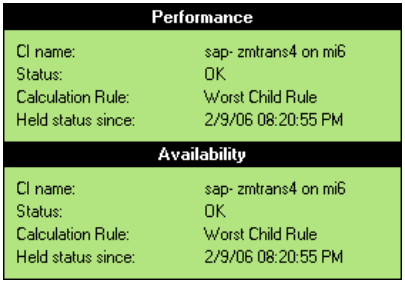
If you select multiple CIs, only one CI has a black selection rectangle around it, while all the other selected CIs have red selection rectangles around them. In this situation, when you right-click anywhere on the map to open the context menu, the option is performed only on the CI surrounded by the black rectangle.

Simultaneous Selection

When you select a CI, it simultaneously selects the CI in both the View Explorer and the topology map.

Tooltips

- 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 the CI Type Manager. For details, see *CI Type Manager Administration*.
- When you point to a CI in the topology map, a tooltip is displayed containing information about the CI, as seen below.



For details, see "Viewing Additional Information for CIs" on page 17.

CI Icon Colors

The colors displayed for a CI icon represent the worst status of all KPIs for the CI, apart from Change. For information on status levels, see "Understanding KPI Status" on page 9.

Navigating Between Different Map Levels



If an icon appears with a shadow, it means that there is an additional CI layer beneath it, created by a parent or child organization rule defined in the View Manager (in a pattern view). For information on how to set up organization rules, see "Adding Organization (Folding) Rules to Relationships" in *View Manager Administration*.

For example, if the IP CI is defined as a child of the host CI in the View Manager, you can double-click any host icon in the topology map to display a map of IPs connected with that host.

To drill down to the lower level(s):

Double-click an icon with a shadow.

To move up one level in the topology map:

1 Select a CI that has an additional CI layer above it.



2 Click the **Up layer** button.

The **Up layer** button is enabled only if there is an additional CI layer above it, created by a parent or child organization rule defined in the View Manager.

Viewing the Selected CI in the Console Tab

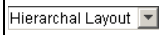
You can view the selected CI and its direct child CI(s) in the Console tab.

To view the selected CI and its direct child CI(s) in the Console tab:

Right-click the required CI and select **Open in Console**. The **Console** tab opens and displays the selected CI and its direct child CI(s). For details about the Console tab, see Chapter 4, “Dashboard Console”.

Using the Topology Map Toolbar

The following table describes the common topology map buttons that appear in the toolbar of all the topology maps in CMDB Administration and Dashboard.

Option Name	Icon	Use this option to...
Print Map		Print the contents of the topology map. For details, see "Printing the Topology Map" on page 91.
Layer Setup		Define the view's layer layout, by assigning positions for the nodes and relationships of the view. For details, see "Modifying Layer Layout Options" in *View Manager Administration*.
Layout		Select the layout display from the list. For more information, see "Understanding Layout Options" on page 114 in *View Manager Administration*.
Reorganize layer		Reorganize the CIs/CITs/nodes according to the selected layer. This is used when CIs/CITs/nodes have been moved around.
Up layer		Go up one layer.
Refresh		Go to the server and load the layer again.
Hide relationship labels		Toggle between showing or hiding the relationship labels.
Hide nodes labels		Toggle between showing or hiding the CI/CIT/node labels.

Option Name	Icon	Use this option to...
Set maximum label length		Enter the maximum number of characters you want the labels to contain.
Zoom		Zoom in on a specific section of the topology map by clicking and drawing a selection rectangle around the part you want to magnify. The area you have selected is displayed at the highest percentage that fits in the topology map.
Interactive zoom		➤ Decrease the view magnification by clicking and pushing the pointer upwards. ➤ Magnify the view by clicking and pulling the pointer downwards.
Fit to window		Fit the complete view in the window.
Pan		Drag the view.
Navigation		Take the pointer to the next connected CI/CIT/node. ➤ Left-click to go from CI/CIT/node to CI/CIT/node in a clockwise direction. ➤ Right-click to point to the next CI/CIT/node in a clockwise direction. **Note:** You can use this option only on CIs/CITs/nodes that are connected by relationships.
Center selected symbol(s)		Place the selected CI/CIT/node or CIs/CITs/nodes in the center of the map.
Select mode		Select a CI/CIT/node or multiple CIs/CITs/nodes.

Printing the Topology Map

You can print the contents of the topology map pane. The result is similar to a screen capture. Therefore, it is recommended to arrange the contents of the Topology map according to your requirements before printing.

To print the contents of the topology map:

1 Select and display the contents you want to print in the topology map.

2 To arrange the contents of the topology map for print, you can use the **Layer Setup** and **Layout** options.

For details about the **Layer Setup** option, see "Understanding Layer Setup" on page 92.

For details about the **Layout** option, see "Understanding Layout Options" on page 114 in *View Manager Administration*.



3 Select the the **Print Map** button to open the Print Setup dialog box.

- Select **Print Entire Graph** to print the complete view.
- Select **Print Current Window** to print the part of the view that appears in the window.
- Select **Print Current Selection** to print anything currently selected in the map.

4 In the **Scale By** area:

- Select **Pages** and enter the number of columns and rows in the **Page Columns** and **Page Rows** boxes.
- Select **Actual Size** to print the view as it really is.
- Select **Zoom Level** to print the view at the zoom level that you are currently using.

5 In the **Caption** area:

- To print a caption for the printout, select **Print Caption**.
- Enter the caption in the text area.
- Click **Font** to format the font you want to use for the caption.
- Select the position of the caption from the **Position** list.

6. In the **Multipage Printing** area:
   - ➤ Select **Print Page Numbers** if you want to print the page numbers.
   - ➤ Select **Print Crop Marks** if you want the printed view to display the crop marks.
7. In the **Other** area:
   - ➤ Select **Print Border** if you want the printed view to have a border and click **Color** to select a color for the border.
   - ➤ Select **Print Background** if you want to print the background behind the view.
   - ➤ Select **Print Grid** if you want to print a grid behind the printed view.
8. Click **Page Setup** to set the printer settings.
9. Click **OK**. These definitions are applied to your printouts. The Print dialog box appears.
10. Click **OK**.

Understanding Layer Setup

The **Layer Setup** option enables you to define the layout of view's layers in a way that helps you achieve the clearest presentation possible. By assigning logical positions for the nodes and relationships that appear on the layer, you can fine-tune your view's visualization and thus facilitate the understanding and monitoring of your managed data.

This option applies only to CIs/nodes and relationships that are displayed in the topology map. The definitions that are set in the dialog boxes apply to a certain layer in a certain view and they determine the effects and behavior of the available layout settings (**General**, **Disconnected**, **Hierarchical**, **Orthogonal**, **Symmetric**, and **Routing**).

The **Layer Setup** option provides you with default values for each parameter, which you can leave or change as required. The parameter values are in pixels.

For information on how to define a layer's layout, see "Defining a Layer's Layout" in *View Manager Administration*.

For information on how to modify layer layout options, see “Modifying Layer Layout Options” in *View Manager Administration*.

For information on layout options, see “Understanding Layout Options” in *View Manager Administration*.

9

Dashboard Reports

The Dashboard Reports tab enables you to view the Configuration Item Status Alerts report, KPIs Over Time report, Raw Data Over Time report, and SLAs Summary report, and the Report Repository.

This chapter describes:	On page:
Working with Dashboard Reports	95
Configuration Item Status Alerts	100
KPIs Over Time Report	107
Raw Data Over Time Report	120
Change Report	135
SLAs Summary Report	140
Report Repository	140

Working with Dashboard Reports

The Dashboard reports are:

- **Configuration Item Status Alert report** – lists all the alerts that occurred in the specified period of time. Those alerts represent predefined performance limits that were breached. For details, see "Configuration Item Status Alerts" on page 100.
- **KPIs Over Time report** – 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 107.

- **Raw Data Over Time report** – displays raw data, over time, for selected configuration items, received in the data samples from Business Process Monitor sources for the transaction from location CIs. For details, see "Raw Data Over Time Report" on page 120.
- **Change report** – displays information about the changes to CI properties for all CIs that were assigned to keep this information. For details, see "Change Report" on page 135.
- **SLAs Summary report** – displays a list of SLAs and their status for two levels, for example, SLA and CIs, or CIs and child CIs. For details, see "SLAs Summary Report" on page 140.
- **Report Repository** – displays a list of reports saved to the report repository. For details, see "Report Repository" on page 140

  You can filter the Dashboard reports by configuration item (CI), by Key Performance Indicator (KPI), by raw data measurement and by period of time. For details about raw data measurements, see "Raw Data Over Time Report" on page 120) and by period of time. For details about the period of time, see "Choosing the Time Range and Granularity" in *Working with Applications*.

  You can print the generated report, send the report by e-mail, open the report in different formats, publish the report in different formats, or save the report to the report repository. For details, see "About Working in Reports" in *Working with Applications*.

  This section includes the following topics:

- "Filtering by CI(s)" on page 98
- "Filtering by KPI(s)" on page 99

Note:

- Mercury 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 filter(s), drilling down in reports, and so forth. For details about the reports log, see "Reports Log" in *Platform Administration*.
- Mercury 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 *Platform Administration*.

Filtering by CI(s)

Active filters enable you to filter specific components from reports for the duration of a Web session. You can select specific CIs to filter Dashboard reports.

To filter by CI(s):

1 Click **Configuration Items** to open the Configuration Items Filter dialog box.



2 Select the appropriate view in the **View** list. For additional information, see "Filtering Data Using Active Filters" in *Working with Applications*.

3 Select the relevant CI(s).

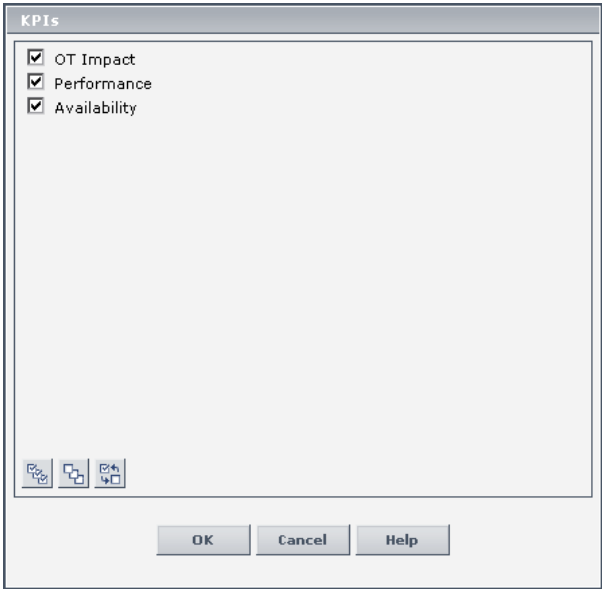
4 Click **OK** to save the selection.

Filtering by KPI(s)

Active filters enable you to filter specific components from reports for the duration of a Web session. You can select specific KPIs to filter Dashboard reports.

To filter by KPI(s):

1 Click **KPIs** to open the KPIs Filter dialog box.



2 Select the appropriate KPI(s). For additional information, see "Filtering Data Using Active Filters" in *Working with Applications*.

3 Click **OK** to save the selection.

Configuration Item Status Alerts

Note: It is recommended to use the new CMDB-based alerting mechanism under **Admin** > **Dashboard** > **CI Status Alerts** which provides greater granularity and flexibility for configuring alerts. The existing alerting mechanism under **Admin** > **Platforms** > **Alerts and Recipients** will be gradually phased out in future releases of Mercury Business Availability Center.

Mercury Business Availability Center alerts proactively inform you when predefined performance limits are breached, by sending alerts to pre-defined users. The Configuration Item Status Alerts report is a log of alerts that were sent during a specified time period.

Users with the appropriate permissions must attach alerts to a configuration item (CI) in a view. For details, see "Configuring CI Status Alerts" in *Application Administration*. The alert is then attached to the CI in any view where the CI is included.

You can schedule this report. For details, see "Scheduling User Reports or the Performance Update Report" in *Platform Administration*.

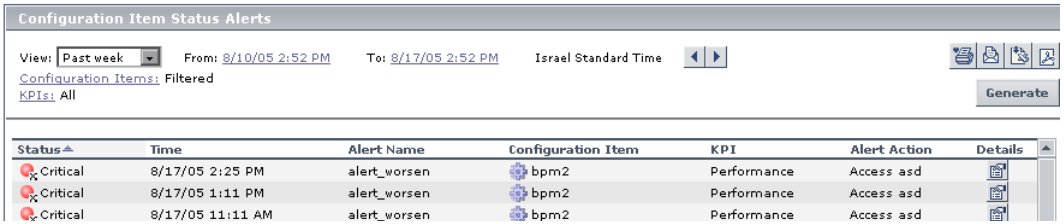
This section includes the following topics:

➤ "Viewing the Configuration Item Status Report" on page 101

➤ "Viewing the Configuration Item Status Alert Notifications Report" on page 103

Viewing the Configuration Item Status Report

The Configuration Item Status Alerts report lists all the alerts that occurred in the specified period of time:



The Configuration Item Status Alerts report displays the following information:

Field	Description
Status	The current status of the KPI(s). The change from previous status to current status triggers the alerts.
Time	The time and date when the alert was triggered. The format is: dd/mm/yy hh:mm GMT[<offset>].
Alert Name	The name of the alert.
Configuration Item	The name of the CI the alert is attached to.
KPI	The name of the KPI.
Alert Action	The action that is triggered by the alert.

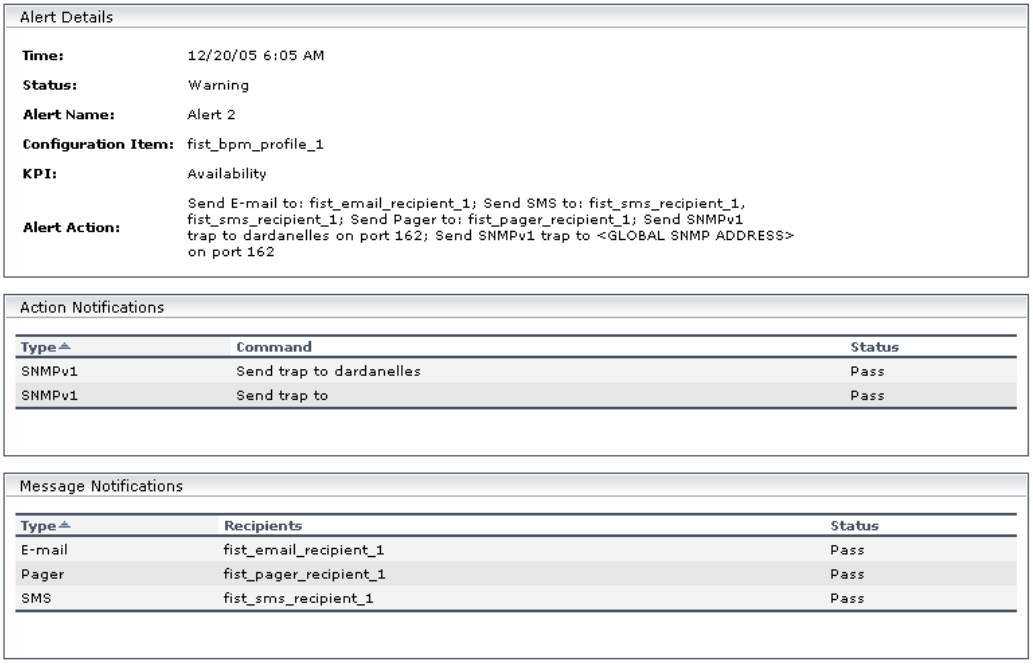
To view the Configuration Item Status Alerts report:

1. Select **Applications** > **Dashboard**.
2. Select the appropriate view, CI, or KPI.
3. You can then do one of the following to display the Configuration Item Status Alerts report:
   - click the **Console** tab, click the appropriate context menu, and select **Configuration Item Status Alerts**
   - right-click the Reports tab and select the **Configuration Item Status Alerts** option
4. You can then:
   - select the period of time for which you want to display the alerts. For details, see "Choosing the Time Range and Granularity" in *Working with Applications*
   - filter by configuration item. For details, see "Filtering by CI(s)" on page 98
   - filter by KPI. For details, see "Filtering by KPI(s)" on page 99
   - click the **Details** button for the relevant alert to see the alert notification details. For details, see "Viewing the Configuration Item Status Alert Notifications Report" on page 103
   - print the report, send it by E-mail, open it in Excel or PDF format. For details, see "Sharing and Storing Reports" in *Working with Applications*

Viewing the Configuration Item Status Alert Notifications Report

To display detailed alert information, access the Configuration Item Status Alerts page, and click the **Details** button for the relevant alert to open the Configuration Item Status Alert Notifications report.

For example:



Alert Details

Time:	12/20/05 6:05 AM
Status:	Warning
Alert Name:	Alert 2
Configuration Item:	fist_bpm_profile_1
KPI:	Availability
Alert Action:	Send E-mail to: fist_email_recipient_1; Send SMS to: fist_sms_recipient_1, fist_sms_recipient_1; Send Pager to: fist_pager_recipient_1; Send SNMPv1 trap to dardanelles on port 162; Send SNMPv1 trap to <GLOBAL SNMP ADDRESS> on port 162

Action Notifications

Type	Command	Status
SNMPv1	Send trap to dardanelles	Pass
SNMPv1	Send trap to	Pass

Message Notifications

Type	Recipients	Status
E-mail	fist_email_recipient_1	Pass
Pager	fist_pager_recipient_1	Pass
SMS	fist_sms_recipient_1	Pass

In the Configuration Item Status Alert Notifications report:

➤ the **Alert Details** area displays the following information:

Field	Description
Time	The time when the alert was triggered.
Status	The previous status of the KPI.
Alert Name	The name of the alert.
Configuration Item	The name of the CI to which the alert is attached.

Field	Description
KPI	The name of the KPI whose change of status triggered the alert.
Alert Action	The action that has been assigned to the alert.

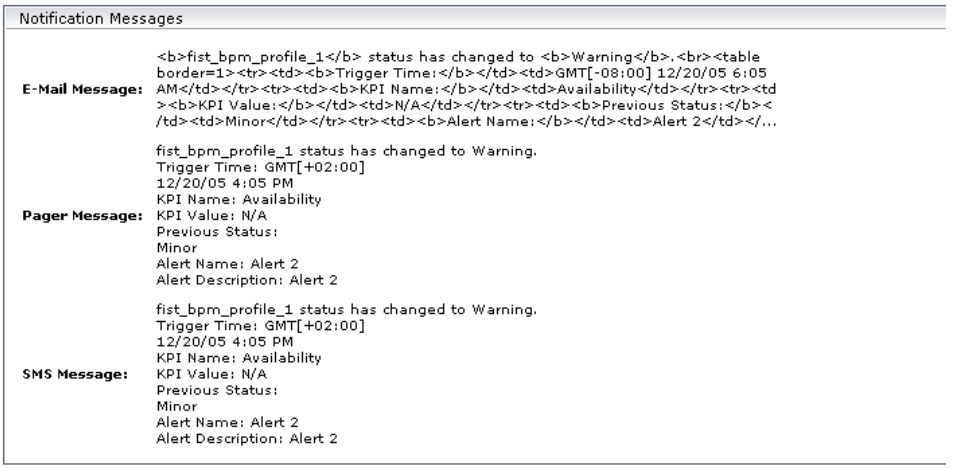
➤ the **Action Notifications** area displays the following information:

Field	Description
Type	The type of action notification: Executable, URL, or SNMP trap.
Command	The action that was executed: ➤ for executables – the command line ➤ for URLs – the URLs ➤ for SNMP traps – **Send SNMP trap to <address>**
Status	The status of the action: ➤ **Pass** – When the action has been performed ➤ **Fail** – When the action failed

➤ the **Message Notifications** area displays the following information:

Field	Description
Type	The type of message notification: E-mail, SMS message, or Pager message.
Recipients	The names of the recipients who receive the notification that the alert has been triggered and that the alert scheme has been executed.
Status	The status of the message: ➤ **Pass** – When the message has been sent ➤ **Fail** – When the message was not sent.

➤ the **Notification Messages** area displays the type of message followed by the text of the message.



The E-mail message text format depends on the e-mail format selected by the sender. The following format corresponds to a Long HTML format:

```
<b><ci-name> status</b> has changed to <b><current-status></b>.<br>
<table border=1>
<tr><td><b>Trigger Time:</b></td><td><trigger-time></td></tr>
<tr><td><b>KPI Name:</b></td><td><KPI-name></td></tr>
<tr><td><b>KPI value: </b></td><td><KPI-value></td></tr>
<tr><td><b>Previous status:</b></td><td><previous-status></td></tr>
<tr><td><b>Alert name:</b></td><td><alert-name></td></tr>
<tr><td><b>Alert Description: </b></td><td><alert-description></td></tr>
<tr><td><b>URL: </b></td><td><URL></td></tr>
</table>
```

HTML is encoded in the report. The text of the e-mail received by the recipient is decoded and is similar to the Pager message text. For more information on the different formats available to send e-mails, or pager messages, see “E-Mail, SMS, and Pager Message Templates” in *Application Administration*.

The text of the Pager and SNMP messages has the following format:

<**ci-name**> status has changed to <**current-status**>.
Trigger Time: <**trigger-time**>
KPI Name: <**KPI-name**>
KPI value: <**KPI-value**>
Previous status: <**previous-status**>
Alert name: <**alert-name**>
Alert Description: <**alert-description**>
URL: <**URL**>

where:

- **ci-name** – the name of the CI whose change of status triggered the alert.
- **current-status** – the new status of the CI.
- **trigger-time** – the time and date when the alert was triggered. The format is: dd/mm/yy hh:mm GMT[<offset>]
- **KPI-name** – the name of the KPI.
- **KPI-value** – the value of the KPI.
- **previous-status** – the previous status of the CI.
- **alert-name** – the name of the alert.
- **alert-description** – the description of the alert.
- **URL** – the URL of the Mercury Business Availability Center Centers Server.

To view the Configuration Item Status Alert Notifications Report:

1. Access the appropriate Configuration Item Status Alerts report. For details, see "Viewing the Configuration Item Status Report" on page 101.
2. Click the **Details** button for the relevant alert to open the Configuration Item Status Alert Notifications report.
3. You can then print the report, send it by E-mail, and open it in Excel or PDF format. For details, see "Sharing and Storing Reports" in *Working with Applications*.

KPIs Over Time Report

KPIs Over Time reports show the status or value, over time, of selected CIs and KPIs that are accessible from the Dashboard application. The report is also accessible from the View Explorer.

The report includes filtering (by CI, KPI, and time). It can be displayed as a table or a chart.

You can also add a KPIs Over Time report to a custom report. For details, see "Custom Report Manager" in *Working with Applications*).

You can also schedule when to run the report. For details, see "Scheduling User Reports or the Performance Update Report" in *Platform Administration*.

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.

After you have created the report, you can:

- change the time frame of the existing report by using the filters. For details, see "Choosing the Time Range and Granularity" in *Working with Applications*.
- change the CIs you want to display. For details, see "Filtering by CI(s)" on page 98, and for more information see "Filtering Data Using Active Filters" in *Working with Applications*.
- change the KPIs you want to display. For details, see "Filtering by KPI(s)" on page 99.
- print the report, send it by e-mail, or save it in PDF or Excel format. For details, see "Sharing and Storing Reports" in *Working with Applications*.
- customize the report by adding a header and a footer, by selecting to automatically or manually generate the report, and/or by customizing other display elements. For details, see "Customizing Reports" in *Platform Administration*.

This section includes the following topics:

➤ "Accessing KPIs Over Time Reports" on page 108

➤ "Understanding KPIs Over Time Reports" on page 109

➤ "KPIs Over Time Reports with Status Data" on page 111

➤ "KPIs Over Time Reports with Value Data" on page 118

Accessing KPIs Over Time Reports

You can access the KPIs Over Time reports from different locations in Mercury Business Availability Center.

To access KPIs Over Time reports:

1 Select **Applications** > **Dashboard**.

2 To open the KPIs Over Time page, you can:

- right-click a specific CI in the View Explorer and select the **Goto Report** > **KPIs Over Time Reports** option
- right-click a specific CI in the right pane of Dashboard and select **Goto Report** > **KPIs Over Time Report**
- select the **KPIs Over Time Report** option in the Reports tab

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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 for KPIs" on page 111.

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3 If relevant, click **Configuration Items** to select the relevant CIs for the report. For details, see "Filtering by CI(s)".

4 If relevant, click **KPIs** to select the relevant KPIs for the report. For details, see "Filtering by KPI(s)". If you do not select specific KPIs then the data of all the KPIs for the selected CIs is displayed in the report.

For details about the KPIs Over Time report, see "Understanding KPIs Over Time Reports" on page 109.

Understanding KPIs Over Time Reports

You can select to display data only about status-based KPIs or about value-based KPIs. To reflect these capabilities, two types of KPIs Over Time reports are available:

- reports that display status information. For details, see "KPIs Over Time Reports with Status Data" on page 111. To display such information, the KPIs must be persistent. For more details, see "Persistent Data for KPIs" on page 111.
- reports that display value information. For details, see "KPIs Over Time Reports with Value Data" on page 118.

KPIs Over Time reports display the status or value of each CI and each instance of the attached KPIs. For example, when you select two CIs and the Availability and Performance KPIs, the performance KPI is not attached to the first CI, and the report has only three rows:

CI	KPI
First	Availability
Second	Availability Performance

The statuses are shown over time, starting with the event and ending with the next event.

This section includes the following topics:

- "Collecting Data" on page 109
- "Persistent Data for KPIs" on page 111

Collecting Data

To display the status or value of each CI and KPI instance in the KPIs Over Time report, you must set specific attributes so Mercury Business Availability Center collects the appropriate information.

These settings store the following information in the database for each CI with the **Save historical data for this CI** option selected:

- 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 settings described above are first selected, the current status for all 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, deselect the **Save historical data for this CI** check box for that CI.

To save status data:

1. Select **Admin** > **Dashboard** > **KPIs**.
2. Select the appropriate CI in View Explorer.
3. Select the **Save historical data for this CI** option.

To save value data:

1. Make sure the **Save historical data for this CI** option has been selected for the CI (it is selected by default). For details, see the procedure above.
2. Set the **saveValuesToPersistency** global attribute has been set to **true** in all the rules. For details, see "Configuring the Rules Global Parameters" on page 453

Persistent Data for KPIs

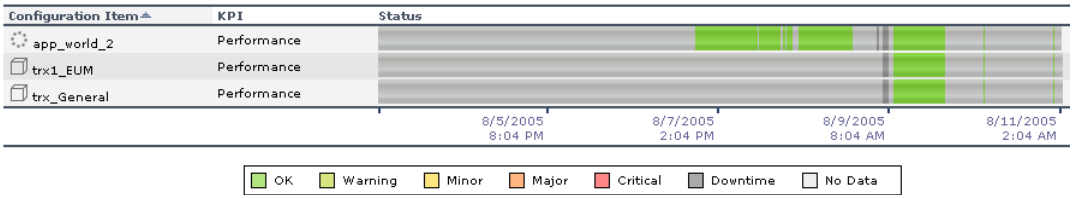
A KPI whose data is persistent is attached to a CI whose **Save KPI data over time for this CI** option has been selected. For details, see "Saving KPI Data over Time for a CI" on page 32. This option is selected by default for Business Process, Line of Business, and Monitor Application CIs. This option is not available for Monitor type CIs.

KPIs Over Time Reports with Status Data

If you select the **Statuses** option when you generate a KPIs Over Time report, the report displays only the status of the relevant KPIs. Those KPIs may also have values in the Mercury Universal CMDB but the status report will not show those values.

The reports can be displayed in graph or table format:

- **View as Graph** – The graph shows all the selected CIs and KPIs.



When you select CIs and do not select specific KPIs, all the KPIs that have been attached to the selected CIs and have historical data in the database are displayed.

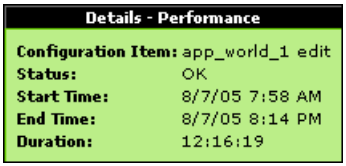
The graph displays the following information:

Item	Description
Configuration Item	The name of the selected configuration item.
KPI	The name of the KPI. The information for each KPI of each CI is displayed in a separate line.
Status	The status of each KPI of each CI during the selected time period.

You can drill down:

- to a specific segment of the time period. For details, see "Drilling Down by Time Segments in Status KPIs Over Time Reports" on page 114.
- to display status information about the children that contribute to the status of the selected CI's KPI. For details, see "Drilling Down to Influencing Children" on page 115.
- to display status information about the parents of the CI whose status is influenced by the status of the selected CI's KPI. For details, see "Drilling Down to Influenced Parents" on page 116.

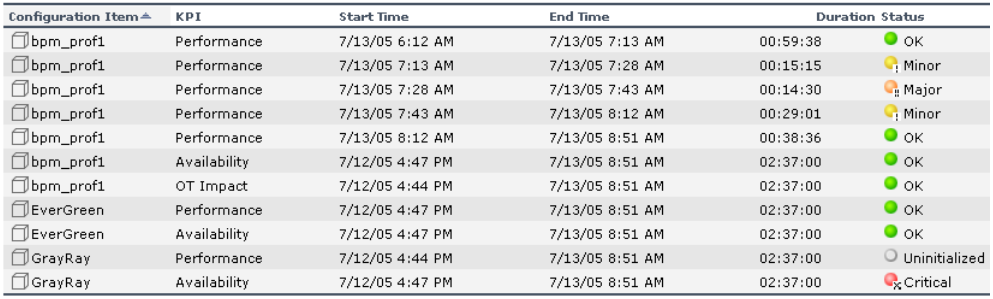
Tooltips are shown for each status. The background of the tooltip reflects the color of the status according to the KPI's objectives.



The tooltip displays the following information:

Item	Description
Details	The name of the KPI.
Configuration Item	The name of the CI whose KPI status is displayed.
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.

➤ **View as Table** – The table shows all the selected CIs and KPIs. When you select CIs and do not select specific KPIs, all the KPIs that have been attached to the selected CIs are displayed.



Configuration Item	KPI	Start Time	End Time	Duration	Status
bpm_prof1	Performance	7/13/05 6:12 AM	7/13/05 7:13 AM	00:59:38	OK
bpm_prof1	Performance	7/13/05 7:13 AM	7/13/05 7:28 AM	00:15:15	Minor
bpm_prof1	Performance	7/13/05 7:28 AM	7/13/05 7:43 AM	00:14:30	Major
bpm_prof1	Performance	7/13/05 7:43 AM	7/13/05 8:12 AM	00:29:01	Minor
bpm_prof1	Performance	7/13/05 8:12 AM	7/13/05 8:51 AM	00:38:36	OK
bpm_prof1	Availability	7/12/05 4:47 PM	7/13/05 8:51 AM	02:37:00	OK
bpm_prof1	OT Impact	7/12/05 4:44 PM	7/13/05 8:51 AM	02:37:00	OK
EverGreen	Performance	7/12/05 4:47 PM	7/13/05 8:51 AM	02:37:00	OK
EverGreen	Availability	7/12/05 4:47 PM	7/13/05 8:51 AM	02:37:00	OK
GrayRay	Performance	7/12/05 4:44 PM	7/13/05 8:51 AM	02:37:00	Uninitialized
GrayRay	Availability	7/12/05 4:47 PM	7/13/05 8:51 AM	02:37:00	Critical

The table displays the following information:

Item	Description
Configuration Item	The class icon and the name of the CI.
KPI	The name of the KPI. The information for each KPI of each CI is displayed in a separate line.
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.
Status	The status of each KPI of each CI during the selected time period.

The table shows the list of all the events sorted by CI by default. You can sort the table by different elements by clicking the relevant column header.

Note: The number of lines that can be displayed in the table is not limited. This might slow performance when displaying the table; in such cases it is recommended to limit the time period or the number of CIs and KPIs you want to display.

This section includes the following topics:

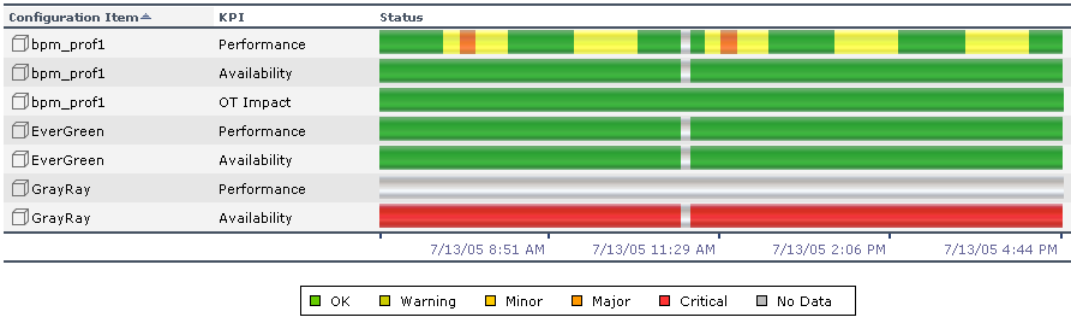
- "Drilling Down by Time Segments in Status KPIs Over Time Reports" on page 114
- "Drilling Down to Influencing Children" on page 115
- "Drilling Down to Influenced Parents" on page 116

Drilling Down by Time Segments in Status KPIs Over Time Reports

Click any time segment in the graph time footer to drill down (zoom) on all the CI and KPI information for that period of time. The time segment you zoom on is split into four equal parts that can also be zoomed until each time segment is one minute long.

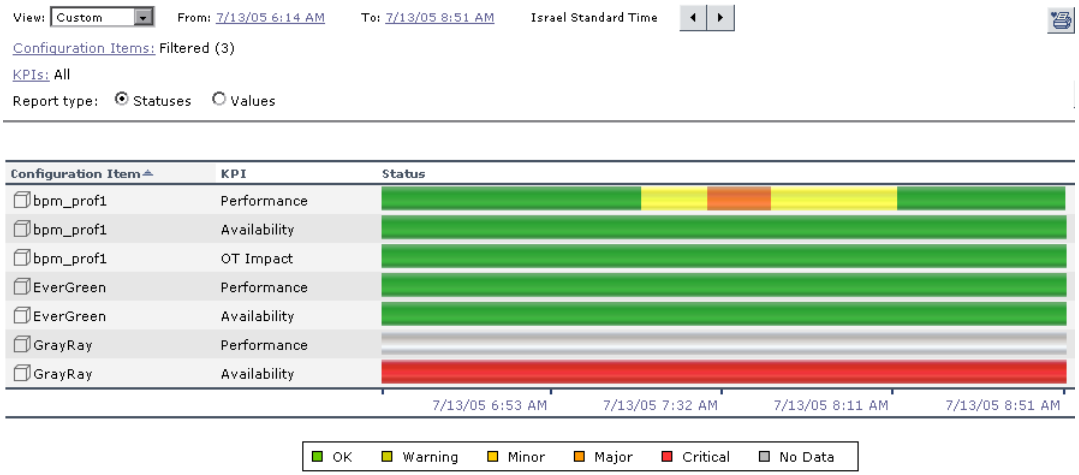
The **From** date and time of the segment you select becomes the **From** date and time of the whole time footer and the **To** date and time of the segment you select become the **To** date and time of the whole time footer.

For example, if the time period you selected is from 7/13/05 6:14 AM till 7/13/05 4.:44 PM, the time footer is split into four equal segments as follows:



If you drill down on the first segment of the time footer, the From date and time of that segment is 7/13/05 6:14 AM, and its To date and time is what is indicated under the second tick of the time footer: 7/13/05 8:51 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: (8:51-6:14)/4=39 mn. The first part starts at 6:14 AM, and ends 6:14+:39=6:53, the second part starts at 6:53 and ends at 6:53+:39=7:32, and so forth:

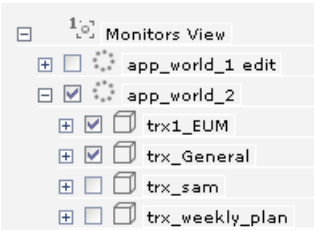


Drilling Down to Influencing Children



Click the **Drill to influencing children** button for a specific CI's KPI to display status information about the children that contribute to the status of the CI's KPI.

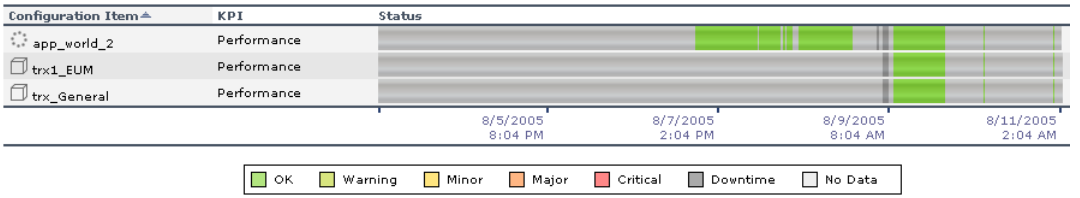
For example, the view has the following hiearchy.



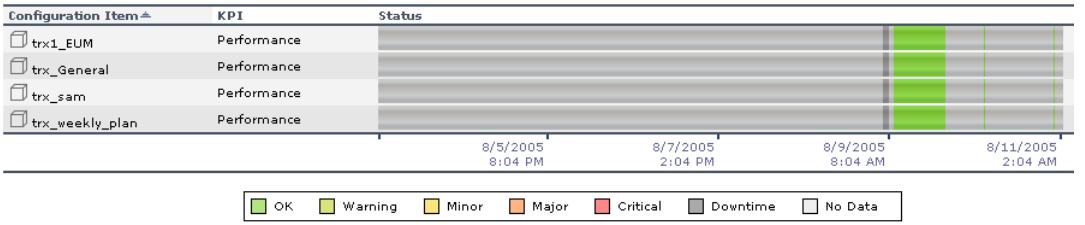
If you drill down the app_world_2 CI and the Performance KPI, the information that is displayed is the status of all the Performance KPIs for all the children of the app_world_2 CI that have a Performance KPI and of the parent itself.



If you click the **Drill to influencing children** button for the app_world_2 CI and the Performance KPI in the following graph:



then the drilled down report displays the status of all the Performance KPIs for all the children of the app_world_2 CI that have a Performance KPI as follows:



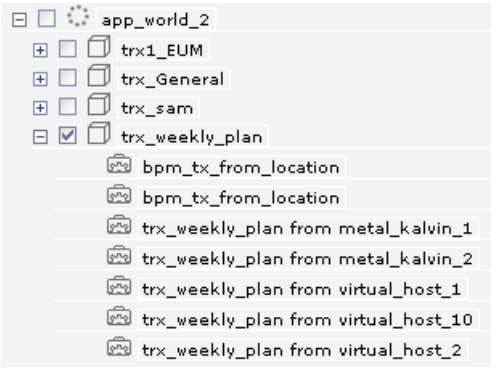
If the selected CI and KPI do not have influencing children, then the report displays the message: **No influencing children found**.

Drilling Down to Influenced Parents

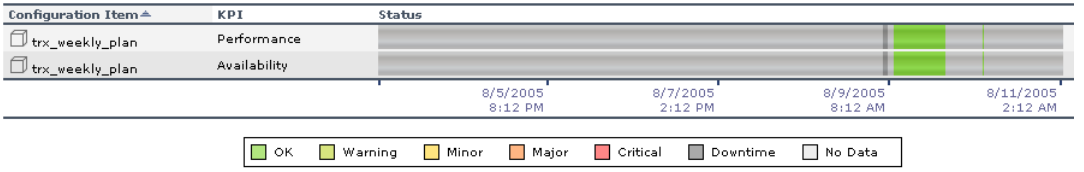


Click the **Drill to influenced parents** button for a specific CI's KPI to display status information about the parents of the CI whose status is influenced by the status of the selected CI's KPI. A CI may have more than one parent but the parent CIs that are displayed in the report are the parent CIs that are part of the view.

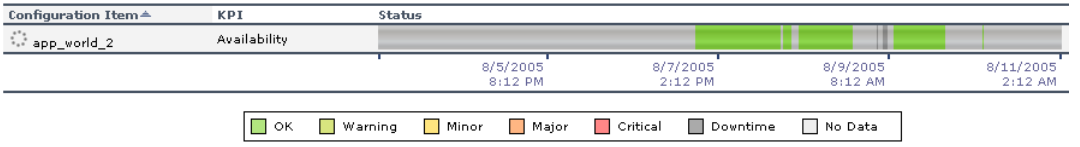
For example, if you drill down to influenced parents for the trx_weekly_plan CI and the Availability KPI, the information that is displayed is the status of all the Availability KPIs for all the parent(s) of the trx_weekly_plan CI and of the influencing child.



The report about the status of trx_weekly_plan CI displays information about the Availability and Performance KPIs as follows:



If you drill down to influenced parents for the Availability KPI, the report displays the status of the Availability KPI for the app_world_2 CI (parent of trx_weekly_plan CI) as follows:



If the selected CI and KPI do not have influenced parents, then the report displays the message: **No influenced parents found**.

KPIs Over Time Reports with Value Data

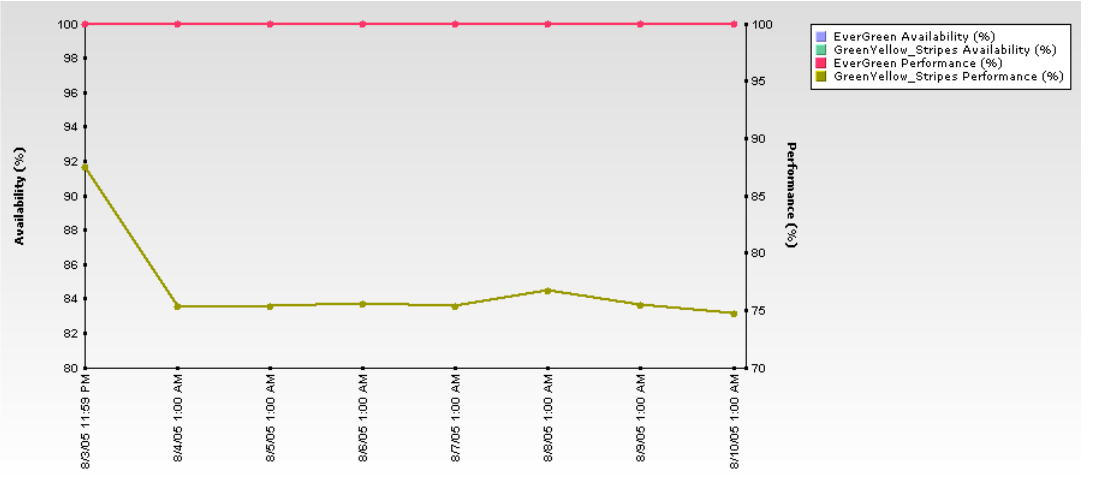
If you select the **View Value over Time** option when you generate a KPIs over Time report, the report displays only the values of the relevant KPIs. Those KPIs may also have statuses in CMDB but the value report will not show those statuses.

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.

The report can be displayed as a graph or as a table:

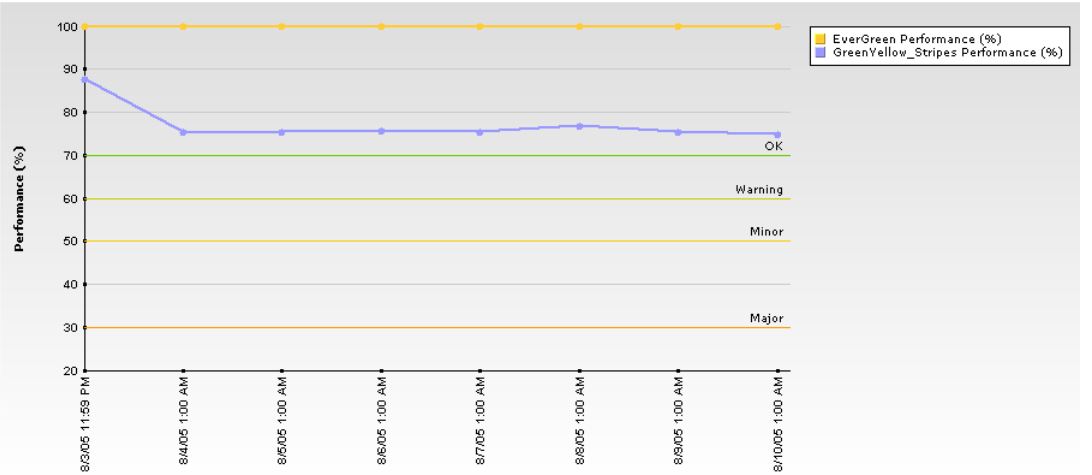
- **View as Graph** – Each KPI instance is represented by a separate graph. The legend lists the color followed by the name of the CI and a specific KPI. If a CI data is shown in more than one graph, the CI has the same color in all the graphs.



Note: The report will show data only on Configuration Items that have historical data for the selected value-based KPIs.

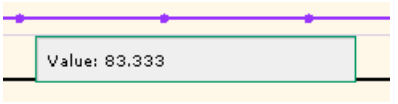
If only two KPIs are selected for one CI, the first KPI appears as the left y-axis and the second KPI as the right y-axis. This is helpful for correlating an event.

If only one KPI is presented in each chart, the KPI objectives are shown as horizontal colored lines (the colors correspond to the objective colors) as follows:



Note: All values in the graph are averaged by time frame.

Tooltips are available for each point in the graph and display the exact data for the point.



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 forth down to a minute interval.

➤ **View as Table** – The table shows the list of all filtered CIs and KPIs. Only existing KPIs should appear.

Configuration Item	KPI	7/11/05 2:55 PM	7/12/05 1:00 AM	7/13/05 1:00 AM	7/14/05 1:00 AM	7/15/05 1:00 AM	7/16/05 1:00 AM
bpm_prof1	OT Impact ($)	-	0.00	0.00	0.00	0.00	0.00
bpm_prof1	Availability (%)	100.00	83.33	83.33	83.33	83.33	83.33
bpm_prof1	Performance (%)	0.00	58.74	59.04	59.38	59.69	58.94

The table displays the selected CIs and KPIs values in the selected time period.

You can sort the CIs and KPIs by clicking the relevant column header.

Raw Data Over Time Report

The Raw Data Over Time report displays raw data over time for selected configuration items, received in the data samples from Business Process Monitor sources for the transaction from location CIs (for Business Process Monitor) or from SiteScope Monitor, SiteScope Measurement Group, and SiteScope Measurement CIs (for SiteScope).

The report displays raw data over time in graph or table format.

You can also:

➤ add this report to a custom report. For details, see "Custom Report Manager" in *Working with Applications*.

➤ schedule it. For details, see "Scheduling User Reports or the Performance Update Report" on page 332 in *Platform Administration*.

Once you have created the report you can:

➤ change the time frame of the existing report by using the filters. For details, see "Choosing the Time Range and Granularity" in *Working with Applications*. The time frame is limited to **Past week** for performance reasons. If you wish to use another time frame, you may select **Custom**; be aware that selecting this time frame might reduce the report performance.

- change the CIs you want to display. For details, see "Filtering by CI(s)" on page 98.
- change the raw data measurements you want to display. For details, see "Filtering by Raw Data Measurements" on page 132.
- use the Advanced Options to change the way the data is presented in the report. For details, see "Selecting Advanced Options" on page 134.
- sort the table by its columns by clicking on the relevant column header.
- print the report, send it by e-mail, or save it in PDF or Excel format. For details, see "Sharing and Storing Reports" in *Working with Applications*.
- customize the report by adding a header and a footer, by selecting to automatically or manually generate the report, and/or by customizing other display elements. For details, see "Customizing Reports" in *Application Administration*.

This section includes the following topics:

- "Accessing the Raw Data Over Time Report" on page 121
- "Understanding the Raw Data Over Time Report" on page 123

Accessing the Raw Data Over Time Report

You can access the Raw Data Over Time report.

To access the Raw Data Over Time report:

1. Select **Applications** > **Dashboard.**
2. Select an appropriate view in the **View** list.
3. To display the Raw Data Over Time page, you can:
   - right-click the appropriate BPM transaction from location in View Explorer and select the **Raw Data Over Time** option
   - right-click a specific CI in the right pane of Dashboard and select **Goto Report**> **Raw Data Over Time**
   - select the **Raw Data Over Time** option in the Reports tab
4. Select the appropriate time frame. For details, see "Choosing the Time Range and Granularity" in *Working with Applications*.

Due to the large number of measurements that can occur in a specific time period, which might create performance issues, the maximum length of time you can select is **Past Day**, and the maximum custom value you can specify is: 48 hours.

5 Select the appropriate filters. For details, see "Filtering by Raw Data Measurements" on page 132.

6 If relevant, click **Configuration Items** to select the relevant CIs for the report. For details, see "Filtering by CI(s)".

7 If relevant, click **Raw Data Measurements** to select the relevant measurements for the report. For details, see "Filtering by Raw Data Measurements" on page 132.

Note:

- Due to performance issues, the maximum raw data value is limited to the last 1000 for one measurement, and to the last 2000/<nbr-of-measurements> per measurement if you select more than one measurement. This limitation exists for the table format and for the graph format of the report.
- If you do not select specific raw data measurements then the default measurements assigned to the CI (if any) are automatically selected. If the CI does not have default raw data measurements, then the first measurement is automatically selected.
- The breakdown raw data measurements are listed only if **Enable breakdowns** was selected for the transaction from location in Monitor Administration. For details, see in "Enable/Disable Transaction Breakdown for the Transaction Monitor" in *End User Management Data Collector Configuration*.

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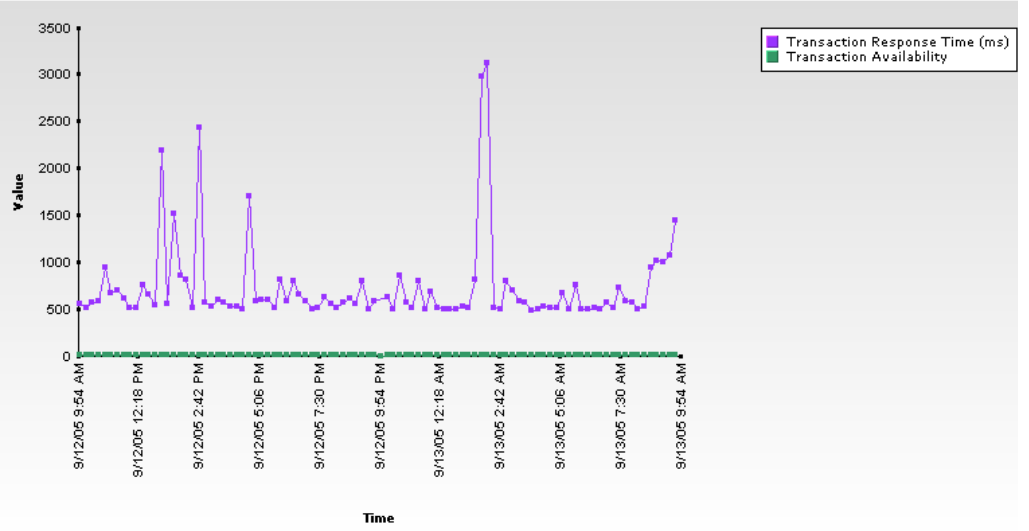
8 If relevant, select **Advanced options** to modify the report's appearance.

9 Click **Generate** to generate the report.

Understanding the Raw Data Over Time Report

The Raw Data Over Time report displays Business Process Monitor raw data in:

- graph format – the graph legend lists the selected raw data measurements.



- table format

Time	Transaction Response Time (ms)	Transaction Availability
9/12/05 9:58 AM	549	1
9/12/05 10:13 AM	516	1
9/12/05 10:28 AM	567	1
9/12/05 10:43 AM	579	1
9/12/05 10:58 AM	936	1
9/12/05 11:13 AM	672	1
9/12/05 11:28 AM	689	1
9/12/05 11:43 AM	614	1
9/12/05 11:58 AM	515	1
9/12/05 12:13 PM	509	1
9/12/05 12:28 PM	759	1
9/12/05 12:43 PM	650	1
9/12/05 12:58 PM	533	1
9/12/05 1:13 PM	2,193	1
9/12/05 1:28 PM	559	1

The type of information displayed in the report depends on the type of CI you select. For more details about Business Process Monitor CIs, see below. For more details about SiteScope CIs, see "Raw Data Over Time Reports for a SiteScope Monitor Source" on page 130.

This section includes the following topics:

- "Raw Data Over Time Reports for a Business Process Monitor Source" on page 124
- "Best Practices for Raw Data Over Time Reports for a Business Process Monitor Source" on page 128
- "Raw Data Over Time Reports for a SiteScope Monitor Source" on page 130
- "Filtering by Raw Data Measurements" on page 132
- "Selecting Advanced Options" on page 134
- "Tooltips" on page 134

Raw Data Over Time Reports for a Business Process Monitor Source

The Raw Data Over Time report displays raw data over time for selected configuration items, received in the data samples from Business Process Monitor sources for the transaction from location CIs.

You can work in two different modes by selecting the **Transactions/Locations** or the **Regular** hierarchy for the Business Process Monitor source. For details, see "Business Process Monitoring" in *Source Manager Administration*.

- If you select the **Transactions/Locations** hierarchy, you can select the transaction from location in the filter. You can then triage the problem by checking the transaction breakdowns and comparing the results of this transaction from different locations.
- If you select the **Regular** hierarchy, you can select only the transaction in the report filter. The report helps you understand at what time the transaction response time was poor and why it was poor. In the report table and graph, the data from all the locations is displayed, sorted by time, in the same graph or table, without location information.

Usually, if the Response Time and Availability raw data measurements are available for the CI, they are automatically selected. The other raw data measurements that are listed are breakdown raw data measurements for the Business Process Monitor transaction from location.

The table displays the following information:

Item	Description
Time	The sampling time.
Transaction Response Time (ms)	(Business Process Monitor raw data measurement) The transaction response time in milliseconds. This raw data measurement is selected by default. All measurements where the transaction was not available are removed from the report.
Transaction Availability	(Business Process Monitor raw data measurement) The availability of the transaction. For details, see "Raw Data Over Time Report" on page 120. This raw data measurement is selected by default. Only the unavailable transactions are displayed (their value is 1).
Client Time	(Business Process Monitor raw data measurement) Displays the average amount of time (in milliseconds) that passes while a request is delayed on the client machine. Client-related delays can include browser think time, CPU think time, HTML page processing time, time needed to open sockets, application delays caused by heavy applets, and so forth. **Note:** Client time is calculated by subtracting all other measured times from the total transaction time.
Connection Time	(Business Process Monitor raw data measurement) Displays the average amount of time (in milliseconds) needed to establish an initial connection with the Web server performing the transaction. The connection measurement is a good indicator of problems along the network or whether the server is responsive to requests.

Item	Description
DNS Time	(Business Process Monitor raw data measurement) Displays the average amount of time (in milliseconds) needed to resolve the DNS name to an IP address, using the closest DNS server. The DNS Lookup measurement is a good indicator of slow DNS resolution or other problems with the DNS server.
SSL Handshaking Time	(Business Process Monitor raw data measurement) Displays the average amount of time (in milliseconds) taken to establish an SSL connection (includes the client hello, server hello, client public key transfer, server certificate transfer, and other—partially optional—stages). After this point, all the communication between the client and server is encrypted. The SSL handshaking measurement is only applicable for HTTPS communications.
Network Time to First Buffer	(Business Process Monitor raw data measurement) Displays the average amount of time (in milliseconds) that passes from the moment the first HTTP request is sent until receipt of ACK. The network measurement is a good indicator of network quality (look at the time/size ratio to calculate download rate).
Server Time to First Buffer	(Business Process Monitor raw data measurement) Displays the average amount of time (in milliseconds) that passes from the receipt of ACK of the initial HTTP request (usually GET) until the first buffer is successfully received back from the Web server. The server time to first buffer measurement is a good indicator of Web server delay. **Note:** Because server time to first buffer is being measured from the client, network time may influence this measurement if there is a change in network performance from the time the initial HTTP request is sent until the time the first buffer is sent.

Item	Description
Time to First Buffer	The sum of **Network Time to First Buffer** and **Server Time to First Buffer**.
Download Time	(Business Process Monitor raw data measurement) Displays the time that passes from the receipt of the first buffer until the last byte is received. Download time is a combination of server and network time, since the server typically sends data over multiple connections, and is therefore working while data is being transmitted over the network.
Retry Time	(Business Process Monitor raw data measurement) Displays the overall amount of time that passes from the moment an HTTP request is started until the moment an HTTP or TCP error message is returned. Retry time relates only to HTTP or TCP errors that execute a retry after the error.

All raw data measurements (except for Transaction Response Time and Transaction Availability) are all weighted breakdowns, as they appear in the Transaction Breakdown Report, and by default they are not selected. For details, see "Understanding the Transaction Breakdown Reports" in *Using End User Management*.

Note:

- The BPM either reports Network and Server Time to First Buffer separately, or reports Time to First Buffer as a whole; hence the Network Time to First Buffer, Server Time to First Buffer, and Time to First Buffer never return values on all three.
- The GDE Sample is **trans_t** for all the raw data measurements.

Best Practices for Raw Data Over Time Reports for a Business Process Monitor Source

This section provides tips that will help you use the Raw Data Over Time Report in the most efficient way. You must first decide whether it is worth using the Raw Data Over Time report, then configure the data collectors, and then analyze the report to find where the problem occurs.

To decide if you should use the Raw Data Over Time report:

➤ **Do not use on a daily basis:**

- This report should not be used on daily basis. In order to get an overall picture about the monitored application open End User Management reports. End User Management report shows the general trend of the applications performance and availability.
- The Raw Data Over Time report is not efficient when the Business Process Monitor is configured to report data at low frequency. For example, if the Business Process Monitor agent reports data every 15 minutes, all the data can be seen in End User Management reports, and there is no need to open the Raw Data Over Time report.

➤ **Use the Raw Data Over Time report when there are performance/availability problems:**

- When the monitored application **is actually having** performance and/or availability problems.
- The end users complain about the bad performance, but there is no indication of any problem in the Business Process Monitor reports in End User Management.
- There seems to be a problem between transaction scheduled runs. To detect when exactly the performance problem happens, increase the frequency to every half minute.
- If the peaks appear during a specific minute, it is very difficult to detect it in the End User Management reports, which usually display the average of all the transactions in the specific time frame. If more than one transaction appears in the time frame the average result may hide the peak you are looking for.
- In such a case, to see all the reported data, open the Raw Data Over Time report.

To configure the data collectors in the most efficient way:

1. In Monitoring Administration set **Enable Breakdown** for the relevant transactions – for details, see "Adding Transaction Monitors" in *End User Management Data Collector Configuration*.
2. To detect the peaks in application performance increase the frequency of the Business Process Monitor. The recommended frequency is one minute.
3. Change the frequency in all the reporting locations.
4. Select **Admin** > **CMDB**, click **Source Manager**, click the **Edit** button to the right of the Business Process Monitoring source adapter, and select **Transaction/Location** in the **Hierarchy structure** list, and click **OK**.

To analyze the report when there is a periodic behavior:

1. Open the Raw Data Over Time report and select the time period where you expect to find the problems. Since the report displays large amount of data, it is recommended to select short time periods. A time period of one day should be enough to find a periodic behavior.
2. To better see the results, enlarge the report size in the advanced settings.
3. Once you detect a peak, travel with the navigations buttons to a previous day and to the day before that. Try to find out whether the bad performance problem appears at the same time each day.

To analyze the report when there is a problematic behavior:

1. To better understand the reason for the problematic behavior, open the report for all the KPIs that available in the KPI filter.
2. Try to find a correlation between the server / network / performance results.

Raw Data Over Time Reports for a SiteScope Monitor Source

The Raw Data Over Time report shows data that is reported to Mercury Business Availability Center from the Business Process Monitor. The main goal of the report is to enable you to analyze application performance and availability at crisis's time. The biggest difference between the Raw Data Over Time report and the End User Management report is that the Raw Data Over Time report displays only **raw** data, which means that all the data that was reported to Mercury Business Availability Center will be shown in the Raw Data Over Time report. No calculations are made over the reported data.

The Raw Data Over Time report displays raw data over time for selected configuration items, received in the data samples from SiteScope Monitor, SiteScope Measurement Group, and SiteScope Measurement CIs.

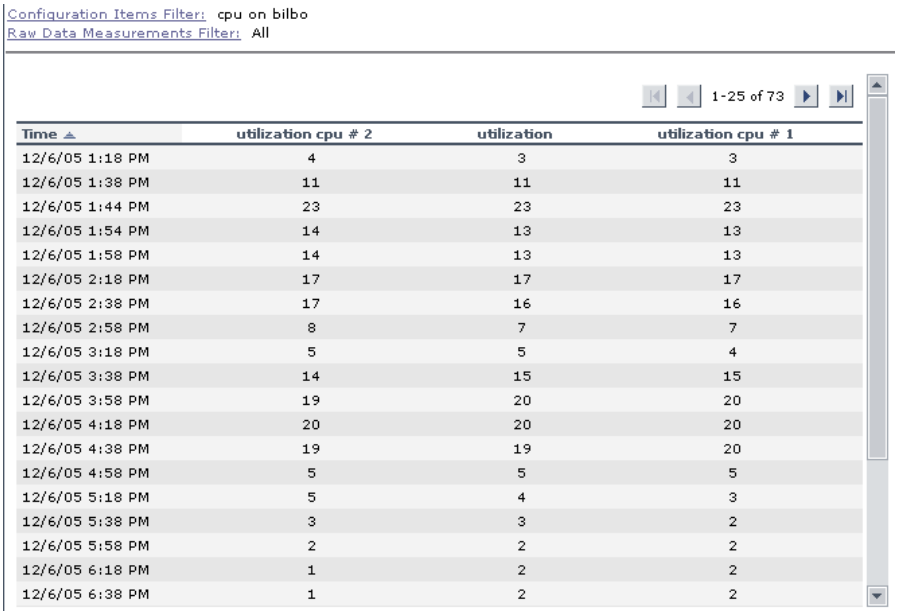
The SiteScope Monitor CI is used by Mercury Business Availability Center when the SiteScope source adapter is configured not to include Measurements. The SiteScope Measurement Group CI and the SiteScope Measurement CI are used when the source adapter is set to include measurements. For details about the source adapter, see "SiteScope" in *Source Manager Administration*.

Different sets of KPIs are displayed in the report depending on the type of CI you selected. The KPIs available for SiteScope Monitor or SiteScope Measurement Group CIs are exactly the measurements that are reported by SiteScope to Mercury Business Availability Center. The KPIs are named according to the Measurement names. There are no explicit units for SiteScope KPIs, but in most cases there are implicit unit indications in the KPI name (for example, MB Free). The raw data values are all taken from the **ss_t GDE Sample** and from the **dValue** field. For details, see "Sitescope Measurement Rule" in *Application Administration*.

The report displays the following information:

➤ If you select a SiteScope Measurement Group CI, the measurements are used as KPIs.

For example, if the SiteScope Measurement Group is cpu on bilbo, whose measurements are: utilization, utilization cpu #1, and utilization cpu #2, the Raw Data Over Time Report displays the measurements as KPIs.



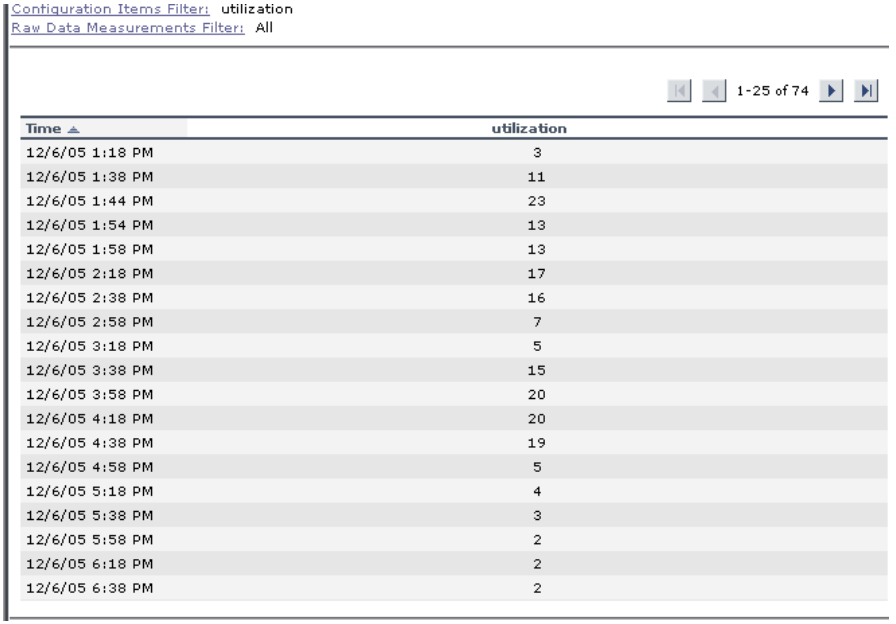
Configuration Items Filter: cpu on bilbo
Raw Data Measurements Filter: All

1-25 of 73

Time	utilization cpu # 2	utilization	utilization cpu # 1
12/6/05 1:18 PM	4	3	3
12/6/05 1:38 PM	11	11	11
12/6/05 1:44 PM	23	23	23
12/6/05 1:54 PM	14	13	13
12/6/05 1:58 PM	14	13	13
12/6/05 2:18 PM	17	17	17
12/6/05 2:38 PM	17	16	16
12/6/05 2:58 PM	8	7	7
12/6/05 3:18 PM	5	5	4
12/6/05 3:38 PM	14	15	15
12/6/05 3:58 PM	19	20	20
12/6/05 4:18 PM	20	20	20
12/6/05 4:38 PM	19	19	20
12/6/05 4:58 PM	5	5	5
12/6/05 5:18 PM	5	4	3
12/6/05 5:38 PM	3	3	2
12/6/05 5:58 PM	2	2	2
12/6/05 6:18 PM	1	2	2
12/6/05 6:38 PM	1	2	2

➤ If you select a SiteScope Measurements CI, a single KPI that corresponds exactly to the measurement is displayed.

For example, if the SiteScope Measurement is utilization, the Raw Data Over Time report displays the measurement as KPIs



Configuration Items Filter: utilization
Raw Data Measurements Filter: All

1-25 of 74

Time	utilization
12/6/05 1:18 PM	3
12/6/05 1:38 PM	11
12/6/05 1:44 PM	23
12/6/05 1:54 PM	13
12/6/05 1:58 PM	13
12/6/05 2:18 PM	17
12/6/05 2:38 PM	16
12/6/05 2:58 PM	7
12/6/05 3:18 PM	5
12/6/05 3:38 PM	15
12/6/05 3:58 PM	20
12/6/05 4:18 PM	20
12/6/05 4:38 PM	19
12/6/05 4:58 PM	5
12/6/05 5:18 PM	4
12/6/05 5:38 PM	3
12/6/05 5:58 PM	2
12/6/05 6:18 PM	2
12/6/05 6:38 PM	2

Filtering by Raw Data Measurements

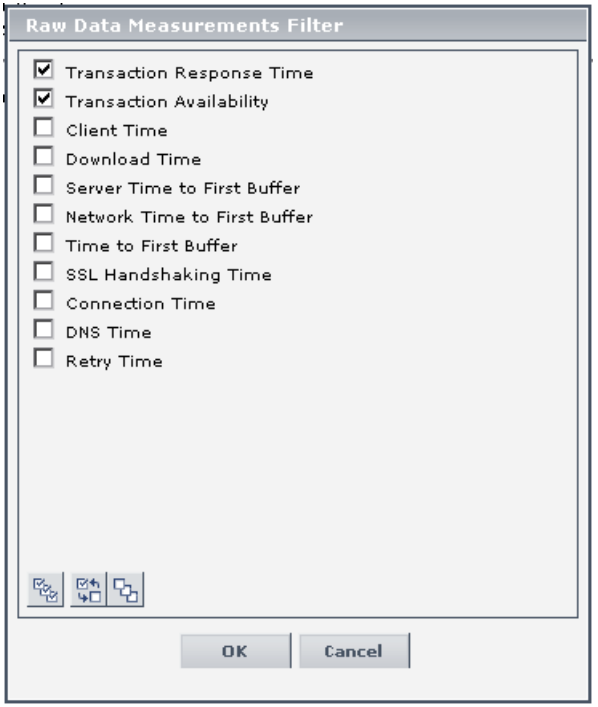
To filter a report for specific raw data measurements, you must select them.

If a selected CI does not have raw data measurements, the message **No applicable measurements** is displayed near the **Raw Data Measurements Filter**.

Availability is always **0** or **1** as each point in the report represents one transaction run that was either successful (1) or failed (0). You can use this capability to pinpoint exactly when the transaction failed.

To filter by Raw Data Measurements:

1 Click **Raw Data Measurements Filter** to open the Raw Data Measurements Filter dialog box.



2 Select the appropriate Raw Data Measurement(s).

3 Click **OK** to save the selection.

Selecting Advanced Options

The advanced options enable you to manipulate the report size and the report scale.

To select Advanced Options:

1 Click **Advanced Options** to open the Advanced Options dialog box.



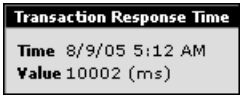
2 Select one of the following:

- **Auto scale graph based on content** – This causes the graph to auto scale based on a fixed number of points, depending on the type of view you selected in the **View** box.
- **Set fixed graph width** – The graph is displayed with the width you select in the **Occupy ... pages** list. The values are in pages in a range from 1 to 8. You can display the report pages one after the other by scrolling the report horizontally.

3 Select OK to save the changes.

Tooltips

The tooltip displays the raw data measurement, the sampling time, the sampling value, and its unit.



Change Report

The Change report displays information about the changes made to the properties of CIs for all CIs that were assigned to keep this information.

Note: To view Change reports, you must:

- be working in a shared CMDB environment
- 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 Mercury Business Availability Center.

The Change Report option is disabled in the context menus if the shared CMDB feature is not installed.

You can also display real-time changes for a CI and its children for a limited number (twenty by default) of CIs. Changes to these CIs and their children are indicated by Change icons in Dashboard. For details, see "Viewing Real-Time Changes to CI Properties" on page 38.

A CI is displayed in the Change report only when the following conditions occur:

1. at least one of the history-sensitive properties of the CI has been updated.
2. the property that was changed had been assigned the **Change Monitored** attribute in the last 24 hours. For details, see "Creating CITs" in *CI Type Manager Administration*.

   The Change report displays the changes that occurred in a specific time frame (1440 by default; that is 24 hours) specified in the **Changes period** parameter in the Infrastructure Settings. For details, see "Specifying the Changes Period for the Change Report" in *Application Administration*.

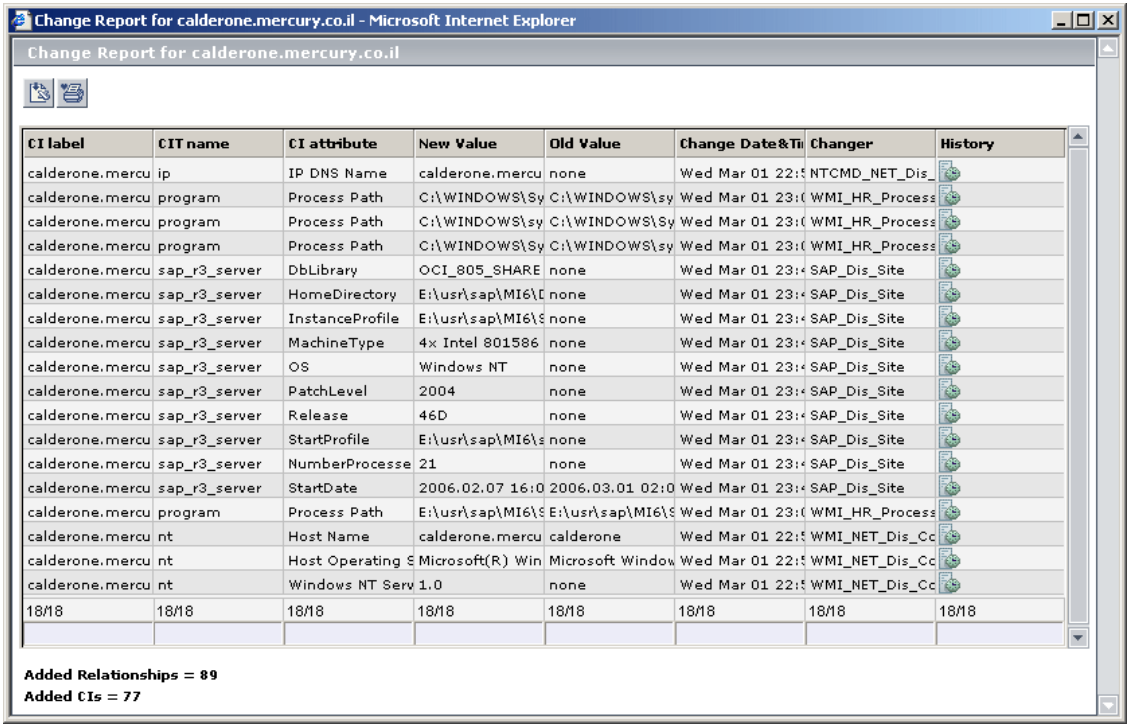
This section includes the following topics:

- "Viewing the Change Report for a CI" on page 136
- "Performing a Snapshot Comparison" on page 138
- "Viewing the Change History for a CI" on page 138

Viewing the Change Report for a CI

The Change report context menu option is also available for any CI or CI's children whose history-sensitive properties was modified.

A typical Change report is as follows:



The information displayed in the report is as follows:

Item	Description
CI Label	The name of the CI.
CIT Name	The name of the CIT (internal).
CI Attribute	The name of the CI attribute that was updated.
New Value	The new value of the CI attribute.
Old Value	The previous value of the CI attribute (before the change).
Change Date & Time	The date and time when the update was performed.
Changer	The name of the user that manually modified the CI's property, or the name of the discovery probe that automatically discovered a change made to the CI's property.
History	Click the icon to view the change history for the CI. For details, see "Viewing the Change History for a CI" on page 138.
Added Relationships	The number of relationships that were added.
Added CIs	The number of CIs that were added.

A backslash (\) in a CI name indicates a parent-child relationship. For example, one of the CI labels in the report above is bloomberg ssl 1\bloomberg ssl 1 from wall providing information for the child, bloomberg ssl 1 CI of the bloomberg ssl 1 CI.

For details about the report's functionality, see *Working with Applications*.

To view the Change report for a CI:

1. Right-click a changed CI (as indicated by the icon) and select **Goto Report** > **Change Report** to open the Change Report page.
2. Select the **Change Report** option to display the Change report for the selected CI and its children CIs.

Performing a Snapshot Comparison

Mercury Business Availability Center enables you to perform a snapshot comparison if snapshots for the selected view were saved in Mercury Application Mapping.

To perform a snapshot comparison:

1 At the bottom of the Change Report window (for details, see "Viewing the Change Report for a CI" on page 136), click **View Snapshots** to open a separate window in your Web browser displaying the snapshots that were saved for the selected view.

Note: The View Snapshots option appears only if snapshots for the selected view were saved.

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2 Select the two snapshots you want to compare.

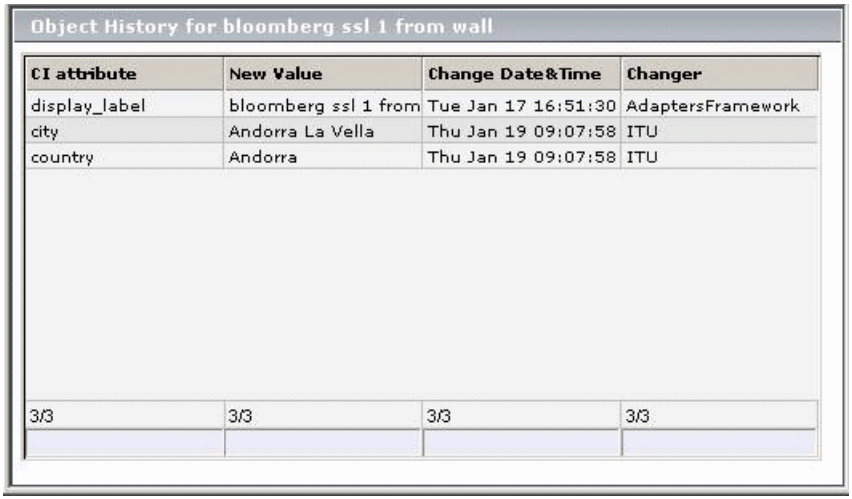
3 Click **Compare** to open a separate window in your Web browser. The window is divided into two sections. Each side displays a hierarchical tree structure of all the CIs in the topology map for that snapshot version. For details, refer to the *Mercury Application Mapping User's Guide*.

Viewing the Change History for a CI

You can view the change history of a specific CI.

Note: To display the Change History report, make sure that the popups are not blocked in your browser.

A typical Change History report is as follows:



The page displays the following information:

Item	Description
CI Attribute	The name of the CI attribute that was updated.
New Value	The new value of the CI attribute.
Change Date & Time	The date and time when the update was performed.
Changer	The name of the user that manually modified the CI's property, or the name of the discovery probe that automatically discovered a change made to the CI's property.

For details about the report's functionality, see *Working with Applications*.

To view the change history for a CI:

1 Right-click a changed CI and select **Goto Report** > **Change Report** to open the Change Report page.



2 Click the **History** icon for the required CI to open the History page.

SLAs Summary Report

This report displays a list of SLAs and their status for two levels, for example, SLA and CIs, or CIs and child CIs. You can filter the list by KPI, time interval, and time period.

Use this report when you want an overview of all SLA data.

You can:

- add this report to a custom report. For details, see "Custom Report Manager" in *Working with Applications*.
- schedule it. For details, see "Scheduling User Reports or the Performance Update Report" on page 332 in *Platform Administration*).

  For details, see "Summary Reports" in *Using Service Level Management*.

Report Repository

The Report Repository page displays all reports previously saved in Dashboard, Service Level Management, and End User Management (Triage report only). For details, see "Report Repository" on page 111 in *Working with Applications*.

10

Mercury Dashboard Ticker

Mercury 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 Mercury Business Availability Center.

This chapter describes:	On page:
About Mercury Dashboard Ticker	141
Understanding Mercury Dashboard Ticker	142
Controlling Mercury Dashboard Ticker Behavior	143
Modifying Preferences	144
Message Window	146
Ticker Window	147
Installing Mercury Dashboard Ticker	148

About Mercury Dashboard Ticker

Using Mercury Dashboard Ticker, you can, without opening Dashboard, select a view, select the server where Mercury Business Availability Center is installed, adjust the rate and the scrolling speed of the Ticker Window, and open the Message Window.

To use Mercury Dashboard Ticker, you must install it on your desktop.

Understanding Mercury Dashboard Ticker

After you have installed Mercury Dashboard Ticker (for details, see "Installing Mercury Dashboard Ticker" on page 148), one of Mercury 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 Mercury 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...**

Mercury 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. For details, see "Modifying Preferences" on page 144. If the server cannot be found or a connection cannot be established, the tray icon changes to **Offline**.

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 properly.

Every KPI in the selected view is checked. Any KPI with an error status is checked against the information already in Mercury 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. Mercury Dashboard Ticker's internal message queue can contain an unlimited number of messages.

Controlling Mercury Dashboard Ticker Behavior

You can view an event in the Message Window or in the Ticker Window. You can open the Web browser, connect to the Mercury Business Availability Center server, and display the view in Dashboard. You can select what information is displayed in Mercury Dashboard Ticker, and how it is displayed.

To control some of the Dashboard Ticker behavior:

You can control the behavior of Mercury 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 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 146
- **Show Ticker** – to display the Ticker Window. For details, see "Ticker Window" on page 147
- **Log On** – opens the default Web browser, connects to the Mercury Business Availability Center server, and displays the view in Dashboard. For details about the Dashboard view, see "Dashboard Console" on page 33
- **Preferences** – to modify the information that is displayed in Mercury Dashboard Ticker, and how it is displayed. For details, see "Modifying Preferences" on page 144
- **About** – to display the About window
- **Exit** – to exit Mercury Dashboard Ticker

Modifying Preferences

You can view messages automatically (if you indicated so in the 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 it currently displayed is removed from the queue as soon as you close the window.

If you have selected to display the Message Window automatically and you do not click that window, the Message Window fades out after 5 seconds, the message is considered unread. It is not removed from the queue.

Use preferences to:

- select the view whose CIs and KPIs statuses you want to display
- reload the views from the Mercury Business Availability Center server you are accessing
- change the server you are accessing
- modify the refresh rate
- change the scrolling speed of the Ticker Window
- display a popup Message Window when a new message arrives
- sound an alert when a new message arrives
- automatically load Mercury Dashboard Ticker when you start your computer

To modify Mercury Dashboard Ticker preferences:

1. Right-click the Mercury Dashboard Ticker icon in the desktop tray bar and select **Preferences**.
2. In the **View name** list, select the name of the view you want to display in the ticker.

   Click **Reload** if you want to reload the views from the Mercury Business Availability Center server you are accessing.

3 In the **Connection Settings** area:

- 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://**<Mercury_Business_Availability_Center_server>**/**<virtual_Web_URL>**
  where **virtual_Web_URL** may be, for example: MercuryAM.
- in the **Update interval** box, enter the update interval timeout (in seconds). The default is 15 seconds. The minimum interval is 5 seconds.

4 In the **Login Information** area:

- enter your user name in the **User name** box
- enter your password in the **Password** box

5 In the **Ticker Window** area, select a scrolling speed: **Low**, **Mid**, or **High**. The default is **Mid**.

6 Select **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.

7 Select **Play incoming message sound alert** to automatically sound an alert when a new message arrives.

The alert sound depends on the **alert.wav** file that is located in **<product_installation_folder>\Dashboard Ticker\ticker**
A user with the appropriate permissions can replace the sound of the alert and save it in the same location under the same name. For details, see "Sound Alert for Critical Status in the Console and Filter Tabs" in *Application Administration*.

8 Select **Load BAC Ticker when my computer starts** to automatically load Mercury Dashboard Ticker when you start your computer.

9 Click **OK** to save your settings.

Message Window

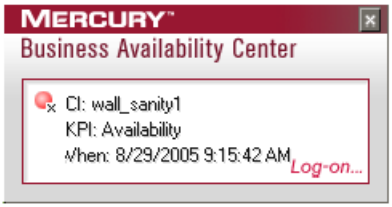
The Message Window is used to convey to the user that a KPI's status has changed to error/poor/worst.

The window is displayed either automatically or manually. For details on how to set this option, see "Modifying Preferences" on page 144.

When you close the message window, the entry that was displayed is removed from the queue. You cannot re-display 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.

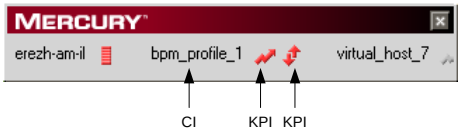
The Message Window displays the following information:



- the status icon of the KPI
- **CI** – the name of the CI
- **KPI** – the name of the KPI
- **When** – the date and time when the status change was received by Mercury Dashboard Ticker
- **Log-on...** – click **Log-on** to automatically open Dashboard

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.



The icons correspond to the icons displayed in the Top View tab in Dashboard. For details, see "Working with the Top View Tab" on page 25.

You set the scrolling speed of Mercury Dashboard Ticker in the Preferences page. For details, see "Modifying Preferences" on page 144.

When you have moved the Ticker Window to a specific location on your desktop, the window will be 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.

You can click an icon in the Ticker Window to show a tooltip that includes the name of the KPI.



If you change any parameter in the Preferences page, scrolling restarts from the beginning.

Installing Mercury Dashboard Ticker

To use Mercury Dashboard Ticker, you must install it and then launch it to configure the various options that control its behavior.

This section includes the following topics:

- "Installing Mercury Dashboard Ticker" on page 148
- "Launching Mercury Dashboard Ticker" on page 148
- "Requirements" on page 148

Installing Mercury Dashboard Ticker

You must first install Mercury Dashboard Ticker.

To install Mercury Dashboard Ticker:

1. Select **Admin** > **Platform** > **Setup and Maintenance** to open the Downloads page.
2. Click **Mercury Dashboard Ticker** and follow the on-screen instructions.

Launching Mercury Dashboard Ticker

After Mercury Dashboard Ticker is installed, you must launch it to configure its behavior.

To launch Mercury Dashboard Ticker:

Select **Start** > **Programs** > **Mercury Dashboard Ticker** > **Mercury Dashboard Ticker** to launch the application and open the Preferences page (for details, see "Modifying Preferences" on page 144).

Requirements

To use the Mercury 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 Mercury Dashboard Ticker. To log on to Mercury Business Availability Center from the Message Window, you must fulfill the requirements detailed in *Preparing the Database Environment*.

11

Real User Monitor Views in Dashboard

This chapter describes the content and structure of the Real User Monitor views.

This chapter describes:	On page:
About Real User Monitor Views	151
Real User Applications View	154
Real User End Users View	160
Real User Locations View	163
Real User Servers View	166
All RUM Monitors View	168

About Real User Monitor Views

The Real User Monitor views present real-time performance, availability, and other data for your network and servers, collected by Real User Monitor by monitoring real traffic generated by end users. The data enables you to analyze the business impact of detected performance issues related to end users, and helps you to identify the cause of delays. From the views, you can access various Real User Monitor reports, where you can analyze the collected data to isolate the root cause of detected problems.

For information on Real User Monitor functionality, see “Introducing Real User Monitor Administration” in *Real User Monitor Administration*.

The CIs and relationships for the incoming Real User Monitor samples are created by the Real User Monitor source adapter (described in "Real User Monitor" in *Source Manager Administration*). The hierarchical structure for each Real User Monitor view is determined by the TQL for the view (described in "Working with Pattern Views" in *View Manager Administration*).

The views include information about applications, containers, pages, end users, servers, user sessions, and so forth.

The Real User Monitor views are:

- "Real User Applications View" on page 154
- "Real User End Users View" on page 160
- "Real User Locations View" on page 163
- "Real User Servers View" on page 166
- "All RUM Monitors View" on page 168

Note: You can also see Real User Monitor applications data in the Monitors View and the End User Monitors View. For an explanation of the data in these views, see "Real User Applications View" on page 154.

Tip: If you are not using Real User Monitor in your Mercury Business Availability Center system, then it is recommended that you deactivate the Real User Monitor views. For more information, see "Defining View Properties to Create Views" in *View Manager Administration*.

KPIs Used for Real User Monitor CIs

The following KPI are used for the CIs in the Real User Monitor views:

- **Performance –** Displays information on the average download time of a page or transaction, or the percentage of sessions with no page performance problems, for an application monitored by Real User Monitor.
- **Availability –** Displays information on the average availability of a page, transaction, or session, for an application monitored by Real User Monitor.
- **Volume –** Displays information on traffic volume, such as: page hits, transaction runs, amount of sessions, errors, events.
- **Latency –** Displays information on the average round-trip time for packets travelling between the end users and the server monitored by Real User Monitor.
- **Component Availability** – Displays information on the percentage of application pages without server errors for a monitored server.
- **Bandwidth –** Displays the amount of traffic (in bytes) between the server and end users accessing the server (for traffic in both directions), including both HTTP and HTTPS traffic.

For more details about the KPIs, see "Dashboard KPIs Details" in *Application Administration*.

Real User Applications View

The **Real User Applications** view displays data on the pages and transactions accessed in the applications monitored by Real User Monitor, and data on errors and events for the applications.

The applications are configured in Monitor Administration. For information on configuring applications to be monitored, see "Configuring Applications" in *End User Management Data Collector Configuration*.

This section includes the following topics:

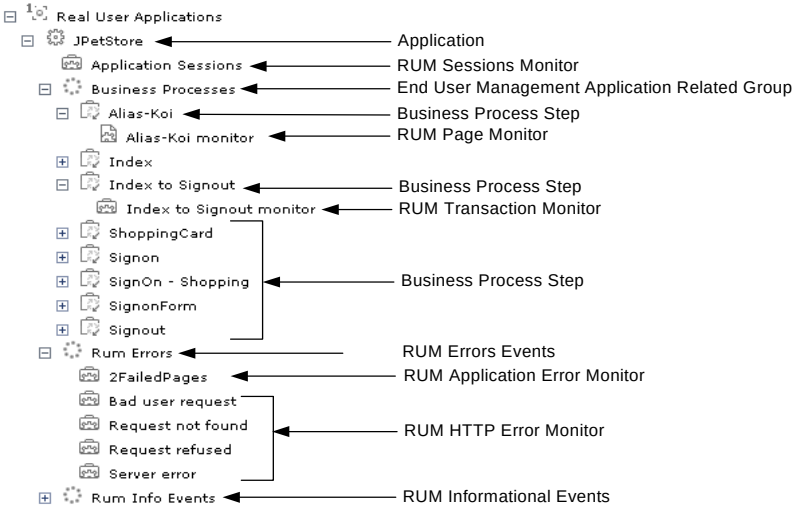
➤ "Hierarchy" on page 155

➤ "CI Types and Their Context Menu Options" on page 156

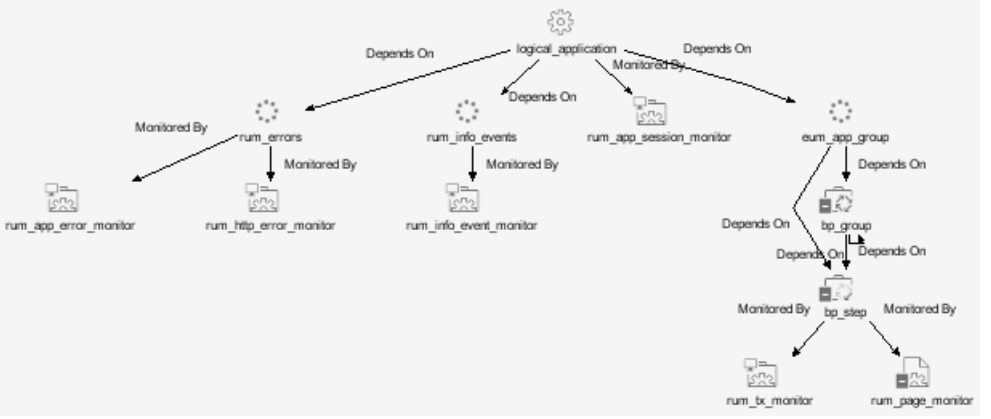
Note: The hierarchies in the Real User Application view are also displayed in the Monitoring View and the End User Monitors View.

Hierarchy

The Real User Applications view generally contains the following hierarchical structure:



The TQL for the view is built as follows:



Note: The TQL nodes use the internal names for the CITs.

CI Types and Their Context Menu Options

This section provides a description of each CIT in the Real User Applications view, and of the Real User Monitor-related options that are available for each CIT.

The report options that are not related to Real User Monitor are described in "Menu Options for CIs" on page 39.

Application

An Application CI is created for, and with the same name as, each application configured in Monitor Administration.

Note: The Application CI does not show information on volume, even though the Volume KPI is defined for each of the child CIs. Volume does not propagate up to Application, because it shows volume of different traffic types for each of the child groups, and these cannot be logically amalgamated.

The Real User Monitor-related reports accessible from this CI are:

- **Session Analyzer report** – displays session data for specific applications that were configured for Real User Monitor in Monitor Administration. For details, see "Session Analyzer Report" in *Using End User Management*.
- **Event Count Over Time report** – displays data for all events, or sessions with events, in monitored applications that you configured in Monitor Administration, broken down by time intervals. For details, see "Event Count Over Time Report" in *Using End User Management*.
- **Event Summary report** – displays a summary of events in monitored applications that you configured in Monitor Administration. For details, see "Event Summary Report" in *Using End User Management*.

Business Process Group

Business Process Group CIs are created automatically with a default name by Mercury Business Availability Center.

The Real User Monitor-related report accessible from this CI is:

➤ **Event Count Over Time report** – displays data for all events, or sessions with events, in monitored applications that you configured in Monitor Administration, broken down by time intervals. For details, see "Event Count Over Time Report" in *Using End User Management*.

Business Process Step

Business Process Step CIs are added automatically by Mercury Business Availability Center using the names of the pages and transactions configured for the application in Monitor Administration.

The Real User Monitor-related report accessible from this CI is:

➤ **Event Count Over Time report** – displays data for all events, or sessions with events, in monitored applications that you configured in Monitor Administration, broken down by time intervals. For details, see "Event Count Over Time Report" in *Using End User Management*.

End User Management Application Related Group

An End User Management Application Related group CI is automatically created for each application configured in Monitor Administration, using a default name from Mercury Business Availability Center.

The Real User Monitor-related report accessible from this CI is:

➤ **Event Count Over Time report** – displays data for all events, or sessions with events, in monitored applications that you configured in Monitor Administration, broken down by time intervals. For details, see "Event Count Over Time Report" in *Using End User Management*.

RUM Application Error Monitor

A RUM Application Error Monitor CI is automatically created for, and with the same name as, each error event configured for the application in Monitor Administration.

The Real User Monitor-related report accessible from this CI is:

➤ **Event Count Over Time report** – displays data for all events, or sessions with events, in monitored applications that you configured in Monitor Administration, broken down by time intervals. For details, see "Event Count Over Time Report" in *Using End User Management*.

RUM Errors Events

A RUM Error Event CI is created with a default name by Mercury Business Availability Center for each application configured in Monitor Administration which has error events defined.

The Real User Monitor-related report accessible from this CI is:

➤ **Event Summary report** – displays a summary of events in monitored applications that you configured in Monitor Administration. For details, see "Event Summary Report" in *Using End User Management*.

RUM HTTP Errors Monitor

A RUM HTTP Error Monitor CI is automatically created for, and with the same name as, each HTTP error event configured for the Real User Monitor engine in Monitor Administration. When a new Real User Monitor engine is created in Monitor Administration, four default HTTP error events are automatically created for the engine (bad user request, request not found, request refused, and server error), and the corresponding RUM HTTP Error Monitor CIs are added to the Application branch in the views.

The Real User Monitor-related report accessible from this CI is:

➤ **Event Count Over Time report** – displays data for all events, or sessions with events, in monitored applications that you configured in Monitor Administration, broken down by time intervals. For details, see "Event Count Over Time Report" in *Using End User Management*.

RUM Informational Event Monitor

A RUM Informational Event Monitor CI is automatically created for, and with the same name as, each informational error event configured for the application in Monitor Administration.

The Real User Monitor-related report accessible from this CI is:

➤ **Event Summary report** – displays a summary of events in monitored applications that you configured in Monitor Administration. For details, see "Event Summary Report" in *Using End User Management*.

Rum Informational Events

A RUM Informational Event CI is created with a default name by Mercury Business Availability Center for each application configured in Monitor Administration which has informational error events defined.

The Real User Monitor-related report accessible from this CI is:

➤ **Event Summary report** – displays a summary of events in monitored applications that you configured in Monitor Administration. For details, see "Event Summary Report" in *Using End User Management*.

RUM Page Monitor

A RUM Page Monitor CI is automatically created for each page that is configured for the application in Monitor Administration. The name of the CI comprises the page name and the word **monitor** (for example, **p1 monitor**).

RUM Session Monitor

RUM Session Monitor CIs are created with a default name by Mercury Business Availability Center.

The Real User Monitor-related reports accessible from this CI are:

➤ **Session Analyzer report** – displays session data for specific applications that were configured for Real User Monitor in Monitor Administration. For details, see "Session Analyzer Report" in *Using End User Management*.

- **Event Count Over Time report** – displays data for all events, or sessions with events, in monitored applications that you configured in Monitor Administration, broken down by time intervals. For details, see "Event Count Over Time Report" in *Using End User Management*.
- **Event Summary report** – displays a summary of events in monitored applications that you configured in Monitor Administration. For details, see "Event Summary Report" in *Using End User Management*.

RUM Transaction Monitor

A RUM Transaction Monitor CI is automatically created for each transaction that is configured for the application in Monitor Administration. The name of the CI comprises the transaction name and the word **monitor** (for example, **transaction1 monitor**).

The Real User Monitor-related report accessible from this CI is:

- **Event Count Over Time report** – displays data for all events, or sessions with events, in monitored applications that you configured in Monitor Administration, broken down by time intervals. For details, see "Event Count Over Time Report" in *Using End User Management*.

Real User End Users View

The Real User End Users view displays data for the end-user groups that are configured for Real User Monitor in Monitor Administration. The data includes information for each end-user group on the availability, performance, and volume of sessions that were accessed by end users.

If IP addresses that have not been configured in end-user groups in Monitor Administration are received in Real User Monitor samples, then a hidden Dynamic Node Factory creates a separate branch for them in the view, under a RUM End User Group CI called **Unconfigured**.

For information on configuring end-user groups to be monitored, see "Configuring End-User Groups" in *End User Management Data Collector Configuration*.

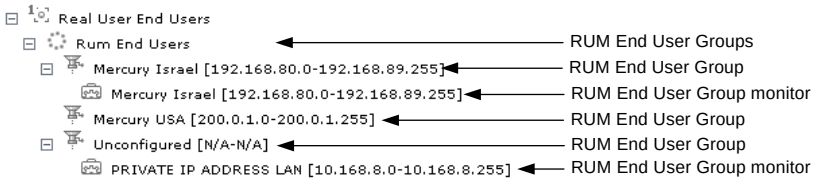
This section includes the following topics:

➤ "Hierarchy" on page 161

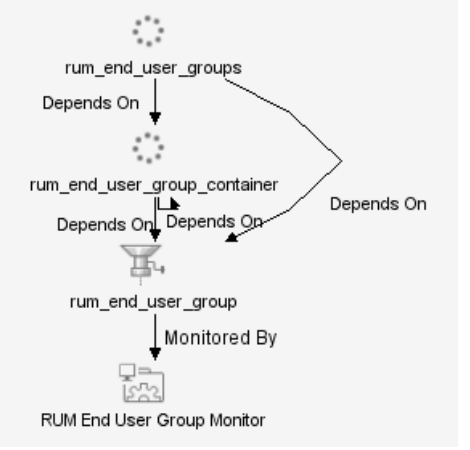
➤ "CI Types and Their Context Menu Options" on page 162

Hierarchy

The Real User End Users view generally contains the following hierarchical structure:



The TQL for the view is built as follows:



Note: The TQL nodes use the internal names for the CITs.

CI Types and Their Context Menu Options

This section provides a description of each CIT in the Real User End Users view, and of the Real User Monitor-related options that are available for each CIT.

RUM End User Groups

RUM End User Groups CIs are created automatically by Mercury Business Availability Center using a default name.

The Real User Monitor-related report accessible from this CI is:

➤ **End User Summary report** – displays data for specific end users that were configured for Real User Monitor in Monitor Administration. For details, see "End User Summary Report" in *Using End User Management*.

RUM End User Group

A RUM End User Group CI is created automatically for each end-user group configured in Monitor Administration. The name comprises the configured end-user group name, together with the IP range of the end-user group.

The Real User Monitor-related report accessible from this CI is:

➤ **End User Summary report** – displays data for specific end users that were configured for Real User Monitor in Monitor Administration. For details, see "End User Summary Report" in *Using End User Management*.

RUM End User Group Monitor

A RUM End User Group Monitor CI is automatically created for each end-user group configured in Monitor Administration that has been received in Real User Monitor samples. The name comprises the end-user group name together with the IP range of the end-user group.

In addition, a RUM End User Group Monitor CI called **Private IP Address Lan** (with an IP range) is created for IP addresses received in Real User Monitor samples, but not included in end-user groups configured in Monitor Administration.

The Real User Monitor-related report accessible from this CI is:

- **End User Summary report** – displays data for specific end users that were configured for Real User Monitor in Monitor Administration. For details, see "End User Summary Report" in *Using End User Management*.

Real User Locations View

The Real User Locations view displays data for end-user groups, organized by location. The locations displayed are those configured in Monitor Administration. The data includes information on the availability, performance, and volume of sessions that were accessed by end users.

If IP addresses that have not been configured in end-user groups in Monitor Administration are received in Real User Monitor samples, then a hidden Dynamic Node Factory creates a separate branch for them in the view, under a RUM Location Container CI called **Unknown**.

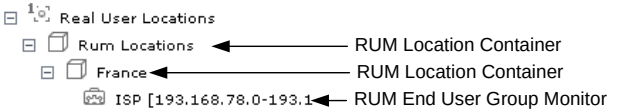
For information on configuring end-user groups to be monitored, see "Configuring End-User Groups" in *End User Management Data Collector Configuration*.

This section includes the following topics:

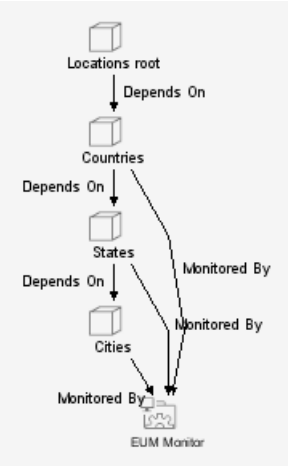
- "Hierarchy" on page 164
- "CI Types and Their Context Menu Options" on page 164

Hierarchy

The Real User Locations view contains the following hierarchical structure:



The TQL for the view is built as follows:



Note: The TQL nodes use the internal names for the CITs.

CI Types and Their Context Menu Options

This section provides a description of each CIT in the Real User Locations view, and of the Real User Monitor-related options that are available for each CIT.

RUM Location Container

A RUM Location Container CI is created for each location defined in Monitor Administration (for end-user groups), when data is received for that location in the Real User Monitor samples. A RUM Location Container CI called **Unknown** is created for samples without a configured location.

The Real User Monitor-related report accessible from this CI is:

- **Triage report** – displays transaction data for Business Process Monitor, Client Monitor, and Real User Monitor profiles for the past day. For details, see "Triage Report" in *Using End User Management*.

RUM End User Group Monitor

RUM End User Group Monitor CIs are created for each end-user group for which an IP address has been received in the Real User Monitor samples. The name comprises the configured end-user group name together with the IP range of the end-user group.

In addition, a RUM End User Group Monitor CI called **Private IP Address Lan** (with an IP range) is created for IP addresses received in Real User Monitor samples, but not included in end-user groups configured in Monitor Administration.

The Real User Monitor-related report accessible from this CI is:

- **Triage report** – displays transaction data for Business Process Monitor, Client Monitor, and Real User Monitor profiles for the past day. For details, see "Triage Report" in *Using End User Management*.

Real User Servers View

The Real User Servers view displays information on bandwidth usage and server errors for the servers monitored by Real User Monitor.

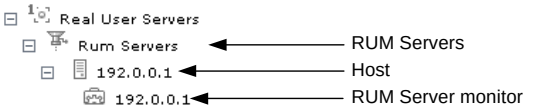
For information on configuring servers to be monitored, see "Defining a Server Name" in *End User Management Data Collector Configuration*.

This section includes the following topics:

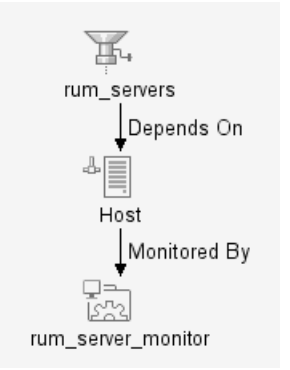
- "Hierarchy" on page 166
- "CI Types and Their Context Menu Options" on page 167

Hierarchy

The Real User Servers view contains the following hierarchical structure:



The TQL for the view is built as follows:



Note: The TQL nodes use the internal names for the CITs.

CI Types and Their Context Menu Options

This section provides a description of each CIT in the Real User Servers view, and of the Real User Monitor-related options that are available for each CIT.

RUM Servers

The RUM Servers CI is automatically created with a default name by Mercury Business Availability Center.

The Real User Monitor-related report accessible from this CI is:

➤ **Server Summary report** – displays data for the servers that are monitored by the Real User Monitor probe. For details, see "Server Summary Report" in *Using End User Management*.

Host

A Host CI is automatically created for each host (server) for which information has been received in the Real User Monitor samples. If a name has been defined for the server in Monitor Administration, the CI uses the that name. Otherwise, the CI name will generally be the IP address of the host.

The Real User Monitor-related report accessible from this CI is:

➤ **Server Summary report** – displays data for the servers that are monitored by the Real User Monitor probe. For details, see "Server Summary Report" in *Using End User Management*.

RUM Server monitor

A RUM Server Monitor CI is automatically created under each Host CI, using the same name.

The Real User Monitor-related report accessible from this CI is:

➤ **Server Summary report** – displays data for the servers that are monitored by the Real User Monitor probe. For details, see "Server Summary Report" in *Using End User Management*.

All RUM Monitors View

The All RUM Monitors view includes all the hierarchies from other views for Real User Monitor views. For details on these hierarchies, see the following sections:

- ➤ "Real User Applications View" on page 154
- ➤ "Real User End Users View" on page 160
- ➤ "Real User Locations View" on page 163
- ➤ "Real User Servers View" on page 166

12

Using Mercury Business Availability Center for SAP

This chapter describes the specific tasks involved in using Mercury Business Availability Center for SAP.

This chapter describes:	On page:
About Using Mercury Business Availability Center for SAP	170
Mercury Business Availability Center for SAP Architecture	171
Collecting SAP System Information	172
Viewing SAP Information in Dashboard	173
Context Menu Options	178
Showing Impact	179
Isolating a Problem	181
Viewing Changes Made to SAP System CIs	182
Show Content	187
CCMS Counters	190

About Using Mercury Business Availability Center for SAP

Mercury Business Availability Center for SAP, integrating SiteScope 8.1.2, Business Process Monitor 6.1, and Mercury Application Mapping 6.1 (if you are using Shared CMDB) enables you to gain visibility and control over your mission-critical SAP systems and applications.

Mercury Business Availability Center for SAP provides:

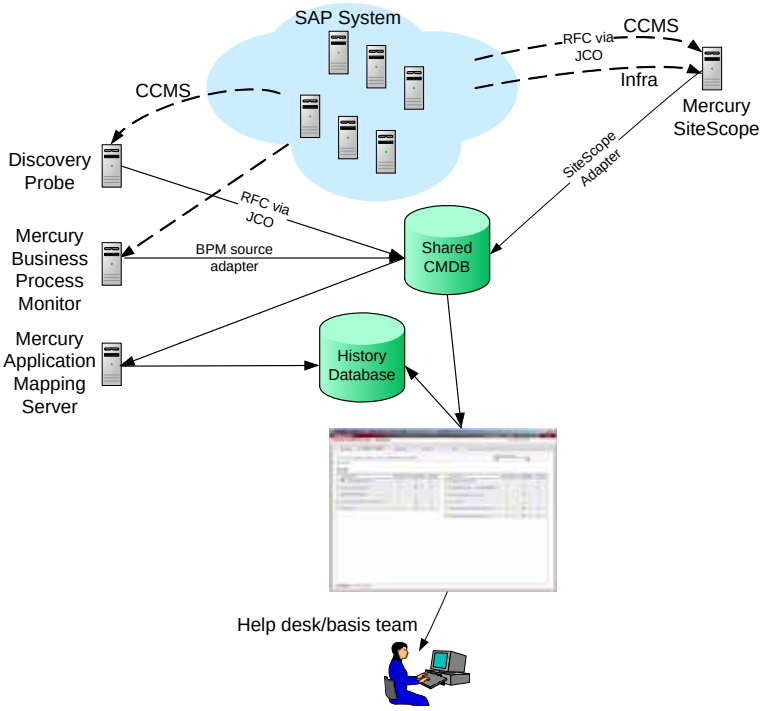
- a single operation console consolidating all SAP monitoring information
- automatic discovery and modeling of SAP-related elements, as well as their relations to other systems in the organization's IT
- change discovery and notification, for quicker problem resolution
- display of transport deployment impact, for move-to-production risk analysis
- proactive monitoring of end-user experience in SAP systems
- a bridge between IT and line-of-business people using the SAP Solution Manager business processes' hierarchy monitoring
- the ability to distinguish between SAP-specific problems and general ones
- examination, over time, of SAP CCMS monitoring data
- Service Level Management of SAP systems' service level commitments

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Note: You must have a SAP license to view the SAP_Systems view in Mercury Business Availability Center.

Mercury Business Availability Center for SAP Architecture

The architecture of Mercury Business Availability Center for SAP is illustrated in the following diagram:



The configuration for SAP entities is saved into the CMDB. Most of those entities are created by automatic discovery. Some of the relations to Business Process Monitor and SiteScope entities are created by automatic mechanisms unique to Mercury Business Availability Center for SAP.

The architecture of Mercury Business Availability Center for SAP includes the following components:

- The Discovery Probe discovers SAP-related entities and the general entities (such as hosts) that are related to them using CCMS. The Discovery Probe communicates with the shared CMDB using a Remote Function Call (RFC) via a Java Connector (JCO).

- Mercury SiteScope SAP CCMS Solution Set communicates with the SAP system and retrieves CCMS monitoring data using a Remote Function Call (RFC) via a Java Connector (JCO).
- Mercury Business Process Monitor collects data on the performance and availability of Business Process Monitor transactions carried out on the SAP system.
- Mercury Application Mapping Server collects change information from the Shared CMDB and stores it in the History database (only when you selected to work with Shared CMDB).
- Mercury Business Availability Center is used as the central console for viewing all the data and performing analysis actions.

Collecting SAP System Information

The Automatic Discovery component discovers the actual SAP IT entities and stores them as CIs in the CMDB.

All configuration actions of SAP CIs are performed inside the CMDB Administration application. All SAP CIs appear in the SAP Systems view under a root CI called SAP Systems.

All SAP system metrics are monitored by SiteScope monitors.

SAP business processes/transactions are simulated using Business Process Monitor pre-recorded VUGen scripts. Each script includes one or more Business Process Steps and are executed from a specific location. All Business Process Monitor-related CIs are stored in the CMDB as non-SAP-related CIs with links to the appropriate SAP-related CIs.

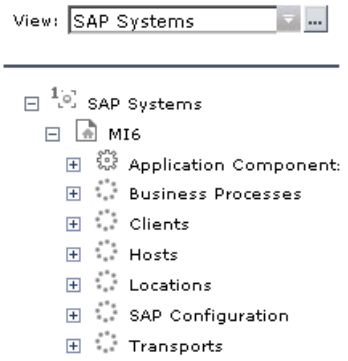
Information about the SAP System is available in Dashboard in all the relevant tabs like other information.

The SAP Systems views includes information from the SAP IT entities, SAP system metrics monitored by SiteScope monitors, and information about the SAP business processes/transactions simulated by Business Process Monitor scripts.

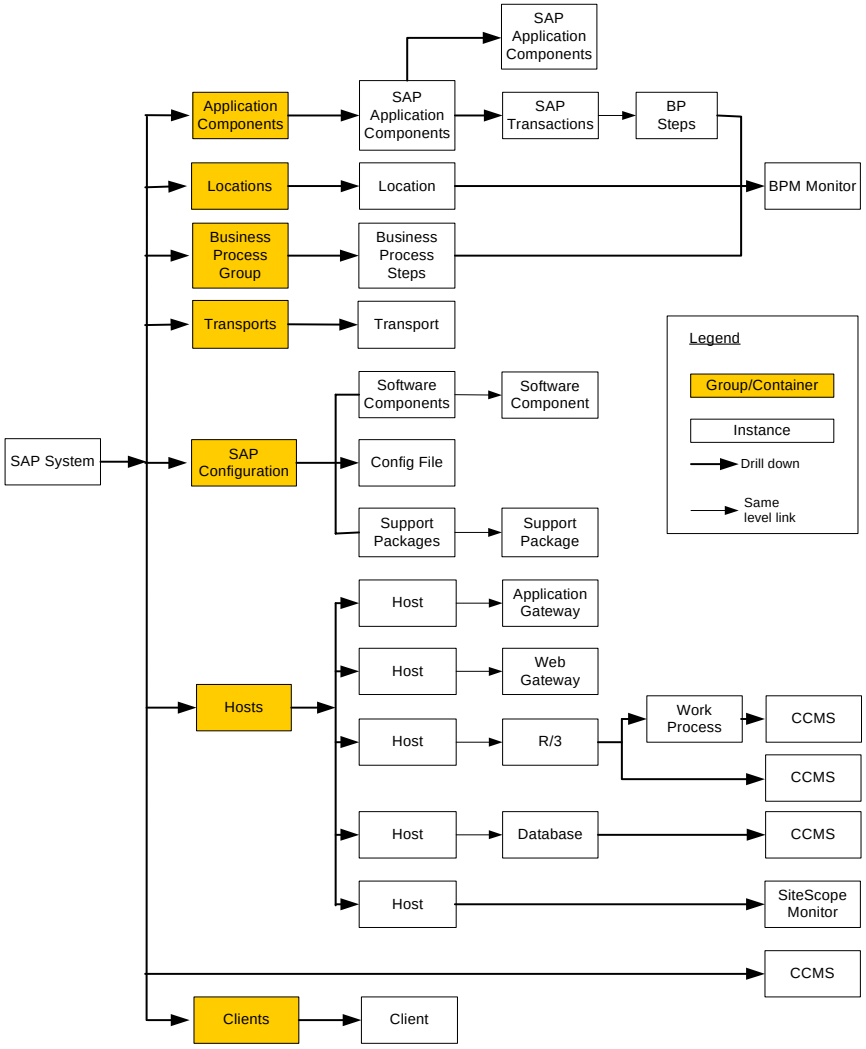
Viewing SAP Information in Dashboard

You can view SAP information in the SAP Systems view in Dashboard. For details about how to work with the Console tab, see Chapter 4, "Dashboard Console."

The SAP Systems view in View Explorer is as follows:



The following graph describes the various layers and drill-downs available in the topology of the SAP Systems view.



This section includes the following topics:

- "CIs" on page 175
- "KPIs" on page 178

CIs

The CIs are as follows:

- **SAP System** – SAP System is a logical unit, grouping together SAP-related CIs (and possibly other CIs as well) into one homogeneous SAP deployment.
- **SAP Applications** – SAP Applications is a logical unit, grouping together Application Components.
- **SAP Application Component** – A SAP Application Components may include other SAP Application Components and some SAP transactions with some common denominator.
- **SAP Transaction** – A SAP Transaction CI is part of a business process defined in the SAP System. It is comprised of request-response couples called dialog steps. The end user uses SAP transactions to carry out actions on the SAP System.
- **Business Process Step** – Business Process Steps (BPM transactions inside a script) are emulated SAP transactions executed on a Business Process Monitor machine. They are used to supply proactive monitoring of end user experience.
- **BPM Monitor** – The BPM Monitor CIs represent Business Process Monitor entities used to monitor user experience.
- **Solution Manager Projects** – The Solution Manager Projects CI type includes SAP Business Project CIs, SAP Scenario CIs, SAP Business Process CIs, and SAP Business Process Step CIs. The Solution Manager Projects hierarchy is specified by the user in SAP Solution Manager.
- **Locations** – The Contained Group Locations is a logical unit, grouping together Contained Locations CIs.
- **Contained Locations** – Location CIs are created as part of the Business Process Monitor hierarchy when working with the **Transactions/locations** option.

  To separate the SAP Business Process steps locations status from the Location CI (from the Business Process Monitor), the Contained Locations CIs are created by the SAP solution and are connected to the SAP Business Process steps (identified by following the naming convention or by manually linking them).

The regular Location CI is connected to all Business Process steps both regular and SAP, but the Contained Location CI is connected only to the SAP Business Process steps.

The Locations information represents the locations specified in **BMP Profile > BP Step > BPM transaction from location** in Platform Administration.

- **Business Processes** – The Contained Group called Business Processes is a logical container that contains all the Business Process steps attached to all the SAP transactions.
- **Transports** – A Transport represents packaged change requests that include the changes that are to be deployed onto the system.
- **Client** – A client is an organizational and legal CI in the SAP system. The main objective of the client is to keep the data isolated: the data in a client can only be visible within that client; it cannot be displayed or changed from another client. Each client on a system can represent a unique working environment.
- **Hosts** – Hosts is a logical unit, grouping together Host CIs.

  A Host CI represents the physical machine on which a server is installed. This is not a SAP-specific element.
- **Application Gateway** – An Internet Transaction Server (ITS) component. Establishes the connection to the R/3 System and performs the processing of tasks that are required to move data between R/3 applications and the Internet.
- **Web Gateway** – An ITS component. A web server extension that establishes the connection between ITS and the Web server and forwards user requests to the Application Gateway.
- **R/3 Application Server** – SAP R/3 Application Server is SAP's integrated software solution for client/server and distributed open systems.

  R/3 Application servers and databases are displayed under Hosts. You can also have several levels of hosts under the Hosts CI, SiteScope Monitor CIs, and CCMS Monitor CIs.
- **Work Processes** – Each work process CI is a logical, single-instance representation of all the work processes of the same type existing on the R/3 server.

There are several available types of work processes:

- **Dialog Work Process** – Executes dialog programs (ABAP).
- **Update Work Process** – Responsible for asynchronous database changes (controlled by a COMMIT WORK statement in a dialog work process).
- **Update2 Work Process** – Used for statistical, non-critical updates (for example, result calculations).
- **Background Work Process** – Executes time-dependent or event-controlled background jobs.
- **Enqueue Work Process** – Executes locking operations (if SAP transactions have to synchronize themselves).
- **Spool Work Process** – Performs print formatting (to printer, file, or database).

- **Database** – A database management system holding the data tier, including all the SAP elements: SAP transactions, programs, work processes, and so forth. This is not a SAP-specific CI.
- **Software Component** – A software component installed on the SAP System, for example: SAP_ABA (cross-application component), SAP_HR (human resources), and so forth.
- **Support Package** – A Support Package contains quality improvements for the SAP system, or adjustments due to legal changes.
- **Configuration File** – Configuration files are used to enter configuration parameters into the system/servers.
- **CCMS Counters** – CCMS Counters (also called Measurements) are pieces of information elements, relevant to SAP, retrieved from SAP CCMS (Computer Center Management System).
- **Monitor** – The monitors are SiteScope entities used to monitor the various CIs that exist in the CMDB. The monitors that are most likely to appear in the SAP view are host monitors: CPU, memory, disk space, and so forth. These monitors appear in the SAP view only if they are manually attached to the Host CI.

KPIs

Different Key Performance Indicators (KPIs) are displayed depending on the selected CI. For details about the displayed KPIs, see "Mercury Business Availability Center for SAP CIs" on page 287.

The SAP-related KPIs displayed in the Console tab are as follows:

- **SAP** – The SAP KPI indicates problems related to the SAP infrastructure that are reported by CCMS.
- **Transactions** – At the group level, displays the worst status of all the child CIs.

  At the monitor level, displays the worst status of the **Performance** and **Availability** KPIs for the CI.
- **Locations** – At the group level, displays the worst status of all the child CIs.

  At the monitor level, displays the worst status of the **Performance** and **Availability** KPIs for the CI.

  The other KPIs displayed in the views are not SAP-related. For more details about those KPIs, see "Dashboard KPIs Details" in *Application Administration*.

Context Menu Options

Note: Additional options are available in the SAP Systems view that are not related to SAP CIs. For details, see "Menu Options for CIs" on page 39.

The following context menu options are relevant only for SAP CIs:

- **Application Mapping:**
  - **Show Impact** – shows the impact of a root cause object by displaying all the objects that are affected by it in a separate window. For details about the report, see "Showing Impact" on page 179.
  - **Problem Isolation** – isolates a CI's problem in a separate browser window. For details about the report, see "Isolating a Problem" on page 181.

- **Goto Report:**
  - **SAP Transport Changes report** – display the changes inside the Transport and the impact on the SAP transaction. For details about the report, see "SAP Transport Changes Report" on page 185.
  - **SAP Transaction Changes report** – display the SAP transactions and SAP transports and the impact of transports on each transaction. For details about the report, see "SAP Transaction Changes Report" on page 183.
- **Show Content** – displays a details file that includes details about the configuration file, software component, or support package of the SAP system discovered by the automatic discovery process. For details, see "Show Content" on page 187.

Different menu options are available depending on the type of CIs:

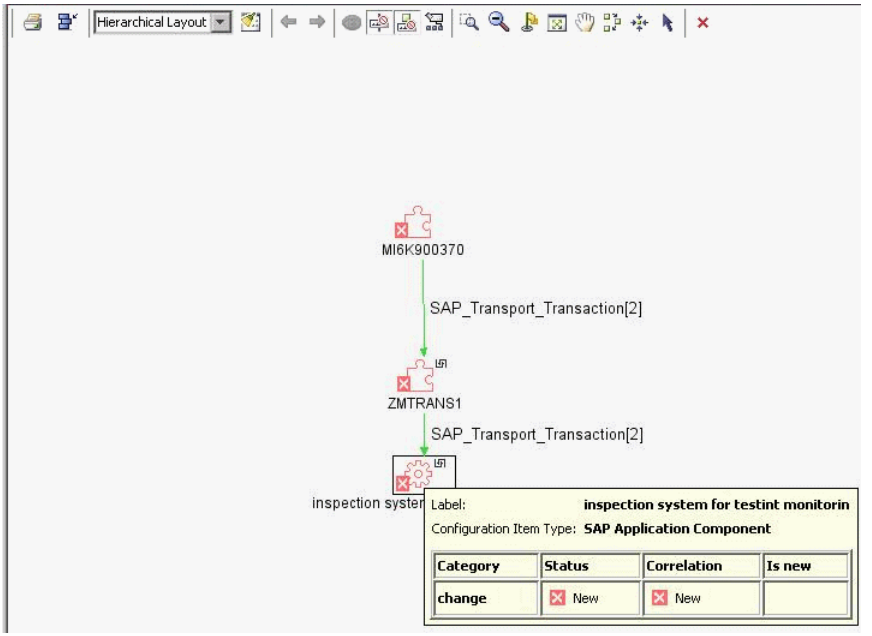
Context Menu Option	Type of CI
Show Impact	All SAP-specific CI types
Problem Isolation	All SAP-specific CI types
SAP Transport Changes Report	SAP System and SAP Transports CIs
SAP Transaction Changes Report	SAP System and SAP Transaction CIs
Show Content	Configuration Files, Software Components, and Support Package CIs

Showing Impact

The **Show Impact** option enables you to select a CI, which is defined by a correlation rule as a root cause CI, and to display all the CIs that are affected by it in a separate window.

For example, a transport affects specific transactions. Using Show Impact you can see the impact of Transport CIs on Transaction CIs and the impact of Transaction CIs on Transport CIs.

For example, when this procedure is performed on a transport, the window displays all the elements that have been impacted by the transport:



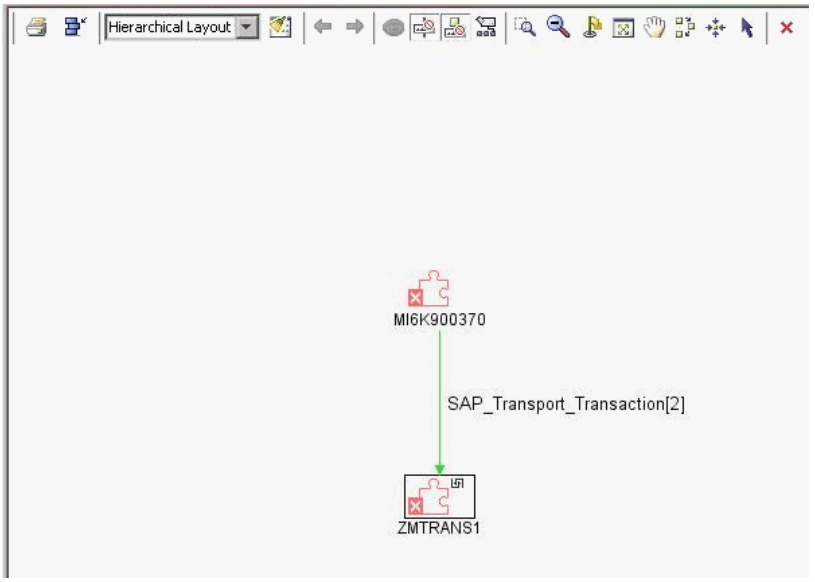
To show the impact of a root cause object:

1. In Mercury Business Availability Center, click **Applications** > **Dashboard** > **Console** and select **SAP Systems** in the **View** list.
2. Click the gray arrow to the right of the element. A menu opens. Select **Application Mapping** > **Show Impact**.

Isolating a Problem

You can isolate a CI's problem in a separate browser window. The **Problem Isolation** option enables you to retrieve root cause information for CIs that are affected by a chain of correlation rules. The output of problem isolation displays a logical map that describes a chain of trigger/affected CITs that affect the CI.

For example, when the Problem Isolation procedure is performed on a transaction, the window displays the transports that have impacted the transaction.



To isolate a problem:

1 Select **Applications** > **Dashboard** > **Console** and select **SAP Systems** in the **View** list.

2 Click the gray arrow to the right of the element. A menu opens. Select **Application Mapping** > **Problem Isolation**.

Viewing Changes Made to SAP System CIs

Changes made to the properties of all types of CIs are discovered by different types of discoveries. For details, see "Running SAP Discovery" in *Application Administration*. Those changes are displayed in the Change report available as a right-click menu option for each one of the relevant CI types. For details about the Change report, see "Change Report" on page 135.

Some of the changes made to the SAP Transactions CIs are caused by the corresponding Transport CIs. Those specific changes are processed by correlation rules in discovery and are displayed in the SAP Transaction Changes report and the SAP Transport Changes report.

This section includes the following topics:

➤ "SAP Transaction Changes Report" on page 183

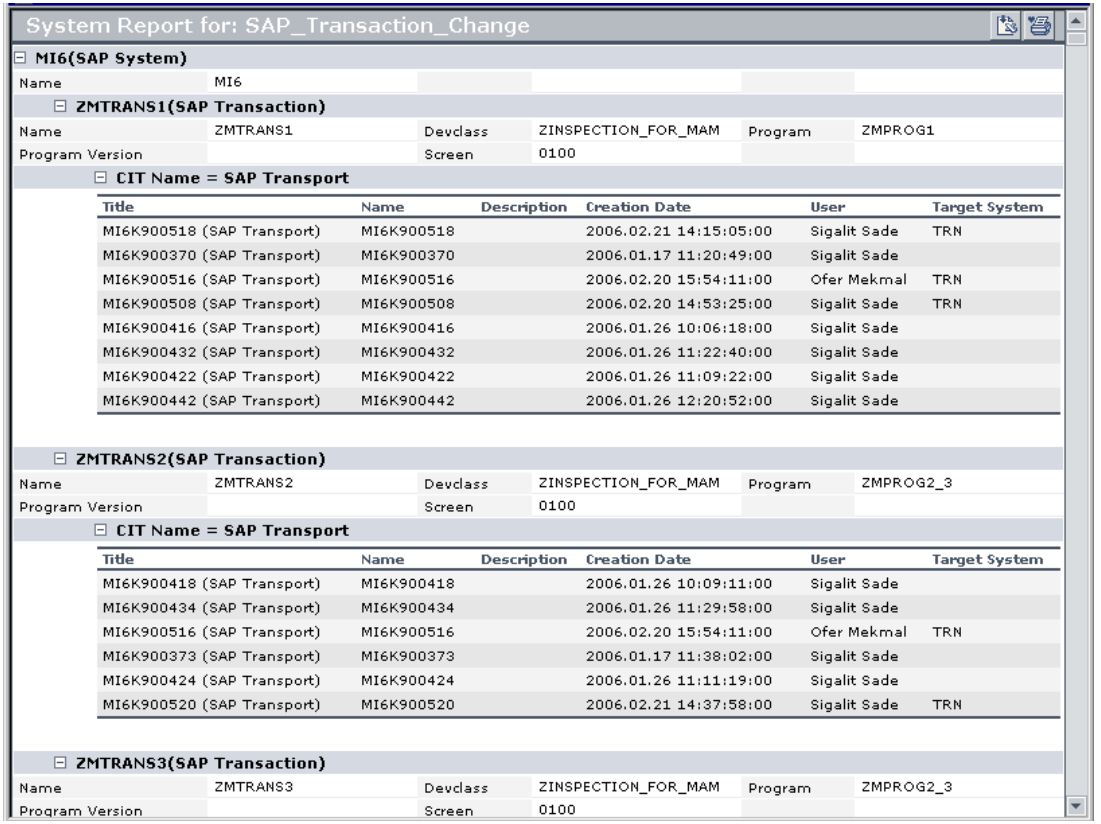
➤ "SAP Transport Changes Report" on page 185

SAP Transaction Changes Report

You can display a SAP Transaction Changes report to track changes made to a SAP Transaction CI when a transport was discovered. The SAP Transaction Change report displays those changes.

To access the SAP Transaction Changes report:

Right-click a SAP System CI or a SAP Transaction CI in the View Explorer and select **Application Mapping** > **SAP Transaction Changes report** or click the small arrow corresponding to a SAP System CI or a SAP Transaction CI in the Console tab, and select **Application Mapping** > **SAP Transaction Changes report** to display the SAP Transaction Changes report.



System Report for: SAP_Transaction_Change

MI6(SAP System)

Name	MI6				

ZMTRANS1(SAP Transaction)

Name	ZMTRANS1	Devclass	ZINSPECTION_FOR_MAM	Program	ZMPROG1
Program Version		Screen	0100		

CIT Name = SAP Transport

Title	Name	Description	Creation Date	User	Target System
MI6K900518 (SAP Transport)	MI6K900518		2006.02.21 14:15:05:00	Sigalit Sade	TRN
MI6K900370 (SAP Transport)	MI6K900370		2006.01.17 11:20:49:00	Sigalit Sade	
MI6K900516 (SAP Transport)	MI6K900516		2006.02.20 15:54:11:00	Ofer Mekmal	TRN
MI6K900508 (SAP Transport)	MI6K900508		2006.02.20 14:53:25:00	Sigalit Sade	TRN
MI6K900416 (SAP Transport)	MI6K900416		2006.01.26 10:06:18:00	Sigalit Sade	
MI6K900432 (SAP Transport)	MI6K900432		2006.01.26 11:22:40:00	Sigalit Sade	
MI6K900422 (SAP Transport)	MI6K900422		2006.01.26 11:09:22:00	Sigalit Sade	
MI6K900442 (SAP Transport)	MI6K900442		2006.01.26 12:20:52:00	Sigalit Sade	

ZMTRANS2(SAP Transaction)

Name	ZMTRANS2	Devclass	ZINSPECTION_FOR_MAM	Program	ZMPROG2_3
Program Version		Screen	0100		

CIT Name = SAP Transport

Title	Name	Description	Creation Date	User	Target System
MI6K900418 (SAP Transport)	MI6K900418		2006.01.26 10:09:11:00	Sigalit Sade	
MI6K900434 (SAP Transport)	MI6K900434		2006.01.26 11:29:58:00	Sigalit Sade	
MI6K900516 (SAP Transport)	MI6K900516		2006.02.20 15:54:11:00	Ofer Mekmal	TRN
MI6K900373 (SAP Transport)	MI6K900373		2006.01.17 11:38:02:00	Sigalit Sade	
MI6K900424 (SAP Transport)	MI6K900424		2006.01.26 11:11:19:00	Sigalit Sade	
MI6K900520 (SAP Transport)	MI6K900520		2006.02.21 14:37:58:00	Sigalit Sade	TRN

ZMTRANS3(SAP Transaction)

Name	ZMTRANS3	Devclass	ZINSPECTION_FOR_MAM	Program	ZMPROG2_3
Program Version		Screen	0100		

The table displays information about the SAP systems with changed transactions, and under each transaction the SAP transports that have changed during the past week (you can modify the default):

➤ The SAP System level:

Item	Description
Name	The name of the SAP system with a new transaction.

➤ The SAP Transaction level:

Item	Description
Name	The name of the SAP transaction that has changed.
Devclass	The development class that includes the transaction.
Program	The name of the program that runs the transaction.
Program Version	The version of the program that runs the transaction.
Screen	The first screen that opens when you load the transaction.

➤ The SAP Transport level:

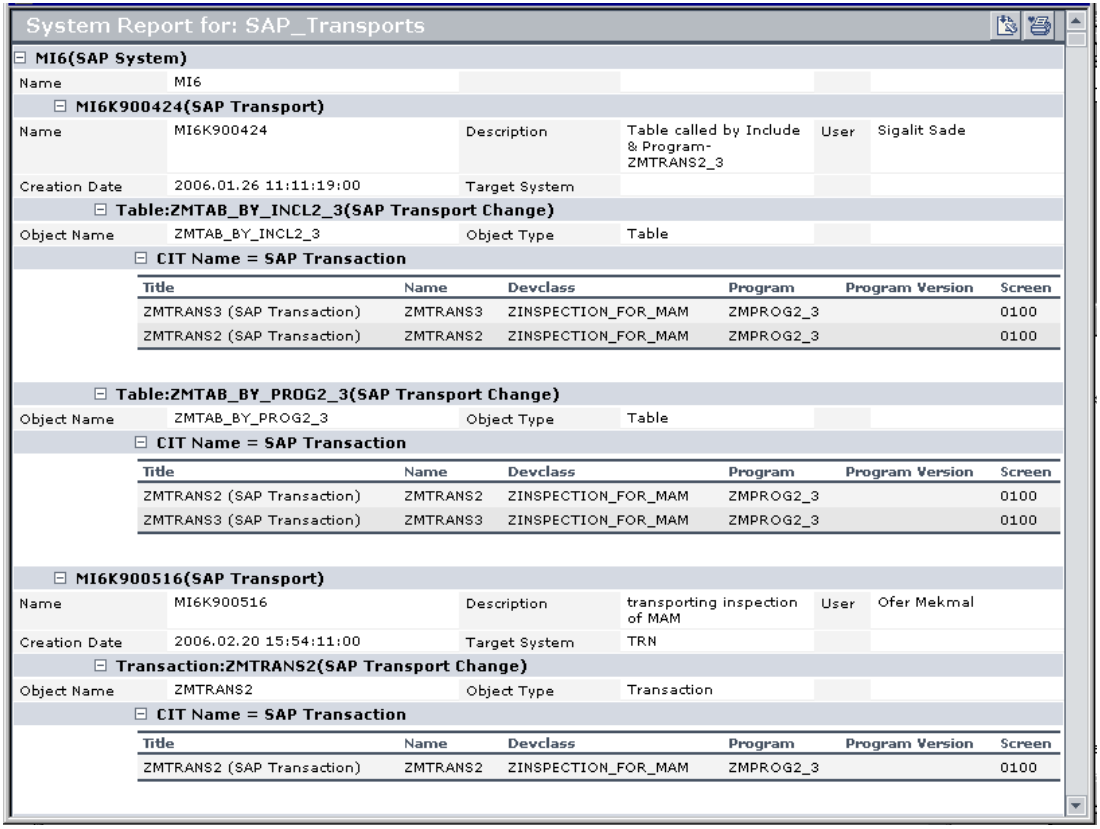
Item	Description
Name	The name of the transport that has changed.
Description	A description of the transport.
User	The name of the user who created the transport.
Creation Date	The date when the transport was created.
Target System	The target system for non-local transports.

SAP Transport Changes Report

You can display a SAP Transport Changes report that includes the transports discovered in the past week, the changes that are included in each transport, and under each change the SAP transaction that is impacted by this change.

To access the SAP Transport Changes report:

Right-click a SAP System CI or a SAP Transport CI in the View Explorer, select **Application Mapping** > **SAP Transport Changes report** or the small arrow corresponding to a SAP System CI or a SAP Transport CI in the Console tab, and select **Application Mapping** > **SAP Transport Changes report** to display the SAP Transport Changes report.



System Report for: SAP_Transports

MI6(SAP System)

Name	MI6				
MI6K900424(SAP Transport)					
Name	MI6K900424	Description	Table called by Include & Program- ZMTRANS2_3	User	Sigalit Sade
Creation Date	2006.01.26 11:11:19:00	Target System			
Table:ZMTAB_BY_INCL2_3(SAP Transport Change)					
Object Name	ZMTAB_BY_INCL2_3	Object Type	Table		

CIT Name = SAP Transaction

Title	Name	Devclass	Program	Program Version	Screen
ZMTRANS3 (SAP Transaction)	ZMTRANS3	ZINSPECTION_FOR_MAM	ZMPROG2_3		0100
ZMTRANS2 (SAP Transaction)	ZMTRANS2	ZINSPECTION_FOR_MAM	ZMPROG2_3		0100

Table:ZMTAB_BY_PROG2_3(SAP Transport Change)					
Object Name	ZMTAB_BY_PROG2_3	Object Type	Table		

CIT Name = SAP Transaction

Title	Name	Devclass	Program	Program Version	Screen
ZMTRANS2 (SAP Transaction)	ZMTRANS2	ZINSPECTION_FOR_MAM	ZMPROG2_3		0100
ZMTRANS3 (SAP Transaction)	ZMTRANS3	ZINSPECTION_FOR_MAM	ZMPROG2_3		0100

MI6K900516(SAP Transport)					
Name	MI6K900516	Description	transporting inspection of MAM	User	Ofer Mekmal
Creation Date	2006.02.20 15:54:11:00	Target System	TRN		
Transaction:ZMTRANS2(SAP Transport Change)					
Object Name	ZMTRANS2	Object Type	Transaction		

CIT Name = SAP Transaction

Title	Name	Devclass	Program	Program Version	Screen
ZMTRANS2 (SAP Transaction)	ZMTRANS2	ZINSPECTION_FOR_MAM	ZMPROG2_3		0100

The table displays information about the SAP systems with the transports discovered during the past week (this default is configurable), under each transport the changes that are included in the transport, and under each change the SAP transaction that is impacted by this change:

➤ The SAP System level:

Item	Description
Name	The name of the SAP system.

➤ The SAP Transport level:

Item	Description
Name	The name of the transport that has changed.
Description	A description of the transport.
User	The name of the user who created the transport.
Creation Date	The date when the transport was created.
Target System	The target system for non-local transports.

➤ The SAP Transport Change level:

Item	Description
Object Name	The change that has been made.
Object Type	The object that changed.
Title	The name of the transaction followed by **(SAP Transaction)**.
Name	The real name of the transaction.
Devclass	The development class that includes the transaction.
Program	The name of the program that runs the transaction.

Item	Description
Program Version	The version of the program that runs the transaction.
Screen	The first screen that opens when you load the transaction.

Note: Transports that are older than a month are automatically deleted from the CMDB. The default is configurable.

Show Content

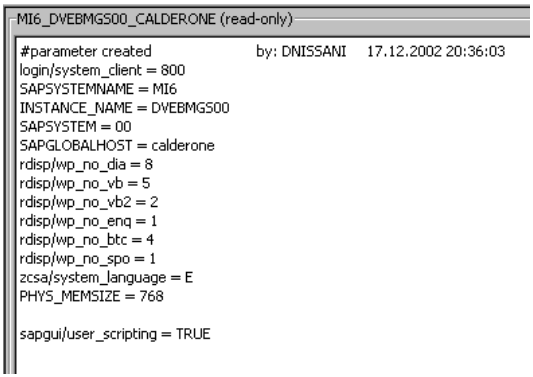
The **Show Content** option displays a configuration file details, the software components file, or the support packages file of the SAP system discovered by the automatic discovery process.

This section includes the following topics:

- "Configuration File Details" on page 188
- "Software Components File" on page 188
- "Support Packages File" on page 189

Configuration File Details

Right-click a Configuration File CI and select the **Show Content** option to display the corresponding configuration file. For example:



Details about the SAP configuration file are provided in the SAP product documentation.

Software Components File

Right-click a Software Component CI and select the **Show Content** option to display the software components file. For example:

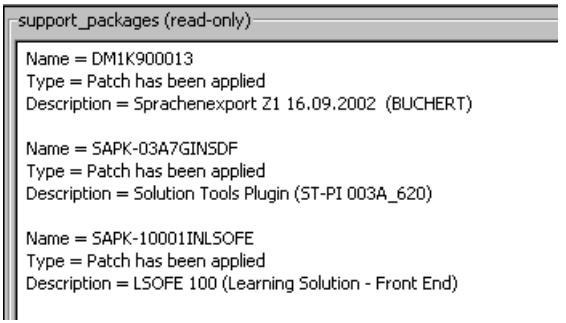


The software components file shows the following information:

Item	Description
Name	The name of the software component.
Package Level	The level of the package.
Description	A description of the package.
Release	The release number.

Support Packages File

Right-click a Support Package CI and select the **Show Content** option to display the support packages file. For example:



The support packages file shows the following information:

Item	Description
Name	The name of the support package.
Type	The type of support package.
Description	A description of the package.

CCMS Counters

The CCMS Counters Dynamic Nodes collect the samples from SiteScope and display them as CIs under the elements they are monitoring.

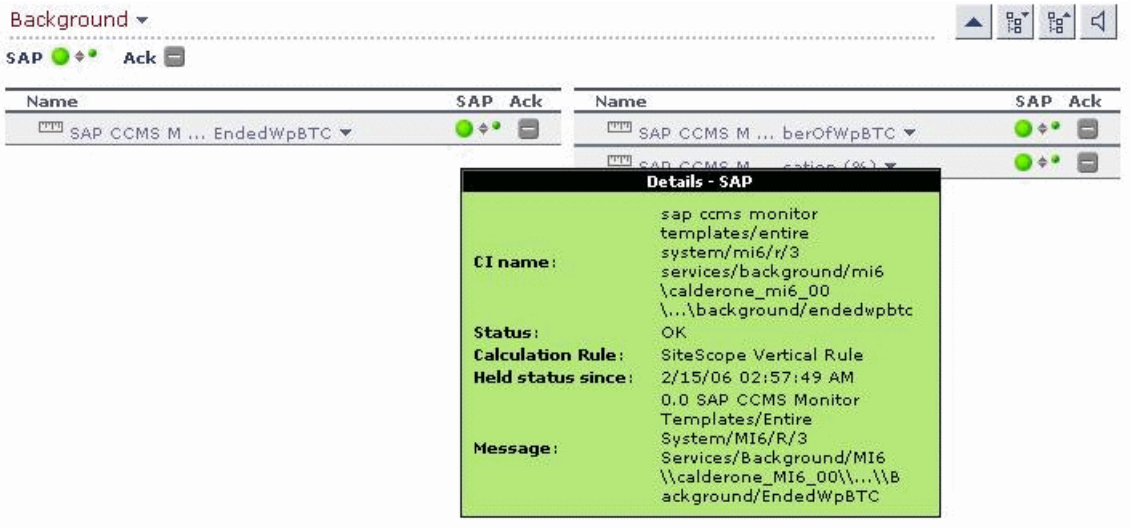
To view SiteScope samples under a CCMS Counters node:

1 Select **Applications** > **Dashboard**, click **Console**.

2 Select **SAP Systems** in the **View** list.

3 Select **Background**.

4 The Console page displays the samples from SiteScope.



The tooltips includes the following information:

- **CI Name –** The name of the CI.
- **Status –** The status of the CI (calculated according to one of the status calculation methods). It may also display:
  - **Not up to date** for decayed CIs, indicating that the CI has passed its timeout period. (For a SiteScope CI, this status is displayed after a SiteScope monitor is disabled.)
  - **Stopped** when a Business Process profile is stopped.

- **Calculation Rule** – The name of the rule that calculates the KPI status or value.
- **Held Status Since** – The date and time since which this CI has held its current operational status.
- **Message** – The value(s) returned by the monitor the last time it ran, as displayed in SiteScope. This may simply be the retrieval time and file size or it may include specific parameters for a server component.
- **Last Update** – The date and time that the last update for the CI was received by Dashboard. This information is not always displayed.
- **Measurement** – The name of the measurement from SiteScope. This information is not always displayed.
- **Monitor** – The monitor type that the CI represents. This information is not always displayed.

13

Working With Deep Transaction Tracing

This chapter describes the Deep Transaction Tracing data available in Dashboard. Deep Transaction Tracing provides a monitoring layer for collecting information about the behavior of transactions within the target machine.

This chapter describes:	On page:
Introducing Deep Transaction Tracing Monitor	193
Viewing Deep Transaction Tracing Information in Dashboard	194
Deep Transaction Tracing Reports	197

Introducing Deep Transaction Tracing Monitor

Deep Transaction Tracing enables component level breakdown for your Business Process Monitor transactions. This is achieved through integration with Bristol's TransactionVision application, to provide an additional level of business process monitoring in Mercury Business Availability Center.

TransactionVision technology enables monitoring of a transaction at the component level within a target machine. As the transaction flows through the target machine via CICS, JMS, EJBs, servlets, and WebSphere MQ, TransactionVision tracks and analyzes the interaction with each component.

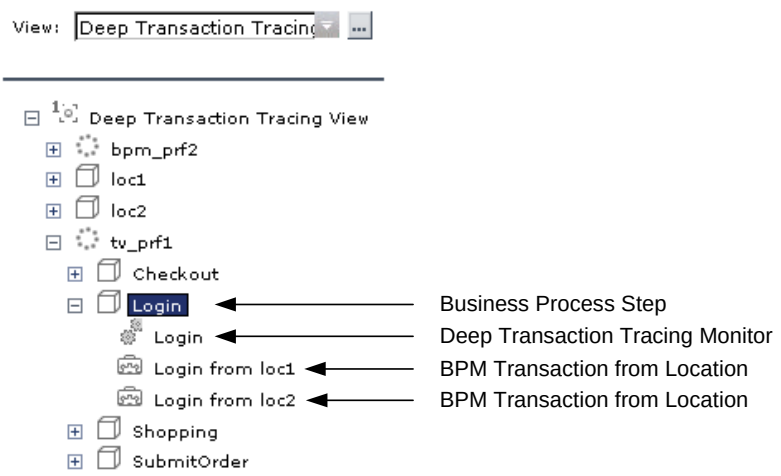
TransactionVision sends the data on the transaction's path through the monitored components to Mercury Business Availability Center; in Mercury Business Availability Center, the received data is mapped to a Deep Transaction Tracing monitor that is correlated with the appropriate Business Process Monitor transaction. In Dashboard, you can then see availability and performance information for the transaction within the target machine, and you can open breakdown reports for the transaction at component level.

Viewing Deep Transaction Tracing Information in Dashboard

You can view Deep Transaction Tracing information for transactions in Dashboard in the Deep Transaction Tracing View.

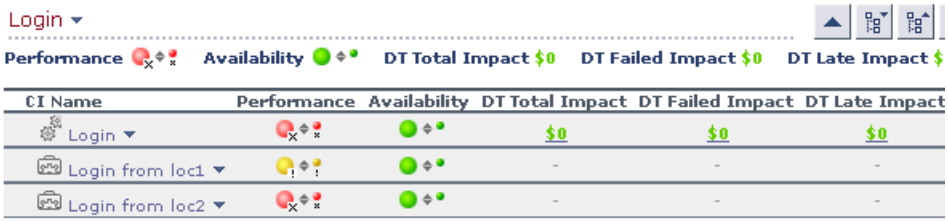
Note: The Deep Transaction Tracing View is added to the Views list in View Explorer once the Deep Transaction Tracing package is installed. If the view is not in the Views list, contact your administrator.

The Deep Transaction Tracing View is displayed like any other view in Dashboard. The view contains all Business Process CI types (such as Business Process Group, Business Process Step, Business Process Transaction from Location), and in addition contains all Deep Transaction Tracing Monitor CIs. Its structure is as follows:



The Deep Transaction Tracing Monitor CIs in the view are dynamically created by a Dynamic Node Factory, based on the incoming samples from TransactionVision. Each Deep Transaction Tracing Monitor CI is given the same name as the Business Process Monitor transaction it relates to, and is added to the hierarchy under the relevant Business Process Step CI, using its own icon.

Under the Business Process Step, you can see information on both the emulated user experience (as shown for the BPM Transaction from Location CIs) and on how the transaction behaved in the target server (as shown for the Deep Transaction Tracing Monitor CI).



The KPIs for the Deep Transaction Tracing Monitor are:

KPI	Description
Performance	Displays information on the performance of the components within the target machine. The displayed status is calculated by the TransactionVision application. The status is calculated in Mercury Business Availability Center based on a value and threshold provided by TransactionVision.
Availability	Displays information on availability of the components within the target machine. The displayed status is based on the objective values defined in Mercury Business Availability Center.
DT Total Impact	Displays information on total financial loss for the organization. This value is calculated by adding the values of the DT Late Impact and the DT Failed Impact KPIs. Status is based on the objective value defined in Mercury Business Availability Center (default threshold = $100).

KPI	Description
DT Failed Impact	Displays information on financial loss due to failure of the transaction within the target machine. Status is based on the objective value defined in Mercury Business Availability Center (default threshold = $100).
DT Late Impact	Displays information on financial loss due to failure to complete the transaction within a time limit set in the TransactionVision application. Status is based on the objective value defined in Mercury Business Availability Center (default threshold = $100).

Deep Transaction Tracing Reports

From the Deep Transaction Tracing view, you can access reports in the TransactionVision application that provide you with breakdown information for the transaction at component level.

The reports are opened from the menu options for a Deep Transaction Tracing Monitor CI in the Console and Filters tabs: Select **Deep Transaction Tracing Reports**, then select the required report type from the displayed list. TransactionVision opens in a new browser window, displaying the selected report for the relevant transaction.

The available report types are discussed in the following topics. For more detailed information on each report, and how to set viewing options, refer to the TransactionVision documentation, available from the Help menu in the TransactionVision application.

This section includes the following topics:

➤ "Tracking Report" on page 198

➤ "Service Level Report" on page 199

➤ "Component Topology Report" on page 200

Tracking Report

The **Tracking Report** menu option opens the Transaction Tracking Report, which lists information for every instance (run) of the Business Process Monitor transaction over a specified time period. The displayed information includes start time, response time, and the result of the run.

To see more detailed breakdown of behavior on the target machine for a run of the transaction, click the **Tx Class** link to drill down to the Transaction Details report; from there, click an event link to drill down to an event details report.

» Transaction Tracking Report- (Show Form) Project: TEST

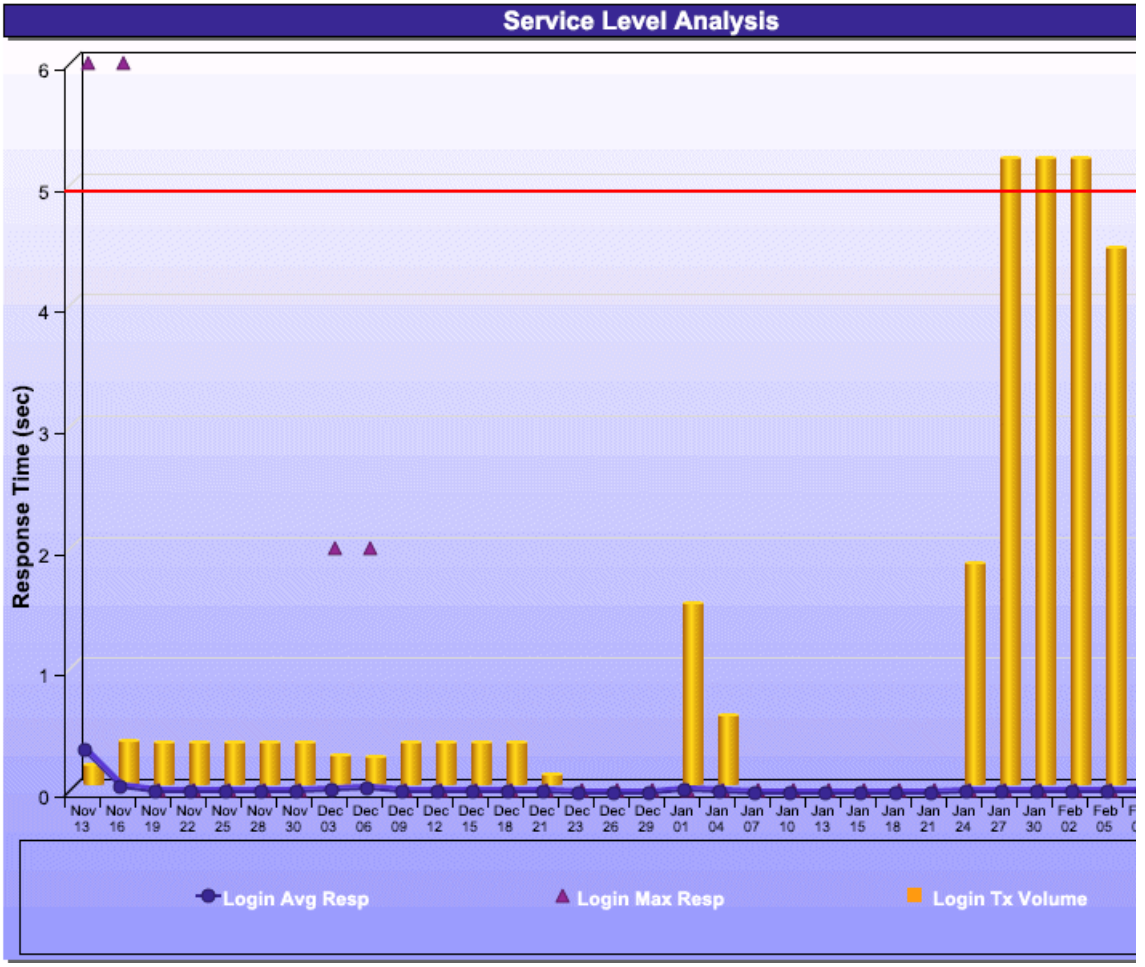
Transaction Tracking Report
(17513 transactions, showing 1-20)

Tx Class	Start Time	Response Time	Completion State	Result State	Label	BpmTransaction	BpmScript Value
Login	01/26/2006 09:45:23.038	0.05	Completed	Success	Login	WebSphere	-
Login	01/26/2006 09:46:23.866	0.02	Completed	Success	Login	WebSphere	-
Login	01/26/2006 09:47:23.957	0.03	Completed	Success	Login	WebSphere	-
Login	01/26/2006 09:48:21.957	0.02	Completed	Success	Login	WebSphere	-
Login	01/26/2006 09:49:19.832	0.02	Completed	Success	Login	WebSphere	-
Login	01/26/2006 09:50:20.191	0.02	Completed	Success	Login	WebSphere	-
Login	01/26/2006 09:51:20.582	0.02	Completed	Success	Login	WebSphere	-
Login	01/26/2006 09:52:21.159	0.02	Completed	Success	Login	WebSphere	-
Login	01/26/2006 09:53:21.487	0.02	Completed	Success	Login	WebSphere	-
Login	01/26/2006 09:54:21.346	0.02	Completed	Success	Login	WebSphere	-
Login	01/26/2006 09:55:21.549	0.03	Completed	Success	Login	WebSphere	-
Login	01/26/2006 09:56:22.628	0.00	Completed	Success	Login	WebSphere	-
Login	01/26/2006 09:57:22.719	0.02	Completed	Success	Login	WebSphere	-
Login	01/26/2006 09:58:23.423	0.02	Completed	Success	Login	WebSphere	-
Login	01/26/2006 09:59:23.844	0.02	Completed	Success	Login	WebSphere	-
Login	01/26/2006 10:00:21.173	0.00	Completed	Success	Login	WebSphere	-
Login	01/26/2006 10:01:21.173	0.02	Completed	Success	Login	WebSphere	-
Login	01/26/2006 10:02:22.894	0.02	Completed	Success	Login	WebSphere	-
Login	01/26/2006 10:03:25.972	0.02	Completed	Success	Login	WebSphere	-
Login	01/26/2006 10:04:20.379	0.02	Completed	Success	Login	WebSphere	-

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Service Level Report

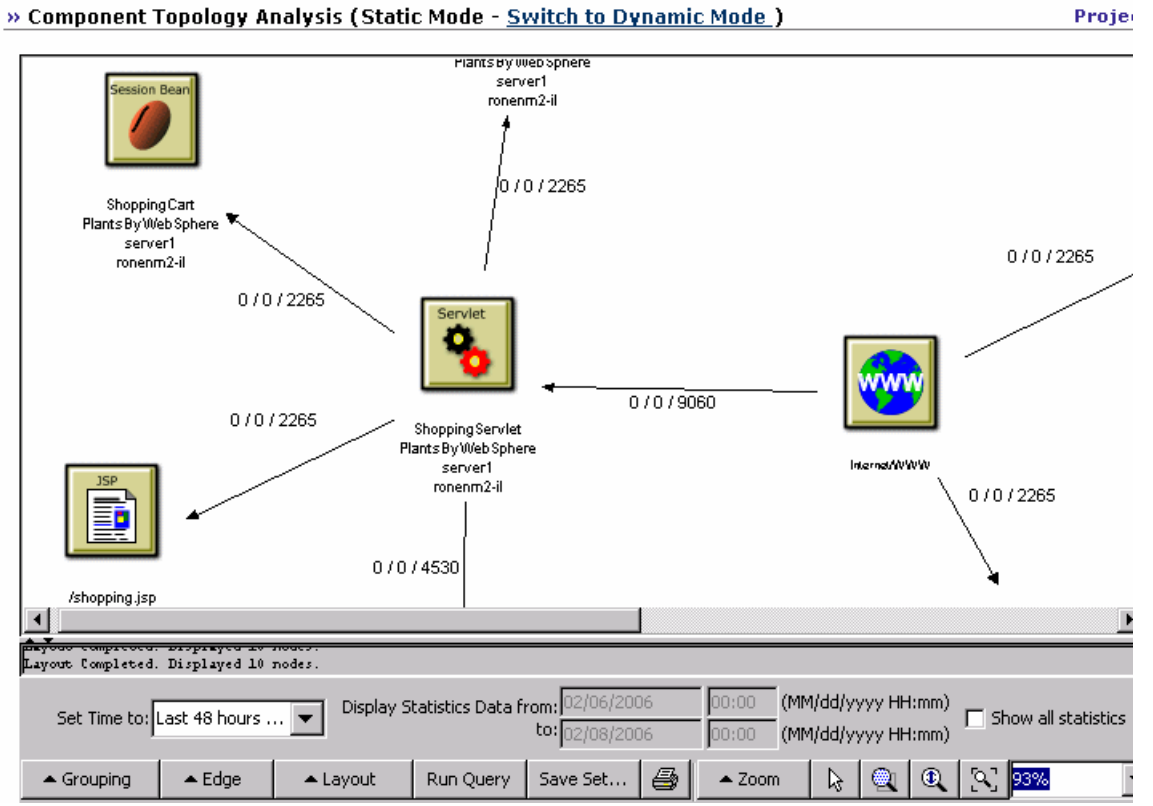
The **Service Level Report** menu option opens the Service Level Analysis report, which provides a graphical view of response time for the transaction over time. The displayed information includes average response time, maximum response time, and transaction volume over each reporting time period.



Note: You need Adobe SVG Viewer 3 installed on your local machine to see the Service Level Analysis report. Download from the Adobe Web site http://www.adobe.com/svg/viewer/install/main.html.

Component Topology Report

The **Component Topology** menu option opens the RTM report, which displays a top view map for the flow of information across components in the target machine, over a specified time period. The report shows activity for all components on the machine during the time period, not for any individual transaction. The report also displays statistics on the interaction between components (for example, failed, late, and total counts for events).



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